adani
Power

Ref: APL/APRL/EMD/EC/MoEF/209/05/23
Date: 24/05/2023

To,

Additional Principal Chief Conservator of Forest
Ministry of Environment, Forest and Climate Change
Integrated Regional Office, Jaipur
Aranya Bhawan, Mahatma Gandhi Road, Jhalana Institutional Area.
Jaipur – 302004, Rajasthan

Sub: Submission of Six-Monthly Compliance Status of Environment Clearances for Kawai Thermal Power Plant along with Environmental Monitoring reports reg.

Ref: Environmental Clearance letter no. **J-13012/154/2008-IA.II (T)** Dated- **04.05.2011,** Amendment on 13/03/2014 & Transfer of EC from Adani Power Rajasthan Ltd. to **Adani Power Ltd. dated 24.04.2023**.

Dear Sir,

With reference to above subject, please find enclosed herewith Six-Monthly Environment Clearances (EC) compliance status report along with Environmental monitoring reports as Ambient Air Quality, Water Quality, Noise level & Soil quality, CAAQM data, Met. data, Greenbelt development, Fly ash & CSR Report etc. for the period of **October'2022 to March'2023** in soft (**e-mail**).

This is for your kind information & record please.

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

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

Encl: as above

CC:

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

The Regional Officer,
Rajasthan State Pollution Control Board
Jhalawad, Rajasthan

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

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Adani Corporate House
Shantigram, S G Highway
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SIX MONTHLY COMPLIANCE REPORT OF ENVIRONMENT CLEARANCE (EC)

1320 (2×660) MW KAWAI THERMAL POWER PLANT

At

KAWAI VILLAGE, ATRU TEHSIL
BARAN DISTRICT
RAJASTHAN

Submitted to:

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

Submitted By:

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

PERIOD: October'2022 – March'2023

CONTENTS

Introduction

Kawai Thermal Power Plant of APL has established 1320 (2x660) MW Coal based Supercritical Thermal Power Plant at Village-Kawai, Tehsil Atru, District Baran in Rajasthan.

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

Environmental Clearance granted from Ministry of Environment, Forest & Climate Change (MoEF&CC) dated 04.05.2011 and subsequent amendment in EC dated 13.03.2014 and has also obtained Consent to Establish as well as Consent to Operate (CTO) from Rajasthan State Pollution Control Board. 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 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 Rajasthan State Pollution Control Board, Presently Environmental monitoring & analysis is being carried out by M/s Team Institute of Science & Technology, Jaipur, (Rajasthan).

The Hon'ble NCLT vide its order dated 08.02.2023 sanctioning the scheme of amalgamation of Adani Power Rajasthan Limited with Adani Power Limited. Subsequently, Environment Clearance were transferred from Adani Power Rajasthan Limited to Adani Power Limited vide F. No. J-13012/154/2008-IA.II (T) dated;24.04.2023.

Point wise compliance status of **Environmental Clearance for 1320 (2x660) MW** 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 & 24.04.2023.

A	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. MoEF&CC has Transfer of EC from Adani Power Rajasthan Limited to Adani Power Limited dated 24.04.2023
(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 Wildlife 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 Wildlife 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.	80 no. Solar light are installed near hostel/residential area in first phase of solar harnessing program. Solar panels are installed for streetlights of residential complex. 10KW capacity Solar Panel is installed at rooftop of Administrative Building to harness solar energy for its consumption.
(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	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.

	said land.	
(vi)	Coal transportation to plant site shall be by rail. The project proponent shall take up the matter with the Railways and shall submit action taken and implementation status to the ministry from time to time.	Being complied. Coal is being transported to power plant through Rail only.
(vii)	Existing de-generated water bodies (if any) in the study area shall be regenerated at the project proponent's expenses in consultation with the state govt.	Development of existing degenerated water body in village Antana of Atru tehsil is completed as proposal approved by District 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 annually from an institute / organization of repute to assess impact of surface water and ground regime (especially around ash dyke). In case and deterioration is observed specific mitigation measures shall be undertaken and reports / data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	Complied. Hydrogeology of the area is being reviewed regularly. Last hydrogeology reviewed done in Year- 2020 by third party to assess the surface & ground regime. (Especially around ash dyke). Regular water quality monitoring is also being carried out by MoEF&CC/NABL accredited Laboratory. The water quality monitoring results is being submitted regularly along with Six Monthly Compliance reports.
(ix)	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry within three months	Water allocation from Parvan River for 34 MCM. This quantity is adequate to meet the plant's requirement, including lean season.
(x)	No ground water shall be extracted for use in operation of the power plant even in lean season.	Compiled. There is no ground water extraction for use in operation of the power plant even in lean season.
(xi)	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up / operation of the power plant.	No water body was disturbed while setting up power plant.
(xii)	Minimum required water flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel / Rivers (as applicable) even in lean season.	Kawai TPP has no role in the distribution of water from Parvan irrigation Project. Water Resource Department, Govt. of Rajasthan 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 adopted.	It has been incorporated in the plant design and being maintained.
(xiv)	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline so as to ensure that the ground water quality is not adversely affected due to the project.	Being Complied. Regular monitoring of ground water quality including heavy metals is being carried out in and around the plant area by MoEF&CC accredited agency and NABL accredited Environment laboratory of APL. Please refer attached **Annexure-I.** Three Piezometric wells are established around the ash pond. Record are being maintained and attached as **Annexure-II.**
(xv)	Monitoring surface water quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Being Complied. Regular monitoring for surface and ground water quality is being carried out including heavy metals in & around the ash pond and nearby villagers, Monitoring report enclosed herewith as **Annexure I.**
(xvi)	A well-designed rainwater harvesting shall be put in place before commissioning of the plant. Central Ground Water Authority / Board shall be consulted for finalization of appropriate rainwater harvesting technology / design within a period of three months from the date of this clearance and detail shall be furnished. The design of rainwater harvesting shall comprise of rainwater 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.	Complied Design for rainwater harvesting scheme is prepared by Hydro-geo Survey Consultant-Jaipur and the same is submitted to Regional Office of CGWB. Jaipur, MoEF&CC regional office, Lucknow and MoEF&CC New Delhi. Rainwater harvesting pond already constructed within the plant to store and reuses more than **120000 m3** of water.
(xvii)	Additional soil for levelling of proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	The entire plant area was almost flat and having stony outcrop. There are no streams within the plant premises.
(xviii)	Provision for installation of FGD shall be provided for future use.	Space was provided for FGD in the plant layout for further requirement. Kawai TPP is in process to install FGD and revised ICB has been issued to install FGD as per implementation schedule of CPCB as well as CEA.

		As per MoEFCC Notification dated 5th Sep 2022, Kawai TPP is falling under Category "C" Non- retiring TPPs and the timelines of installation of FGD in compliance of SO2 emission is up to December'2026.
(xix)	The project proponent shall undertake measures and ensure that no fugitive fly ash emission take place at any point of time.	Being complied. Pneumatic ash handling system with bag filters provided for ash handling. The crusher houses for coal are provided with Dust Extraction System & Bag Filter. Dust Suppression System (DSS) and Water Sprinkling System are provided in coal stock yard and ash dyke.
(xx)	Stack of 275 m height shall be installed and provided with continuous online monitoring equipments for SOx, NOx and PM2.5 & PM10. Exit velocity of flue gases shall not be less than 22 m/s. Mercury emissions from stack may also monitored on periodic basis.	Twin flue stack of 275 meter constructed. Continuous Emission Monitoring System installed in both flues for SO_2, NOx, and PM. The flue gas velocity is more than 22 m/sec. Hg monitoring in stack is being carried out by third party on quarterly basis. CEMS results attached as **Annexure Ia.**
(xxi)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm3.	Complied A high Efficiency Electrostatic Precipitators has been provided to each boiler (ESPs) to meet particulate emission less than 50mg/Nm3, ESP efficiency is being observed by our operation department. Details of monitoring results as carried out by NABL accredited environmental lab for Unit-1 and 2 & also same is being submitted to Statutory body on regular basis. All stack monitoring results are well within the prescribed limit which is showing efficiency of ESP. Monitoring results are attached as **Annexure I.**
(xxii)	Adequate dust extraction system such as cyclones / bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Complied. Dust extraction system with bag filter in coal crusher house has been provided. Pneumatic ash handling system with bag filters provided for ash handling. Water sprinkling system provided in coal yard.
(xxiii)	Utilization of 100% Fly Ash generated shall be made from 4th year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Being Complied Ash utilization / implementation report being submitted to MoEF&CC, CPCB, RSPCB as well as CEA. Implementation status of fly ash utilization is enclosed herewith. Please refer **Annexure-III**
(xxiv)	Fly ash shall be collected in dry form and	Being Complied

	storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As, Hg, Cr, Pb, etc.) will be monitored in the bottom ash as also in the effluents emanating in the existing ash pond. No ash shall be disposed off in low lying area.	Kawai TPP has signed MoUs for ash utilization with Mangalam Cement Ltd., J.K.Cement Ltd., Mangrol & Nimbahera, Birla Corporation Ltd, Nuvoco Vistas Corp. Ltd., Shriram Cement Ltd, Wonder Cement Ltd apart that above parties we are also providing to ACC Ltd. Ambuja Cement, Birla Corporation Ltd., Nirma Ltd., India Cement ltd., Heidelberg Cement India ltd, India Cements Ltd, Heidelberg cement India Ltd., TSG Ashtech Movers Pvt. Ltd., etc. Heavy metal analysis is being carried out for As, Pb, Hg, Cr Fe, Cu, Zn, Cd, and Ni in fly ash. Analysis report of the same is attached as **Annexure-I.**
(xxv)	Ash pond (if any) shall be lined with HDPE/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	Well design ash pond with LDPE lining has been established as per guidelines of MOEF/CEA/CPCB. Safety measure such as bund with toe wall and lining of side slope is done to prevent any leachate.
(xxvi)	Sulphur and ash contents in the imported coal to be used in the project shall not exceed 0.6 % and 34 % respectively at any given time. 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.	Complied EC amended on dated 13.03.2014 through vide letter No. J-13012/154/2008/IA. II (T) for change in the fuel quality & source.
(xxvii)	Green Belt consisting of 3 tiers of plantations of native species around the plant of at least 75 m width shall be raised (except in areas not feasible). The density of trees shall not be less than 2500 per Ha and rate of survival at least 80%.	Green belt / plantation is being developed. Our efforts are to develop more greenery in and around the plant premises. Full-fledged horticulture department is established under the guidance of the experienced horticulturist in consultation with the local forest department for the development of green belt / plantation has been established. About 120812 tree saplings have been planted and achieved 90% survival rate. Details is enclosed as **Annexure-IV**
(xxviii)	Over and above the green belt, as carbon sink, social forestry shall be carried out in close consultation with the Forests Department. The project proponent shall accordingly identify blocks of land / degraded forests and shall undertake regeneration of	Social forestry with active participation of the villagers and school children are being carried out in close consultation with Forest Department, Action plan regarding social forestry and regeneration of degraded forest is under implementation.

	degraded forests at a large scale. In pursuance to this the project proponent shall formulate time bound action plan along with financial allocation and shall submit status of implementation to the Ministry within six months.	Planted 1200 Saplings along with the NH-90 in association with forest department. About 500 trees are also planted in school campus & villages.
(xxix)	Atleast three nearest village shall be adopted and basic amenities like development of roads, drinking water supply, primary health centre, primary school etc. shall be developed in co-ordination with the district administration.	Complied Baldevpura, Kawai, Salpura, Khedli Gaddiyan and Nimoda are adopted for development of basic amenities in co-ordination with the district administration. Beside 41 Schools, 2 PHC, 1 CHC of surrounding Gram Panchayats are adopted in association with district administration of Govt. of Rajasthan.
(xxx)	The project proponent shall also adequately contribute in the development of the neighboring villages. Special package with implementation schedule for providing free potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Complied. Need based assessment study report have been already submitted to MoEF&CC. Recommendation made in the report are being implemented by Adani Foundation. **Please refer Annexure V.**
(xxxi)	CSR schemes shall be undertaken based on need assessment in and around the villages within 5 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR prior identification of local employable youth and eventual employment in the project after imparting relevant training shall be also undertaken.	Based on the need-based assessment report under the CSR, recommendations made in the CSR report are being implemented by Adani Foundation. Please refer **Annexure V.** Main Focus has been given on Education, Health, Alternative Livelihood and Rural Infrastructure. Please refer **Annexure V.**
(xxxii)	It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	The implementation of CSR activities carried out by Adani Foundation. Implementation / achievement of CSR activities are being submitted along with EC compliance on regular basis. Please refer **Annexure V.**
(xxxiii)	An amount of Rs 28.0 Crores shall be earmarked as one time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 5.6 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be	Separate budget has been earmarked for CSR activities. CSR activities are being carried out by Adani Foundation. CSR report and expenditures is attached as **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 mechanism for the schemes identified is in place and annual social audit shall be got done from the nearest government institute of repute in the region. The project proponent shall also submit the status of implementation.	Complied. Social audit report is prepared by Indian Institute of Social Welfare and Business Management of University of Kolkata. Audit report is submitted along with six monthly compliance report.
Additional Specific Conditions		
(xxxv)	The Coal transportation by road shall be through tarpaulin covered trucks for a maximum period of two years and hence forth shall be only through mechanically covered trucks.	Coal is being transported by Rail up to Plant premises.
(xxxvi)	Avenue plantation of 2/3 rows all along the road shall be carried out by project proponent at its own expenses.	Complied 2 Tier greenbelt as avenue plantation has been developed up to 3KM distance along both side of nearest NH-90.
(xxxvii)	Periodic maintenance of the road shall be done by the project proponent at its own expenses and shall also facilitate the traffic control on the road.	We have maintained the approach road from plant main gate to the nearest highway (NH-90) and linked road to plant.
(xxxviii)	Sulphur and ash contents in the domestic coal to be used in the project shall not exceed 0.4% and 33% at any given time. In case of variation of coal quality at any point of time, fresh reference shall be made to the ministry for suitable amendments to environmental clearance condition wherever necessary.	Being Complied Half yearly & annual reports of Ash Utilization & ash content in coal being submitted to MoEF&CC and Central Electricity Authority (CEA) since plant operation. **Please refer attached Annexure-III.**
(xxxix)	A long-term study of radio activity and heavy metals contents on coal to be used shall be carried out through a reputed institute. Thereafter, mechanism for an in-built continuous monitoring for radio activity and heavy metals in coal and fly ash (including bottom ash) shall be put in place.	Being Complied Test results of coal samples for radio activity and heavy metal report submitted along with previous compliance report.
(xl)	Harnessing solar power within the premises of the plant particularly at available roof tops shall be undertaken and status of implementation shall be submitted periodically to the Regional Office of the Ministry.	Solar streetlight near administrative building and along approach road has been installed to harness solar power.
(xli)	Fugitive emissions shall be controlled to	Being Complied.

	prevent impact on agriculture or non-agriculture land.	Adequate air pollution control measures such as Dust Extraction System (DES), Dust Suppression System, Wind Shield, Water Sprinkling & Fog Canon system have been provided to meet particulate matter emission within the norms.
(xlii)	Fly ash shall not be used for agriculture purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted, prior detailed study of soil characteristics of the mine area shall be undertaken from an institute of reputed and adequate clay lining shall be ascertained by the State Pollution Control Board and implementation done in close co-ordination with the State Pollution Control Board.	The generated fly ash is being used by Cement Industries as per 'Fly Ash Notification'. Copy of annual data on fly ash generation & utilization is being submitted to MoEF&CC, CPCB, and SPCB & Central Electricity Authority (CEA). Fly Ash generation & utilization is attached as **Annexure III.**
(xliii)	Three tier green belt shall be developed all around Ash Pond over and above the Green Belt around the plant boundary and grassing shall be done on the ash mound.	Plantation all along ash dyke is taken up by seed broadcasting of species like Subabol, Jatropha and Desi Babool. Slope of ash dyke is covered with grass to avoid soil erosion.
(xliv)	An Environmental Cell be created at the project site itself and shall be headed by an officer of the company of appropriate seniority and qualification. It shall be ensure that the head of the Cell directly report to the Head of the Organization. The Environmental Cell shall be responsible and accountable for implementation of all the conditions given in the EC including in the amendment letter.	Being Complied We have already established an Environmental Management Cell headed by Manager & supported by Env. Engineer, Officer, Chemist & Horticulturist. We have NABL accredited Laboratory. Certificate Number- TC-5235 valid up to 28/03/2025. Please refer attached NABL certificate attached as **Annexure-VII.**
(xlv)	The project proponent shall formulated a well laid Corporate Environmental Policy and identify and designate responsible officers at all levels of its hierarchy for ensuring adherence to the policy and compliance with the conditions stipulated in this clearance letter and other applicable environmental laws and regulations.	Corporate level Environmental Policy has been developed to implement EMS (Environmental Management System) as per ISO 14001-2015. Environmental Management System as per EMS ISO 14001 implemented Integrated Management System (IMS) is also Implemented.
B	**General Conditions:**	
(i)	The treated effluents confirming to the prescribed standards only shall be re-circulated and reused within the plant.	Compiled ETP has been established (Capacity- 226 m3/hr. based on primary treatment) to treat

<table>
<tr><td></td><td>Arrangements shall be made that effluents and storm water do not get mixed.</td><td>effluents and treated water reuses within the premises. The concept of “Zero Liquid Discharge (ZLD) Condition” is implemented except during non-monsoon period. Separate drainage network is established for storm water.</td></tr>
<tr><td>(ii)</td><td>A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt / plantation.</td><td>Complied
Sewage Treatment Plant has been established inside the plant & treated domestic water is suitably reused within the plant premises in plantation / green belt development.
<table>
<tr><th>Particular</th><th>Capacity</th><th>Total Capacity</th><th>Technology</th></tr>
<tr><td>STP</td><td>120 KLD (10 x 2 KLD)</td><td>140</td><td>Mikie Bioreactor</td></tr>
</table></td></tr>
<tr><td>(iii)</td><td>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.</td><td>Adequate safety team has been established in plant site to take preventive control measures. Fire hydrant system for firefighting is provided in plant layout. Fire & Safety department made available with 3 no. of firefighting tanker equipped with all necessary control system.</td></tr>
<tr><td>(iv)</td><td>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.</td><td>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 Annexure-IX.</td></tr>
<tr><td>(v)</td><td>First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.</td><td>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.</td></tr>
<tr><td>(vi)</td><td>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</td><td>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) is provided to workers & employees working in noisy areas. Noise</td></tr>
</table>

	provided. Workers engaged in noisy area such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy / less noisy area.	level monitoring is carried out regularly. Periodic audiometric check-up is carried out. Occupational Health & Safety Management System as per ISO 45001 as implemented.
(vii)	Regular monitoring of ambient air ground level concentration of SO2, NOx, PM2.5 & PM10 and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	Being Complied Regular Environmental monitoring of SO2, NOx, $PM_{2.5}$ & PM_{10} and Hg is being carried out by third party Env. Lab. The Ambient Air Quality Monitoring locations are established in consultation with RPCB. Full fledge Environmental Lab for Air & Water has been established. Monitoring reports attached as **Annexure I.**
(viii)	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche, etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	Complied During construction, provision was made for common facilities to labours as toilets, safe drinking water, medical health care etc. who were engaged for construction.
(ix)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board / Committee and may also be seen at website of the Ministry of Environment and Forest at http://envfor.nic.in	Complied Advertised in local daily News Paper 'Dainik Bhaskar and Rajasthan Patrika' on 10th May 2011 in Hindi.
(x)	A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions / representations, if any,	Complied Copy of clearance letter has been submitted to Kawai Village Panchayat and Zila Parishad, Baran.

	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 one expert in environmental science / engineering, occupational health and social scientist, shall be created at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the head of the Cell shall directly report to the head of the organization and he shall be held responsible for implementation of environmental regulations and social impact improvement / mitigation measures.	Being Complied. We have already established an Environmental Management Cell headed by Manger & supported by Env. Engineer Officer, Chemist & Horticulturist. Full fledge Environment Lab (Air & Water) has been established. Environmental Management System as per EMS ISO: 14001:2015 implemented.
(xii)	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of 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.	Six monthly Environmental Clearance Compliance status report is regularly submitted to MoEF&CC, CPCB and RSPCB. The same is sent by email also. Compliance status updated on company's website www.adanipower.com
(xiii)	The environmental statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the 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.	Environment Statement had been submitted with vide letter no APRL/PK/GOVT/RSPCB/00591, dated-27.09.2022. Please refer **Annexure VI**
(xiv)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forest, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project	Six monthly compliance report on the Environmental Clearance granted by MoEF&CC is being submitted to MoEF&CC, CPCB & RSPCB regularly. Compliance status updated on company's website. Compliance report for the period of April

	proponent shall upload the status of compliance of the environmental of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forest.	2022 to September 2022 had been submitted to your good office vide letter no.: APL/APRL/EMD/EC/MoEF/210/11/22 dated 26.11.2022
(xv)	Regional Office of the Ministry of Environment & Forest will monitor the 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.	Noted Compliance assured.
(xvi)	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These cost shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	Being Followed. Separate fund has already been allocated and being utilize for Environmental Protection. Environment protection measures (EMP & CER) Expenditure is attached as **Annexure-VIII.**
(xvii)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	Complied
(xviii)	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 compliance of environmental status.	Noted, Full co-operation shall be extended.

*****

F. No. J-13012/154/2008-IA.II (T)
Government of India
Ministry of Environment, Forest and Climate Change
(Impact Assessment Division)

2nd Floor, Vayu Block
Indira Paryavaran Bhawan
Aliganj, Jor Bagh Road,
New Delhi – 110 003

Dated: 24th April, 2023

To,

M/s Adani Power Ltd.
Adani House, Nr Mithakhali Circle
Navrangpura, Ahmedabad- 380009 (Gujarat)

Sub: 2X660 MW Super Critical Imported Coal Based Thermal Power Plant at Village Kawai in Atru Taluk, in Baran District, Rajasthan Transfer of Environmental Clearance from M/s Adani Power Rajasthan Limited to M/s Adani Power Ltd - reg.

Sir,

This has reference to your online proposal no. IA/RJ/THE/297950/2023 dated 25th February, 2023 regarding transfer of the environmental clearance for the above said project from M/s Adani Power Rajasthan Limited to M/s Adani Power Ltd.

2. The Ministry had earlier issued environmental clearance for the project 2X660 MW Super Critical Imported Coal Based Thermal Power Plant at Village Kawai in Atru Taluk, in Baran District, Rajasthan in favour of M/s Adani Power Rajasthan Limited vide letter dated 4th May, 2011, followed by amendment in EC dated 13th March, 2014 for change of source of coal from Imported to Domestic.

3. M/s Adani Power Ltd has submitted application for transfer of environmental clearance and informed that the Hon'ble NCLT vide its order dated 08th February, 2023, sanctioning the scheme of amalgamation of M/s Adani Power Rajasthan Limited with M/s Adani Power Ltd, and thus necessitating transfer of all requisite approvals in the name of M/s Adani Power Ltd. Also, it has informed that M/s Adani Power Rajasthan Limited is wholly owned subsidiary company of Adani Power Ltd.

4. M/s Adani Power Ltd, has submitted an affidavit to abide by the terms and conditions stipulated in the environment clearance dated 4th May, 2011, followed by amendment in EC dated 13th March, 2014 issued in the name of M/s Adani Power Rajasthan Limited.

5. As per the relevant provisions of the EIA Notification, 2006, the environmental clearance granted to the project vide letter dated 4th May, 2011 for 2X660 MW Super Critical Imported Coal Based Thermal Power followed by amendment in EC dated 13th March, 2014 at Village Kawai in Atru Taluk, in Baran District, Rajasthan are hereby transferred from M/s Adani Power Rajasthan

Limited to M/s Adani Power Ltd on the same terms and conditions under which prior environmental clearance was initially granted.

6. This issues with approval of the competent authority.

24.4.2023

(Yogendra Pal Singh)
Scientist 'E'
Tele: 011-20819364
Email Id: yogendra78@nic.in

Copy to: -

1. The Secretary, Ministry of Power, Shram Shakti Bhawan, Rafi Marg, New Delhi – 110 001.
2. The Chairman, Central Electricity Authority, Sewa Bhawan, R.K. Puram, New Delhi – 110 066.
3. The Member Secretary, Central Pollution Control Board, Parivesh Bhawan, CBD cum-Office Complex, East Arjun Nagar, Delhi – 110 032.
4. The Deputy Director General of Forests (C), Integrated Regional Office, Jaipur, A-209 & 218, 'Aranya Bhawan', Mahatma Gandhi Road, Jhalana Institutional Area, Jaipur (Raj.) – 304 002.
5. The Principal Secretary (Environment), Government of Rajasthan, Room No. 4224, Main Building, Government Secretariat Jaipur, (Rajasthan).
6. The Member Secretary, Rajasthan Pollution Control Board, 4, Jhalana Institutional Area, Jhalana Doongri, Jaipur (Rajasthan) – 302 004.
7. Guard file/Monitoring file.
8. Website of MoEF&CC.

24.4.2023

(Yogendra Pal Singh)
Scientist 'E'

SIX MONTHLY COMPLIANCE REPORT ON ENVIRONMENTAL MONITORING as AMBIENT AIR QUALITY, WATER QUALITY, SOIL QUALITY AND NOISE LEVEL for

Adani Power Rajasthan Limited

(Amalgamated with Adani Power Limited)

(2x660 MW- SUPERCRITICAL THERMAL POWER STATION)

Village - Kawai, Tehsil - Atru, District -Baran, Rajasthan

PREPARED BY:

TEAM TEST HOUSE

(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'2022 to March'2023

TABLE OF CONTENTS

1 EXECUTIVE SUMMARY

ADANI group has constructed 2 units of 660 MW Supercritical Thermal Power Station at Village- Kawai, Tehsil- Atru, District- Baran, Rajasthan. The plant is designed to generate 2x660 MW 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 (amalgamated with Adani Power Limited) limited has awarded environmental monitoring job work to **M/s Team Institute of Science and Technology (Unit - Team Test House)** vide Service Order No 5700295971 dated 03/04/2021 for Sampling/Monitoring and Testing of Environmental parameters on quarterly basis for the period 01/04/2021 to 31/03/2023.

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 the third and fourth quarters are found to be satisfactory. The plant was performing well during the monitoring and environmental parameters in each segment like Ambient air, source emission, soil, Water, wastewater, and noise are found to be within the permissible limits.

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

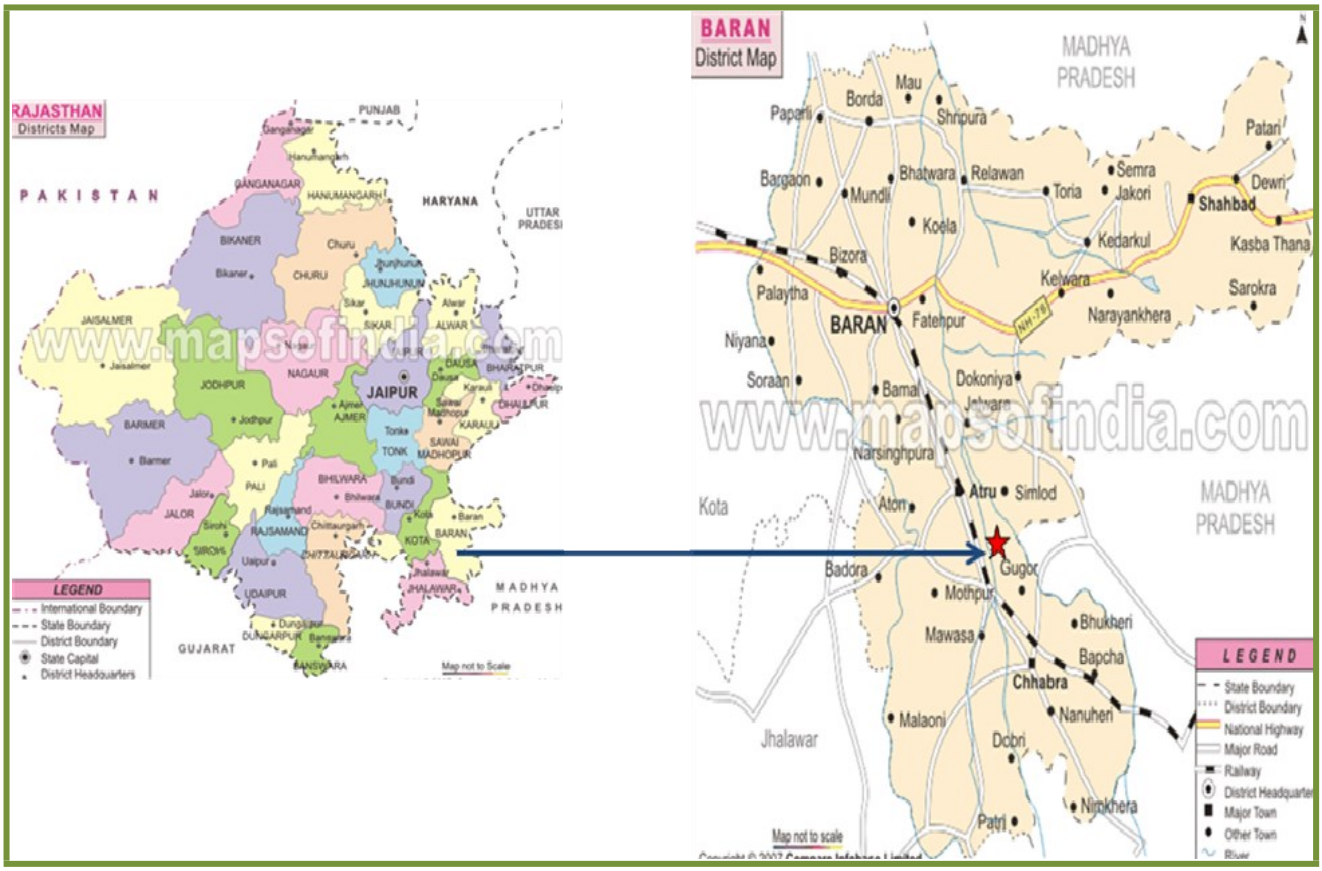
Adani Enterprises Limited (AEL) have signed MoU with Energy Department, Government of Rajasthan on 20th March 2008 for developing a Thermal Power Project of 1320 MW capacity at Kawai, District Baran, Rajasthan. For this purpose, Adani Enterprises Limited (AEL) has registered Adani Power Rajasthan Limited, amalgamated with Adani Power Limited. 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 APL 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 about 15 km from plant.

2.3 LOCATIONS OF THE 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

METEROLOGICAL DATA

AVERAGE DAILY METEROLOGICAL DATA OF OCTOBER-2022

Date	Temp (Deg C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
2022-10-01	26.1	32.1	65.1	93.1	0
2022-10-02	27.0	35.1	59.0	92.3	0
2022-10-03	25.6	36.1	37.1	83.5	0
2022-10-04	25.1	35.3	39.2	81.3	0
2022-10-05	26.0	32.2	63.0	91.4	19
2022-10-06	26.7	33.2	65.5	93.2	0
2022-10-07	26.0	32.5	81.0	98.2	63.5
2022-10-08	24.0	29.5	67.1	98.2	38
2022-10-09	24.0	31.4	74.2	95.3	4.5
2022-10-10	25.0	29.2	70.4	98.3	0
2022-10-11	25.1	32.2	69.1	95.4	0
2022-10-12	25.6	33.1	70.1	93.4	0
2022-10-13	21.1	32.4	30.2	97.4	0
2022-10-14	20.3	32.5	36.0	92.0	0
2022-10-15	20.2	32.5	36.0	86.5	0
2022-10-16	22.0	34.1	40.1	97.3	0
2022-10-17	21.2	33.3	30.0	83.1	0
2022-10-18	21.2	34.4	24.2	83.1	0
2022-10-19	21.0	35.1	23.2	74.3	0
2022-10-20	20.3	35.3	21.1	71.2	0
2022-10-21	20.2	34.6	21.1	72.2	0
2022-10-22	20.1	34.5	23.3	70.2	0
2022-10-23	21.0	33.2	25.4	70.0	0
2022-10-24	20.0	32.3	27.0	80.0	0
2022-10-25	18.0	34.5	21.3	77.4	0
2022-10-26	19.5	34.5	22.2	67.0	0
2022-10-27	20.2	35.6	22.1	66.0	0
2022-10-28	20.3	35.4	23.1	66.5	0
2022-10-29	20.1	34.6	21.5	70.1	0
2022-10-30	19.3	32.4	23.2	74.1	0
2022-10-31	18.1	32.1	29.0	73.1	
Max.	**27.0**	**36.1**	**81.0**	**98.3**	**125.0**
Min.	**18.0**	**29.2**	**21.1**	**66.0**	

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Date : 01/10/22 - 31/10/22

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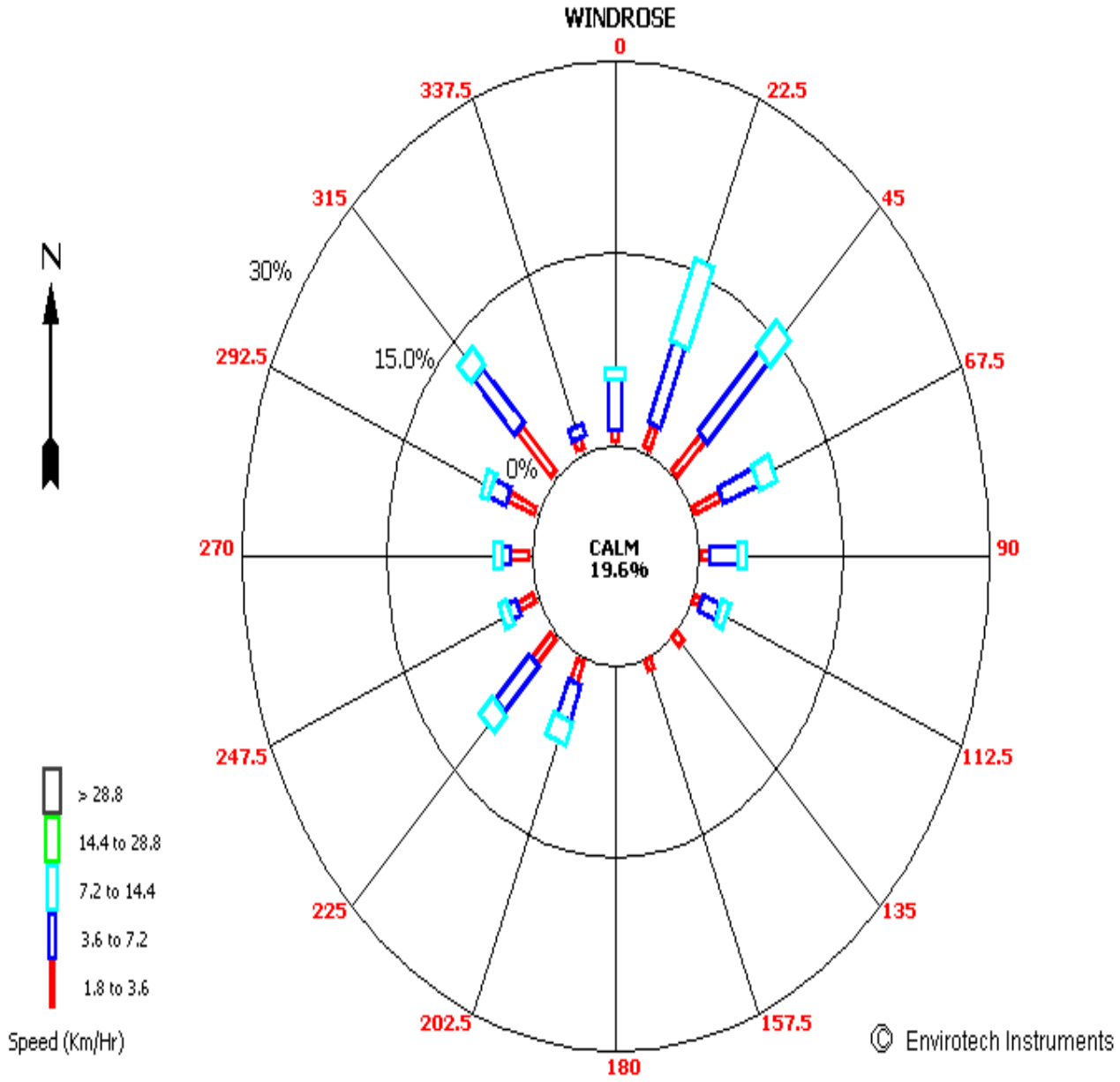
ADANI POWER RAJ. LTD
KAWAI



AVERAGE DAILY METEROLOGICAL DATA OF NOVEMBER-2022

Date	Temp		Relative Humidity		Rainfall
	Min	Max	Min	Max	Total
2022-11-01	18.2	33.2	28.0	78.2	0
2022-11-02	19.6	35.2	23.5	74.0	0
2022-11-03	20.0	34.6	26.3	68.1	0
2022-11-04	20.3	36.1	26.0	70.2	0
2022-11-05	21.4	37.1	21.1	66.1	0
2022-11-06	20.1	36.5	20.1	65.5	0
2022-11-07	22.2	36.0	21.0	65.1	0
2022-11-08	23.3	34.3	24.2	55.6	0
2022-11-09	22.2	32.3	34.0	64.5	0
2022-11-10	20.2	32.0	36.3	78.4	0
2022-11-11	21.0	31.3	31.0	78.5	0
2022-11-12	17.1	34.1	40.1	81.4	0
2022-11-13	21.1	32.4	30.2	97.4	0
2022-11-14	20.3	31.3	24.1	92.0	0
2022-11-15	18.1	31.5	31.0	72.2	0
2022-11-16	18.2	31.1	35.1	77.4	0
2022-11-17	18.1	28.6	27.3	84.6	0
2022-11-18	15.2	29.0	25.1	76.2	0
2022-11-19	15.0	25.4	37.5	73.2	0
2022-11-20	15.1	28.5	32.6	79.1	0
2022-11-21	14.0	29.0	31.1	84.6	0
2022-11-22	14.4	28.2	29.2	87.1	0
2022-11-23	14.2	28.5	28.3	85.0	0
2022-11-24	13.3	27.5	24.2	82.1	0
2022-11-25	14.2	29.0	26.2	72.4	0
2022-11-26	13.0	34.5	22.2	87.5	0
2022-11-27	20.2	35.6	22.1	66.0	0
2022-11-28	20.3	29.3	28.1	66.5	0
2022-11-29	15.3	28.3	31.0	76.5	0
2022-11-30	16.1	27.4	29.3	75.4	0
Max.	**23.3**	**37.1**	**40.1**	**97.4**	**0**
Min.	**13.0**	**25.4**	**20.1**	**55.6**	

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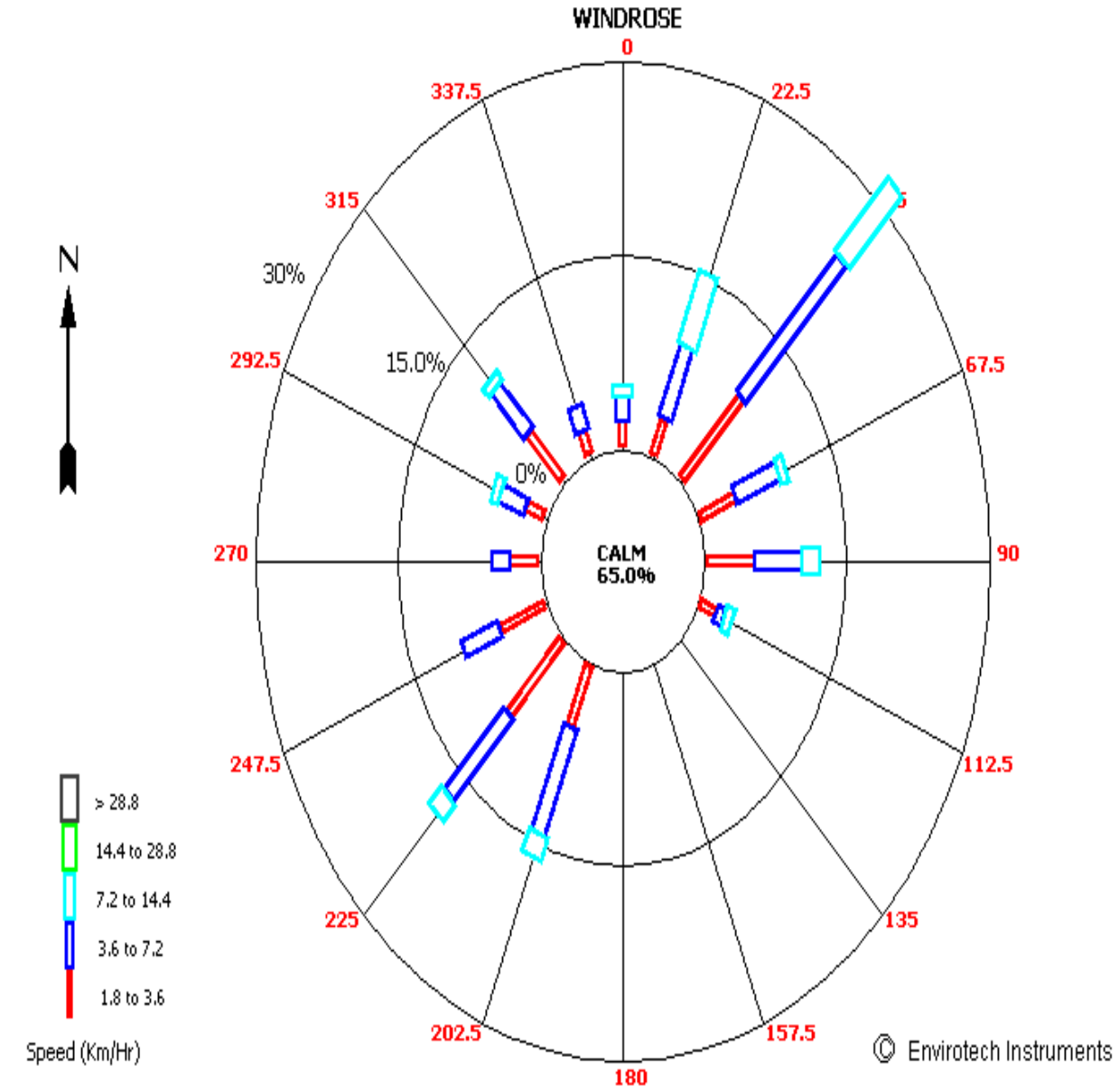
Date : 01/11/22 - 30/11/22

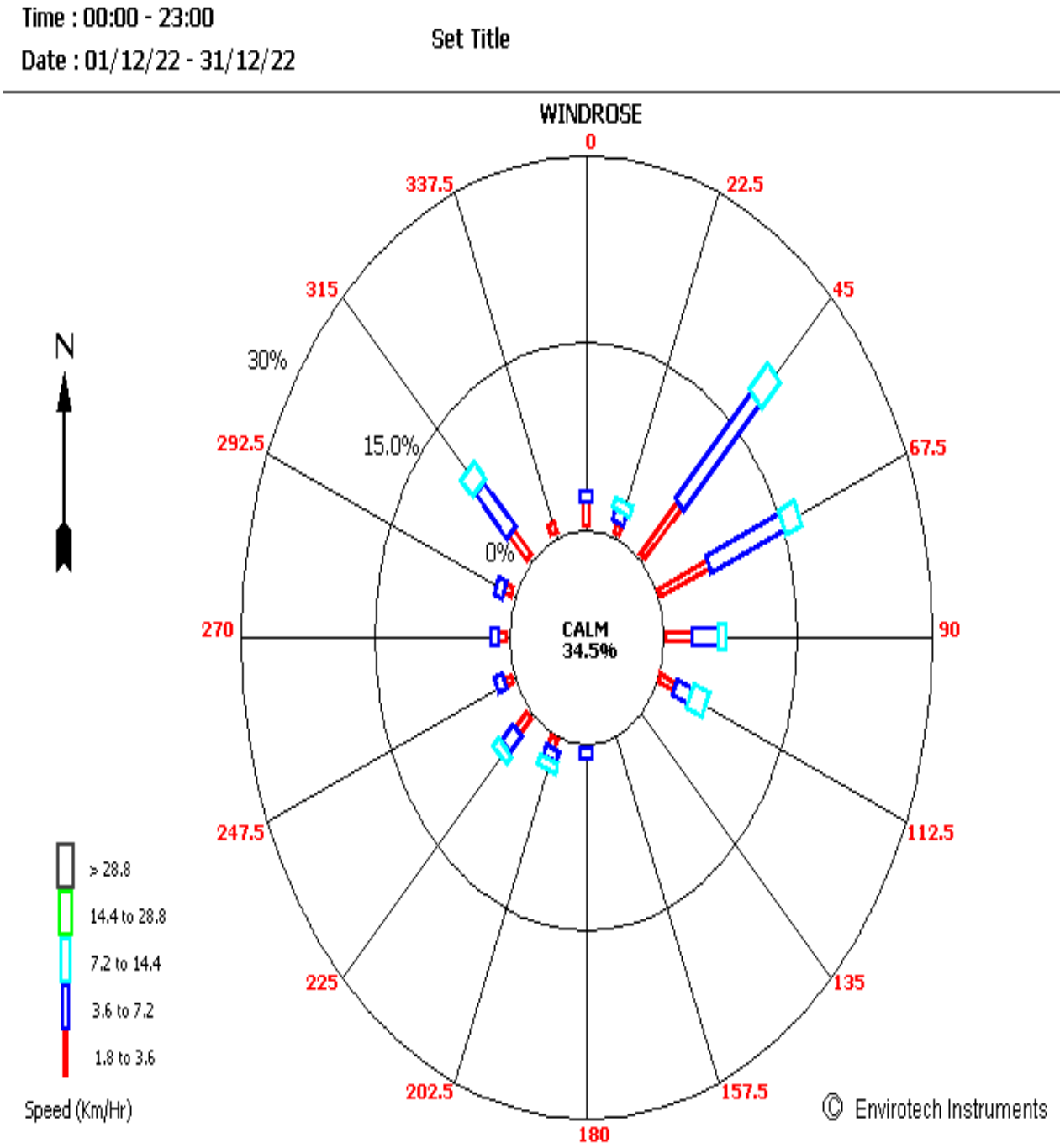
Set Title

ADANI POWER RAJ. LTD
KAWAI



AVERAGE DAILY METEROLOGICAL DATA OF DECEMBER -2022

Date	Temp (Deg C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
2022-12-01	15.2	26.5	31.5	74.3	0
2022-12-02	13.0	27.3	35.0	88.1	0
2022-12-03	15.3	26.1	39.0	81.5	0
2022-12-04	15.0	26.3	42.4	87.3	0
2022-12-05	16.1	26.4	49.0	80.4	0
2022-12-06	15.1	26.5	34.2	79.3	0
2022-12-07	13.0	27.6	27.4	89.2	0
2022-12-08	12.2	27.0	26.0	83.1	0
2022-12-09	13.0	27.6	31.3	84.2	0
2022-12-10	13.1	28.2	34.3	83.2	0
2022-12-11	13.5	28.2	40.4	93.1	0
2022-12-12	17.0	28.5	41.0	71.2	0
2022-12-13	19.0	28.1	30.3	66.4	0
2022-12-14	19.1	27.3	29.1	64.3	0
2022-12-15	16.0	28.5	36.6	88.1	0
2022-12-16	15.1	28.5	36.6	92.2	0
2022-12-17	14.0	27.3	43.4	93.1	0
2022-12-18	13.1	27.1	38.2	86.1	0
2022-12-19	13.4	27.5	36.1	87.4	0
2022-12-20	14.0	28.2	32.6	90.6	0
2022-12-21	16.1	29.1	37.1	75.6	0
2022-12-22	16.0	29.0	41.5	76.2	0
2022-12-23	16.0	27.4	50.1	79.5	0
2022-12-24	13.0	23.6	55.1	96.4	0
2022-12-25	11.0	23.4	32.3	88.3	0
2022-12-26	12.0	23.4	32.3	71.3	0
2022-12-27	11.4	23.0	38.0	87.5	0
2022-12-28	9.2	25.5	34.0	93.3	0
2022-12-29	12.2	28.3	29.1	89.2	0
2022-12-30	15.2	27.1	45.3	79.2	0
2022-12-31	12.1	23.3	48.1	91.0	0
Max.	**19.1**	**29.1**	**55.1**	**96.4**	**0**
Min.	**9.2**	**23.0**	**26.0**	**64.3**	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337.5
30%
15.0%
0%
N
CALM
34.5%
> 28.8
14.4 to 28.8
7.2 to 14.4
3.6 to 7.2
1.8 to 3.6
Speed (Km/Hr)
© Envirotech Instruments

AVERAGE DAILY METEROLOGICAL DATA OF JANUARY-2023

Date	Temp (Deg C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
2023-01-01	9.0	23.4	37.1	96.4	0
2023-01-02	10.2	22.3	40.0	96.2	0
2023-01-03	10.1	20.1	54.4	96.3	0
2023-01-04	7.2	20.1	54.4	96.1	0
2023-01-05	7.1	20.3	48.3	96.1	0
2023-01-06	6.1	21.3	42.0	96.1	0
2023-01-07	8.1	24.0	31.1	93.2	0
2023-01-08	9.1	26.0	33.0	93.6	0
2023-01-09	10.0	26.4	33.2	83.3	0
2023-01-10	10.4	27.3	34.1	92.1	0
2023-01-11	12.1	27.4	40.0	94.1	0
2023-01-12	12.3	20.3	56.0	91.4	0
2023-01-13	7.1	20.1	35.3	95.3	0
2023-01-14	14.0	27.5	46.3	84.5	0
2023-01-15	15.2	26.6	40.3	92.1	0
2023-01-16	8.1	21.5	32.1	89.2	0
2023-01-17	8.0	21.5	35.4	86.4	0
2023-01-18	9.2	23.5	23.1	81.2	0
2023-01-19	9.3	24.1	33.0	82.2	0
2023-01-20	11.6	25.0	44.0	75.2	0
2023-01-21	12.1	28.2	40.6	88.1	0
2023-01-22	15.1	26.2	57.3	93.5	0
2023-01-23	15.6	24.1	69.2	93.3	0
2023-01-24	15.2	25.5	64.0	96.6	0
2023-01-25	15.2	20.3	78.2	97.3	1.5
2023-01-26	14.0	21.3	74.1	97.1	0
2023-01-27	13.1	23.4	40.2	96.0	0
2023-01-28	9.0	25.4	36.2	96.2	0
2023-01-29	16.0	25.3	41.1	82.1	0
2023-01-30	15.0	22.0	59.2	97.0	8.5
2023-01-31	11.0	23.6	60.2	97.2	0
Max.	**16.1**	**28.2**	**78.2**	**97.3**	**10**
Min.	**6.1**	**20.1**	**23.1**	**75.2**	

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Date : 01/01/23 - 31/01/23

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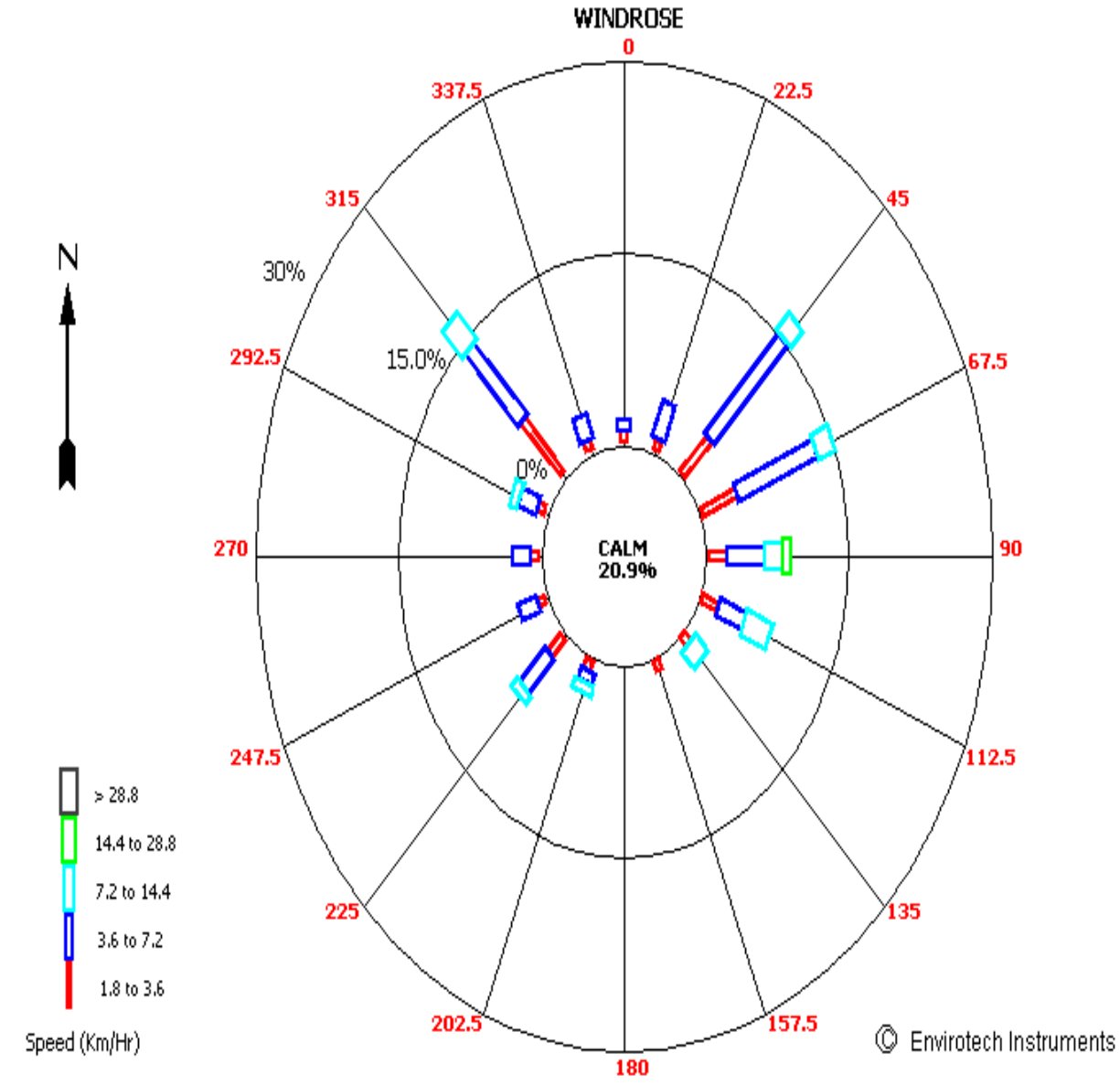
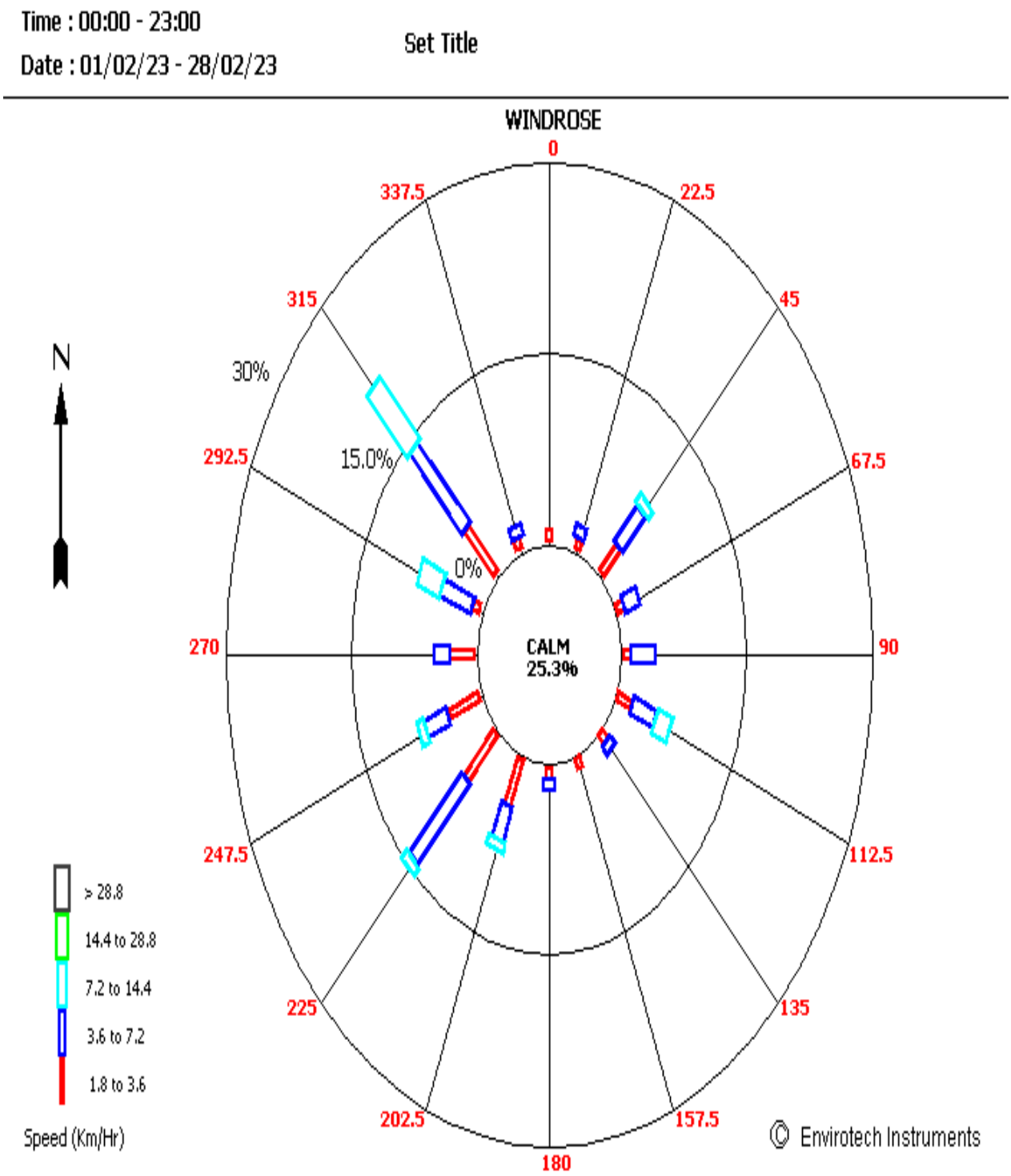


AVERAGE DAILY METEROLOGICAL DATA OF FEBRUARY- 2023

Date	Temp (Deg C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
2023-02-01	11.0	23.6	60.2	97.2	0
2023-02-02	8.2	26.2	33.3	95.1	0
2023-02-03	10.1	28.6	28.2	95.4	0
2023-02-04	11.2	28.2	30.1	91.2	0
2023-02-05	13.0	30.5	28.0	82.4	0
2023-02-06	15.1	31.6	28.0	77.1	0
2023-02-07	16.6	27.6	32.1	83.3	0
2023-02-08	12.0	28.5	26.3	89.0	0
2023-02-09	13.1	31.3	26.3	82.5	0
2023-02-10	17.1	33.2	23.2	64.1	0
2023-02-11	16.2	30.3	37.1	69.6	0
2023-02-12	14.2	29.4	20.6	88.4	0
2023-02-13	12.6	25.5	26.3	67.1	0
2023-02-14	11.0	29.4	20.6	84.2	0
2023-02-15	13.0	32.0	23.1	67.1	0
2023-02-16	15.3	33.0	22.1	73.4	0
2023-02-17	16.2	32.3	30.3	81.4	0
2023-02-18	15.4	33.3	30.2	87.0	0
2023-02-19	16.1	34.6	23.4	83.2	0
2023-02-20	18.1	35.2	21.1	63.4	0
2023-02-21	19.2	35.3	17.1	52.6	0
2023-02-22	18.1	36.0	26.4	64.2	0
2023-02-23	18.5	34.0	27.5	74.3	0
2023-02-24	19.0	34.1	24.0	76.2	0
2023-02-25	18.6	34.5	20.0	73.1	0
2023-02-26	18.1	35.0	18.3	70.1	0
2023-02-27	19.1	34.3	18.1	57.2	0
2023-02-28	19.1	35.4	21.1	63.3	0
Max.	**19.2**	**23.6**	**60.2**	**97.2**	**0**
Min.	**8.2**	**36.0**	**17.1**	**52.6**	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Date : 01/02/23 - 28/02/23
Set Title
WINDROSE
0
22.5
45
67.5
90
112.5
135
157.5
180
202.5
225
247.5
270
292.5
315
337.5
30%
15.0%
0%
CALM
25.3%
N
> 28.8
14.4 to 28.8
7.2 to 14.4
3.6 to 7.2
1.8 to 3.6
Speed (Km/Hr)
© Envirotech Instruments

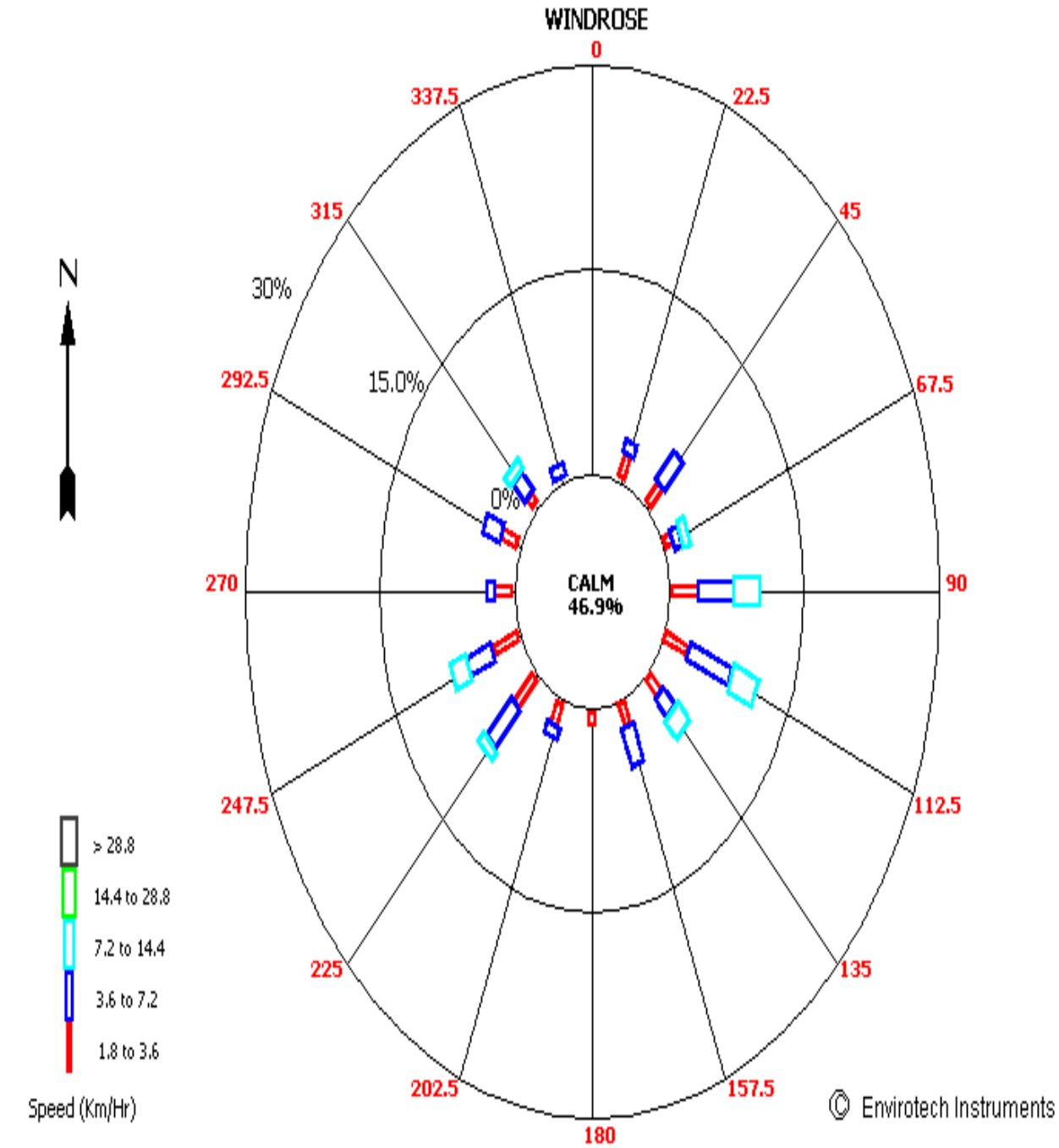
AVERAGE DAILY METEROLOGICAL DATA OF MARCH- 2023

Date	Temp (Deg C)		Relative Humidity (%)		Rainfall (mm)
	Min	Max	Min	Max	Total
2023-03-01	20.0	35.3	26.3	59.3	0
2023-03-02	20.2	36.4	25.2	73.0	0
2023-03-03	20.0	37.3	22.1	71.1	0
2023-03-04	21.1	33.3	29.1	63.0	0
2023-03-05	19.0	33.4	30.0	89.4	7
2023-03-06	18.2	42.3	31.6	82.1	8
2023-03-07	19.0	28.2	46.4	82.1	0
2023-03-08	17.1	32.3	30.4	87.5	0
2023-03-09	16.0	31.2	33.3	92.2	0
2023-03-10	18.1	31.6	26.1	81.5	0
2023-03-11	18.2	35.0	21.2	73.1	0
2023-03-12	20.1	36.3	18.0	66.2	0
2023-03-13	22.0	36.4	19.4	55.2	0
2023-03-14	21.2	36.1	18.6	57.6	0
2023-03-15	21.3	36.3	17.4	58.0	0
2023-03-16	22.1	34.2	23.3	55.6	0
2023-03-17	21.0	34.0	28.0	76.4	0.5
2023-03-18	20.2	32.3	31.3	89.5	0
2023-03-19	19.2	31.4	28.2	82.0	0
2023-03-20	19.0	30.4	38.2	96.3	19.5
2023-03-21	19.1	31.1	33.3	93.4	0
2023-03-22	18.3	30.3	32.5	90.3	0
2023-03-23	21.0	34.0	29.1	79.2	0
2023-03-24	22.0	34.1	29.0	69.1	0
2023-03-25	21.4	34.5	23.0	71.4	0
2023-03-26	21.0	35.3	20.5	65.1	0
2023-03-27	22.0	34.5	24.1	58.1	0
2023-03-28	22.2	36.0	20.2	54.2	0
2023-03-29	22.0	37.2	20.1	48.1	0
2023-03-30	24.1	34.4	23.2	61.2	0
2023-03-31	20.2	34.0	38.2	85.5	0
Max.	**24.1**	**42.3**	**46.4**	**96.3**	**35**
Min.	**16.0**	**28.2**	**17.4**	**48.1**	

Time : 00:00 - 09:00

Date : 01/03/23 - 31/03/23

Set Title



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 2022 to March 2023**

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 4.1 TECHNICAL PROTOCOLS USED FOR AMBIENT AIR QUALITY MONITORING.

S. No.	Parameter	Protocol Followed
1	Particulate Matter, $PM_{10,}$ µg/m^3	IS: 5182 (P-23)
2	Particulate Matter, $PM_{2.5,}$ µg/m^3	CPCB Guidelines (Gravimetric Method)
3	Nitrogen Dioxide (NO_2), µg/m^3	IS: 5182 (P-6)
4	Sulphur Dioxide (SO_2), µg/m^3	IS: 5182 (P-2)
5	Carbon Monoxide, µg/m^3	IS: 5182 (P-10)
6	Ammonia, µg/m^3	CPCB Guidelines
7	Ozone, µg/m^3	APHA 1977, Part819
8	Lead, µg/m^3	IS: 5182 (P-22)
9	Arsenic, ng/m^3	IS: 5182 (P-22)
10	Nickel, ng/m^3	IS: 5182 (P-22)
11	Benzene, µg/m^3	IS: 5182 (P-11)
12	Benzo-alfa-pyrene, ng/m^3	CPCB Guidelines
13	Mercury (Hg), ng/m^3	APHA 2012: 3112 B

4.1 AMBIENT AIR QUALITY RESULTS

The detailed on-site monitoring results of PM_{10}, $PM_{2.5}$, SOx, NOx and Hg are presented in table as given below:

TABLE 4.2: AMBIENT AIR QUALITY MONITORING RESULTS

Quarter III (October- 2022 to December- 2022)								
S. No.	**Parameter**	**West of Stack (Near Coal Handling Plant)**	**Southeast of Stack (Near CT 2)**	**Northeast of Stack (Near Reservior)**	**Sidni (Near Labour Colony)**	**Kawai Village**	**Mukhandpura**	**NAAQ Standard**
1	Particulate Matter, PM_{10}, $\mu g/m^3$	78.45	74.28	70.48	60.59	69.67	65.49	100
2	Particulate Matter, $PM_{2.5}$, $\mu g/m^3$	41.45	43.59	38.24	32.35	41.43	33.18	60
3	Nitrogen Dioxide (NO_2), $\mu g/m^3$	16.48	18.02	17.43	15.28	14.82	14.71	80
4	Sulphur Dioxide (SO_2), $\mu g/m^3$	7.83	8.29	8.07	5.16	7.02	5.06	80
5	Carbon Monoxide, $\mu g/m^3$	410	420	410	310	360	260	4000
6	Ammonia, $\mu g/m^3$	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	400
7	Ozone, $\mu g/m^3$	34.10	38.4	34.78	24.64	29.1	24.9	100
8	Lead, $\mu g/m^3$	0.18	0.2	0.18	0.11	0.14	0.16	1.0
9	Arsenic, ng/m^3	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	6.0
10	Nickel, ng/m^3	9.6	9.7	9.8	6.8	8.5	6.3	20
11	Benzene, $\mu g/m^3$	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^3	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^3	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)	-

Quarter IV (January-2023 to March- 2023)								
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, $PM_{10,}$ $\mu g/m^3$	80.22	82.04	83.87	70.79	66.26	74.22	100
2	Particulate Matter, $PM_{2.5,}$ $\mu g/m^3$	33.75	36.69	37.04	27.98	28.25	28.76	60
3	Nitrogen Dioxide (NO_2), $\mu g/m^3$	14.61	14.62	14.83	12.89	12.16	12.63	80
4	Sulphur Dioxide (SO_2), $\mu g/m^3$	7.45	7.56	8.08	6.07	5.6	7.67	80
5	Carbon Monoxide, $\mu g/m^3$	390	450	410	270	320	350	4000
6	Ammonia, $\mu g/m^3$	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	BDL (<10.0)	400
7	Ozone, $\mu g/m^3$	29.5	32.6	31.7	25.6	24.6	25.6	100
8	Lead, $\mu g/m^3$	0.15	0.12	0.1	0.1	0.12	0.09	1.0
9	Arsenic, ng/m^3	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	BDL (<2.0)	6.0
10	Nickel, ng/m^3	7.9	7.4	7.8	7.9	8.9	8.6	20
11	Benzene, $\mu g/m^3$	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^3	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^3	ND	ND	ND	ND	ND	ND	-

5 AMBIENT NOISE LEVEL

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

1. Day time shall mean from 6:00 am to 10:00 pm
2. Nighttime shall mean from 10:00 pm to 6:00 am.

TABLE 5.1: NOISE MONITORING RESULTS [INDUSTRIAL AREA]

Quarter III (October-2022 to December- 2022)		
Location	**Day Time Leq in dB(A)**	**Night-Time Leq in dB(A)**
West of Stack (Near Coal Handling Plant)	66.5	57.7
Southeast of Stack (Near CT 2)	68.8	60.2
Northeast of Stack (Near Reservoir)	65.5	57.6

Quarter IV (January-2023 to March- 2023)		
Location	**Day Time Leq in dB(A)**	**Night time Leq in dB(A)**
West of Stack (Near Coal Handling Plant)	67.6	59.6
Southeast of Stack (Near CT 2)	69.5	60.6
Northeast of Stack (Near Reservoir)	68.5	59.8

TABLE 5.2: NOISE MONITORING RESULTS [RESIDENTIAL AREA]

Quarter III (October- 2022 to December- 2022)		
Location	**Day Time Leq in dB(A)**	**Night-time Leq in dB(A)**
Sidni (Near Labour Colony)	53.3	43.2
Kawai Village	53.8	44.5
Mukhandpura	54.7	44.5

Quarter IV (January -2023 to March- 2023)		
Location	**Day Time Leq in dB(A)**	**Night-time Leq in dB(A)**
Sidni (Near Labour Colony)	51.4	39.8
Kawai Village	53.9	43.2
Mukhandpura	51.6	40.5

TABLE 5.3: NOISE MONITORING RESULTS [DG Set]

Quarter IV (January-2023 to March- 2023)			
Parameter	DG Set-I	DG Set-II	DG Set-III
Noise level (dB(A) (inside the acoustic enclosure Room)	103.4	102.4	102.7
Noise level 0.5m away from outside the engine room, (db) (Outside the acoustic enclosure)	73.2	73.8	72.3
Insertion Loss	30.2	28.6	30.4

6 STACK

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 2022 to March 2023.

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/ Nm^3	IS 11255 (P-1)
2	Sulphur dioxide (SO_2)	mg/ Nm^3	IS 11255 (P-2)
3	Oxide of nitrogen (NO_x),	mg/ Nm^3	IS:11255 (P-7)
4	Carbon monoxide (CO)	%	IS:13270-1992
5	Mercury as particulate (Hgp)	µg/m^3	USEPA-29

TABLE 6.2: STACK MONITORING RESULTS

S. No	Parameter	Unit	Quarter III (October- 2022 to December- 2022)	
			Unit-I	Unit-II
1	Exit Gas Velocity	m/sec	27.8	25.54
2	Flow Rate	Nm^3/hr	3462300.81	3148784.5
3	Particulate Matter (PM)	mg/Nm^3	36.06	39.86
4	Sulphur dioxide (SO_2)	mg/Nm^3	911	1031
5	Oxide of nitrogen (as NO_x) at 15 % O_2	mg/Nm^3	260	212
6	Mercury as particulate (Hgp)	µg/m3	0.005	0.01

S. No	Parameter	Unit	Quarter IV (January- 2023 to March- 2023)	
			Unit-I	Unit-II
1	Exit Gas Velocity	m/sec	41.44	30.38
2	Flow Rate	Nm^3/hr	3355039.35	3662263.26
3	Particulate Matter (PM)	mg/Nm^3	36.12	34.39
4	Sulphur dioxide (SO_2)	mg/Nm^3	864	880
5	Oxide of nitrogen (as NO_x) at 15 % O_2	mg/Nm^3	245	251
6	Mercury as particulate (Hgp)	µg/m3	BDL (<0.001)	BDL (<0.001)

TABLE 6.3: DG STACK MONITORING RESULTS

Parameter	Unit	Quarter III (October- 2022 to March- 2023)		
		DG Set-I	DG Set-II	DG Set-III
Particulate Matter (PM)	mg/Nm³	48.93	50.93	47.52
Oxide of Nitrogen (NOx) at15% O_2	ppmv	320	310	319
Carbon monoxide (CO)	mg/Nm³	120	110	115
NMHC as C at 15% O_2	mg/Nm³	42	45	43

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 October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 7.1.1: RESULTS OF GROUND WATER MONITORING

Quarter III (October- 2022 to December- 2022)									
S. No.	**Parameter**	**Near Labour Colony SE (Piezometer)**	**Salpura Village**	**Kawai Village**	**Phoolbaroda Village**	**Nimoda Village**	**Sidni Village**	**Baldevpura Village**	**NW of Ash Dyke near Nimoda Railway station (Piezometer)**
1	pH (at 25 °C)	6.69	6.96	7.75	7.35	6.87	7.35	6.64	6.78
2	Colour, Hazen	<5	<5	<5	<5	<5	<5	<5	<5
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity, NTU	3.9	< 0.1	BDL (<0.1)	0.4	<0.1	0.3	0.6	4.3
5	Total Dissolved Solids, mg/l	334	733	642	586	738	642	144	326
6	Electrical Conductivity, µS/cm	564	1203	962	905	1157	1044	229	522
7	Total Hardness (as $CaCO_3$), mg/l	225.24	357.69	307.69	338.46	388.35	276.92	79.61	233.01
8	Calcium (as Ca), mg/l	46.6	110.77	83.08	89.23	105.63	43.92	25.63	80.78
9	Magnesium (as Mg), mg/l	26.42	19.63	24.3	28.04	30.2	30.00	3.77	7.55

10	Chlorides (as Cl^-), mg/l	54.79	156.55	60.66	46.96	112.52	140.89	15.65	25.44
11	Sulphate (as SO_4), mg/l	102.50	75	49.66	42.33	310	80.00	22.16	53.66
12	Iron (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)	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)	BDL (<0.01)
14	Arsenic (as As), mg/l	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
15	Lead (as Pb), mg/l	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)
16	Silica (as SiO2) mg/l	10.48	15.43	25.24	24..00	9.33	14.81	14.38	14.24
17	Mercury, mg/l	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)
18	Appearance	Agreeable	Not Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
19	Appearance after Filtration	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
20	Methyl orange Alkalinity as CaCO3 mg/l	135.1	318.16	347.76	345.32	150.54	225.04	72.37	196.86
21	P- Alkalinity mg/l	ND	ND	ND	ND	ND	ND	ND	ND
22	Non-Carbonate Hardness (as CaCO3 mg/l	90.14	39.53	ND	ND	237.81	51.88	7.24	36.15
23	E coli MPN/100ml	ND	ND	ND	ND	ND	ND	ND	ND
24	Total coliform, MPN/100ml	ND	ND	ND	ND	ND	ND	ND	ND

Quarter IV (January-2023 to March-2023)									
S. No.	**Parameter**	**Near Labour Colony SE (Piezometer)**	**Salpura Village**	**Kawai Village**	**Phoolbaroda Village**	**Nimoda Village**	**Sidni Village**	**Baldevpura Village**	**NW of Ash Dyke near Nimoda Railway station (Piezometer)**
1	pH (at 25 °C)	6.82	8.04	7.91	7.74	7.64	7.63	7.84	7.23
2	Colour, Hazen	<5	<5	<5	<5	<5	<5	<5	<5
3	Odour	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Turbidity, NTU	2.3	BDL (<0.1)	< 0.1	< 0.1	4.8	< 0.1	< 0.8	0.7
5	Total Dissolved Solids, mg/l	157	292	526	446	788	664	146	326
6	Electrical Conductivity, µS/cm	236	495	888	731	1248	969	251	503
7	Total Hardness (as $CaCO_3$), mg/l	83.81	194.39	297.14	217.14	466.67	236.19	93.33	247.62
8	Calcium (as Ca), mg/l	19.81	41.87	73.14	57.9	106.67	56.38	27.43	79.24
9	Magnesium (as Mg), mg/l	8.33	21.8	27.77	17.59	48.6	23.14	6.02	12.03
10	Chlorides (as Cl^-), mg/l	11.01	30.63	42.11	38.29	110.07	76.57	15.31	12.44
11	Sulphate (as SO_4), mg/l	34.67	33.67	44.33	28.67	225.0	85.83	13.67	42.33
12	Iron (as Fe), mg/l	BDL (< 0.01)	0.03	BDL (< 0.01)	BDL (< 0.01)	0.06	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)	BDL (<0.01)
14	Arsenic (as As), mg/l	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)	BDL (<0.001)
15	Lead (as Pb), mg/l	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)	BDL (<0.01)

16	Silica (as SiO2) mg/l	6.0	15.25	22.75	25.0	8.05	15.20	13.30	8.16
17	Mercury, mg/l	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)	BDL (< 0.001)
18	Appearance	Not Agreeable	Agreeable	Agreeable	Agreeable	Not Agreeable	Agreeable	Agreeable	Not Agreeable
19	Appearance after Filtration	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
20	Methyl orange Alkalinity as CaCO3 mg/l	52.36	178.48	348.16	244.44	339.5	205.64	95.06	221.32
21	P- Alkalinity mg/l	ND	ND	ND	ND	ND	ND	ND	ND
22	Non-Carbonate Hardness (as CaCO3 mg/l	31.45	15.91	ND	ND	127.17	30.55	ND	26.3
23	E coli MPN/100ml	ND	ND	ND	ND	ND	ND	ND	ND
24	Total coliform, MPN/100ml	ND	ND	ND	ND	ND	ND	ND	ND

7.2 SURFACE WATER:

TABLE 7.2.1: RESULTS OF SURFACE WATER MONITORING

Quarter III (October-2022 to December- 2022)				
S. No.	**Parameter**	**Barlan Pond**	**Kawai Pond**	**Parvan River**
1	pH (at 25 °C)	8.43	8.23	8.36
2	Colour, Hazen	<5	<5	<5
3	Odour	Agreeable	Agreeable	Agreeable
4	Turbidity, NTU	0.8	3.9	1.2
5	Total Dissolved Solids, mg/l	122	435	313
6	Electrical Conductivity, µS/cm	207	701	505
7	Total Hardness (as $CaCO_3$), mg/l	41.75	174.76	205.83
8	Calcium (as Ca), mg/l	8.93	43.5	46.6
9	Magnesium (as Mg), mg/l	4.72	16.04	21.7
10	Chlorides (as Cl^-), mg/l	10.76	91.97	29.35
11	Sulphate (as SO_4), mg/l	1.5	29.33	26.33
12	Iron (as Fe), mg/l	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)
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	1.05	7.1	24.90
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	Agreeable	Agreeable
20	Methyl orange Alkalinity as CaCO3 mg/l	76.23	247.04	208.44
21	P- Alkalinity mg/l	5.79	ND	5.79
22	Non-Carbonate Hardness (as CaCO3 mg/l	ND	ND	ND
23	E coli MPN/100ml	ND	ND	ND
24	Total coliform, MPN/100ml	ND	ND	ND

Quarter IV (January- 2023 to March- 2023)				
S. No.	**Parameter**	**Barlan Pond**	**Kawai Pond**	**Parvan River**
1	pH (at 25 °C)	8.47	8.14	8.11
2	Colour, Hazen	<5	<5	<5
3	Odour	Agreeable	Agreeable	Agreeable
4	Turbidity, NTU	4.5	4.2	1.6
5	Total Dissolved Solids, mg/l	138	516	336
6	Electrical Conductivity, µS/cm	216	819	511
7	Total Hardness (as $CaCO_3$), mg/l	62.86	167.62	163.81
8	Calcium (as Ca), mg/l	8.38	36.57	42.67
9	Magnesium (as Mg), mg/l	10.18	18.51	13.88
10	Chlorides (as Cl^-), mg/l	18.19	111.03	34.46
11	Sulphate (as SO_4), mg/l	2.17	25.67	25.33
12	Iron (as Fe), mg/l	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)
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	1.65	6.0	24.50
17	Mercury, mg/l	BDL (< 0.01)	BDL (< 0.001)	BDL (< 0.001)
18	Appearance	Not Agreeable	Not Agreeable	Agreeable
19	Appearance after Filtration	Agreeable	Agreeable	Agreeable
20	Methyl orange Alkalinity as CaCO3 mg/l	97.00	213.4	225.04
21	P- Alkalinity mg/l	27.16	ND	ND
22	Non-Carbonate Hardness (as CaCO3 mg/l	ND	ND	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 October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 8.1: RESULTS OF STP WATER

Quarter III (October- 2022 to December-2022)											
S. No.	**Parameter**	**45 KLD Adani Vidhayala 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 Township New**	**10KLD III Guest House**	**10KLD 3 BHK**	**60KLD STP in Township (Old)**	**10KLD Health centre**
1	pH (at 25°C)	7.31	7.15	7.25	7.27	7.31	7.37	7.08	7.55	7.18	7.24
2	Total Suspended Solid (TSS) mg/l	10	12	26	25	9	28	7	15	32	24
3	Nitrate Nitrogen mg/l	5.5	6.5	6.76	6.63	4.53	6.74	5.17	3.53	6.84	5.22
4	Ammonical Nitrogen (as NH_3-N) mg/l	5.64	4.30	3.76	6.13	6.87	4.56	6.60	5.37	6.17	6.18
5	Biochemical Oxygen Demand (BOD) mg/l	12.67	8.11	12.83	8.57	10.75	7.29	6.29	7.83	7.13	10.5
6	Chemical Oxygen Demand (COD) mg/l	71.81	65.28	100.06	60.38	75.07	40.18	48.96	55.49	52.77	85.57
7	Total Kjeldahl Nitrogen mg/l	13.21	10.18	18.27	16.82	15.95	14.25	11.28	13.70	24.15	18.74
8	Oil & Grease mg/l	3	3	5	3	3	3	3	3	3	4
9	Free Available Chlorine mg/l	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)
10	Bioassay Test	100% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution

Quarter IV (January-2023 to March-2023)											
S. No.	**Parameter**	**45 KLD Adani Vidhayala 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 Township New**	**10KLD III Guest House**	**10KLD 3 BHK**	**60KLD STP in Township (Old)**	**10KLD Health Centre**
1	pH (at 25°C)	7.18	7.19	7.32	7.5	7.54	7.61	7.28	7.12	7.65	7.52
2	Total Suspended Solid (TSS) mg/l	21.0	14.0	38.0	29.0	13.0	25.0	36.0	40.0	18.0	25.0
3	Nitrate Nitrogen mg/l	6.28	5.35	5.94	7.04	5.67	5.59	6.97	5.66	5.74	6.09
4	Ammonical Nitrogen (as NH_3-N) mg/l	6.48	7.23	7.41	7.74	7.95	6.08	9.45	14.81	7.91	7.66
5	Biochemical Oxygen Demand (BOD) mg/l	12.5	9.0	15.0	10.8	12.0	9.0	22.0	18.75	13.67	11.0
6	Chemical Oxygen Demand (COD) mg/l	87.26	61.66	120.7	80.8	93.73	67.87	168.96	147.2	109.89	74.34
7	Total Kjeldahl Nitrogen mg/l	12.74	6.39	23.08	21.72	18.74	16.82	17.45	38.66	19.72	21.49
8	Oil & Grease mg/l	4	3	5	4	3	4	5	5	4	3
9	Free Available Chlorine mg/l	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	0.2	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)	BDL (<0.1)
10	Bioassay Test	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution	80% Survival of Fish after 96 hours in 100% dilution	90% Survival of Fish after 96 hours in 100% dilution	100% Survival of Fish after 96 hours in 100% dilution

9 ETP WATER

The measurements were conducted during the period of October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 9.1: RESULTS OF ETP OUTLET

S. No.	Parameter	Unit	Quarter III (October-2022 to December-2022)
1	pH	-	7.37
2	Total Suspended Solids (TSS)	mg/l	10
3	Outlet Temperature	ºC	21
4	Chemical Oxygen Demand (COD), mg/l	mg/l	27.5
5	Copper (as Cu), mg/l	mg/l	BDL (<0.01)
6	Iron (as Fe) mg/l	mg/l	0.03
7	Zinc (as Zn) mg/l	mg/l	0.02
8	Phosphate (as P), mg/l	mg/l	0.08
9	Oil & Grease, mg/l	mg/l	2
10	Sulphide	mg/l	BDL (<0.1)
11	Free Available Chlorine	mg/l	BDL (<0.1)

S. No.	Parameter	Unit	Quarter IV (January 2023 to March 2023)
1	pH	-	7.52
2	Total Suspended Solids (TSS)	mg/l	19
3	Outlet Temperature	ºC	25
4	Chemical Oxygen Demand (COD), mg/l	mg/l	36.74
5	Copper (as Cu), mg/l	mg/l	0.05
6	Iron (as Fe) mg/l	mg/l	BDL (<0.01)
7	Zinc (as Zn) mg/l	mg/l	BDL (<0.01)
8	Phosphate (as P), mg/l	mg/l	0.52
9	Oil & Grease, mg/l	mg/l	2
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 October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 10.1: RESULTS OF ASH RECOVERY WATER Sample

S. No.	Parameter	Units	Quarter III (October- 2022 to December- 2022)	
			Ash Recovery Pump House 1	Ash Recovery Pump House 2
1	Lead (as Pb)	mg/l	BDL (<0.01)	BDL (<0.01)
2	Arsenic (as As)	mg/l	BDL (<0.001)	BDL (<0.001)
3	Total Chromium (as Cr)	mg/l	BDL (<0.01)	BDL (<0.01)
4	Cadmium (as Cd)	mg/l	BDL (<0.001)	BDL (<0.001)
5	Mercury (as Hg)	mg/l	BDL (<0.001)	BDL (<0.001)

S. No.	Parameter	Units	Quarter IV (January 2023 to March-2023)	
			Ash Recovery Pump House 1	Ash Recovery Pump House 2
1	Lead (as Pb)	mg/l	BDL (<0.01)	BDL (<0.01)
2	Arsenic (as As)	mg/l	BDL (<0.001)	BDL (<0.001)
3	Total Chromium (as Cr)	mg/l	BDL (<0.01)	BDL (<0.01)
4	Cadmium (as Cd)	mg/l	BDL (<0.001)	BDL (<0.001)
5	Mercury (as Hg)	mg/l	BDL (<0.001)	BDL (<0.001)

11 FLY ASH [SILO]

The measurements were conducted during the period of October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 11.1: RESULTS OF FLY ASH SAMPLE (Unit I)

S. No.	Parameter	Unit	Quarter III (October- 2022 to December- 2022)
1	Arsenic (As)	mg/kg	BDL (<0.001)
2	Mercury (Hg)	mg/kg	BDL (<1)
3	Lead as Pb	%	0.0018
4	Total Chromium as Cr	mg/kg	BDL (<0.001)

S. No.	Parameter	Unit	Quarter IV (January- 2023 to March- 2023)
1	Arsenic (As)	mg/kg	BDL (<0.001)
2	Mercury (Hg)	mg/kg	BDL (<0.001)
3	Lead as Pb	mg/kg	BDL (<0.001)
4	Total Chromium as Cr	mg/kg	BDL (<0.001)

TABLE 11.2: RESULTS OF FLY ASH SAMPLE (Unit II)

S. No.	Parameter	Unit	Quarter III (October- 2022 to December- 2022)
1	Arsenic (As)	mg/kg	BDL (<0.001)
2	Mercury (Hg)	mg/kg	BDL (<1)
3	Lead as Pb	%	0.0014
4	Total Chromium as Cr	mg/kg	BDL (<0.001)

S. No.	Parameter	Unit	Quarter IV (January- 2023 to March- 2023)
1	Arsenic (As)	mg/kg	BDL (<0.001)
2	Mercury (Hg)	mg/kg	BDL (<0.001)
3	Lead as Pb	mg/kg	BDL (<0.001)
4	Total Chromium as Cr	mg/kg	BDL (<0.001)

12 SOIL

The measurements were conducted during the period of October 2022 to March 2023. The parameters covered in the monitoring are depict below:

TABLE 12.1: RESULTS OF SOIL MONITORING

S. No.	Parameter	Quarter III (October- 2022 to December- 2022)		
		Nimoda Village	Kawai Village	Phulbaroda Village
1	Boron [mg/kg]	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)
2	Calcium as CaO [%]	1.30	1.19	2.11
3	Magnesium as MgO [%]	0.73	0.74	1.65
4	Potassium as K2O [%]	0.40	0.32	0.28
5	Iron as Fe [%]	1.24	2.01	1.28
6	Manganese as Mn [ppm]	711	0.08	682
7	Phosphorus [ppm]	11	15	12

S. No.	Parameter	Quarter IV (January- 2023 to March-2023)		
		Nimoda Village	Kawai Village	Phulbaroda Village
1	Boron [mg/kg]	BDL (<1.0)	BDL (<1.0)	BDL (<1.0)
2	Calcium as CaO [%]	2.40	0.42	2.37
3	Magnesium as MgO [%]	1.33	0.60	1.82
4	Potassium as K2O [%]	0.32	0.25	0.45
5	Iron as Fe [%]	1.60	0.98	1.62
6	Manganese as Mn [ppm]	479	329	682
7	Phosphorus [ppm]	13	11	10

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2022-10-01 00:00:00	44.12	42.13
2022-10-02 00:00:00	44.81	42.45
2022-10-03 00:00:00	44.33	42.37
2022-10-04 00:00:00	44.88	42.37
2022-10-05 00:00:00	44.69	42.39
2022-10-06 00:00:00	44.58	42.42
2022-10-07 00:00:00	45.22	42.63
2022-10-08 00:00:00	45.19	42.64
2022-10-09 00:00:00	45.75	42.6
2022-10-10 00:00:00	44.99	42.3
2022-10-11 00:00:00	44.37	42.22
2022-10-12 00:00:00	43.77	42.03
2022-10-13 00:00:00	43.75	42.09
2022-10-14 00:00:00	43.33	42.06
2022-10-15 00:00:00	45.01	42.27
2022-10-16 00:00:00	45.85	42.37
2022-10-17 00:00:00	44.39	42.04
2022-10-18 00:00:00	43.97	41.92
2022-10-19 00:00:00	43.94	41.88
2022-10-20 00:00:00	43.81	42.04
2022-10-21 00:00:00	44.61	42.07
2022-10-22 00:00:00	44.64	42.01
2022-10-23 00:00:00	45.33	42.12
2022-10-24 00:00:00	45.64	42.29
2022-10-25 00:00:00	46.05	42.29
2022-10-26 00:00:00	44.69	42.01
2022-10-27 00:00:00	43.71	41.89
2022-10-28 00:00:00	42.61	41.83
2022-10-29 00:00:00	43.25	41.64
2022-10-30 00:00:00	43.72	41.64
2022-10-31 00:00:00	44.29	41.77
Min	**42.61**	**41.64**
Max	**46.05**	**42.64**
Avg.	**44.49**	**42.15**

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2022-11-01 00:00:00	45.04	41.95
2022-11-02 00:00:00	43.56	41.76
2022-11-03 00:00:00	44.53	41.86
2022-11-04 00:00:00	43.84	41.75
2022-11-05 00:00:00	42.57	41.35
2022-11-06 00:00:00	42.42	41.35
2022-11-07 00:00:00	42.44	38.53
2022-11-08 00:00:00	42.93	30.3
2022-11-09 00:00:00	40.75	30.75
2022-11-10 00:00:00	38.7	31.31
2022-11-11 00:00:00	31.31	30.83
2022-11-12 00:00:00	35.36	30.1
2022-11-13 00:00:00	35.05	30.02
2022-11-14 00:00:00	34.73	32.37
2022-11-15 00:00:00	36.35	32.14
2022-11-16 00:00:00	35.44	29.58
2022-11-17 00:00:00	36.55	31.94
2022-11-18 00:00:00	42.08	31.2
2022-11-19 00:00:00	37.03	30.73
2022-11-20 00:00:00	35.44	32.17
2022-11-21 00:00:00	35.16	33.05
2022-11-22 00:00:00	41.36	32.1
2022-11-23 00:00:00	38.79	32.25
2022-11-24 00:00:00	42.94	32.36
2022-11-25 00:00:00	40.14	31.78
2022-11-26 00:00:00	36.77	33.32
2022-11-27 00:00:00	37.27	33.36
2022-11-28 00:00:00	39.4	33.43
2022-11-29 00:00:00	40.7	32.72
2022-11-30 00:00:00	40.86	35.25
Min	**31.31**	**29.58**
Max	**45.04**	**41.95**
AVG	**39.32**	**34.05**

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2022-12-01 00:00:00	29.42	32.28
2022-12-02 00:00:00	37.07	31.67
2022-12-03 00:00:00	34.87	31.96
2022-12-04 00:00:00	27.72	32.37
2022-12-05 00:00:00	31.98	31.14
2022-12-06 00:00:00	32.27	32.53
2022-12-07 00:00:00	29.96	33.07
2022-12-08 00:00:00	39.12	31.75
2022-12-09 00:00:00	37.06	31.44
2022-12-10 00:00:00	29.72	32.79
2022-12-11 00:00:00	29.89	32.96
2022-12-12 00:00:00	37.7	32.01
2022-12-13 00:00:00	34.79	32.64
2022-12-14 00:00:00	37.73	32.64
2022-12-15 00:00:00	32.96	32.85
2022-12-16 00:00:00	36.22	31.69
2022-12-17 00:00:00	36.02	32.06
2022-12-18 00:00:00	31.13	31.44
2022-12-19 00:00:00	33.73	31.54
2022-12-20 00:00:00	37.45	31.73
2022-12-21 00:00:00	36.72	31.86
2022-12-22 00:00:00	33.65	31.95
2022-12-23 00:00:00	36.64	31.67
2022-12-24 00:00:00	31.68	34.29
2022-12-25 00:00:00	31.91	32.26
2022-12-26 00:00:00	38.75	31.63
2022-12-27 00:00:00	42.11	32.71
2022-12-28 00:00:00	39.63	32.94
2022-12-29 00:00:00	41.71	35.62
2022-12-30 00:00:00	40.36	36.86
2022-12-31 00:00:00	40.55	35.51
MIN	**27.72**	**31.14**
Max	**42.11**	**36.86**
AVG	**35.18**	**32.58**

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2023-01-01 00:00:00	38.89	34.29
2023-01-02 00:00:00	41.84	36.59
2023-01-03 00:00:00	42.14	36.78
2023-01-04 00:00:00	43.51	40.00
2023-01-05 00:00:00	41.61	40.15
2023-01-06 00:00:00	41.61	39.56
2023-01-07 00:00:00	43.43	40.19
2023-01-08 00:00:00	43.5	40.67
2023-01-09 00:00:00	43.73	40.47
2023-01-10 00:00:00	43.86	41.03
2023-01-11 00:00:00	43.18	40.73
2023-01-12 00:00:00	44.66	42.14
2023-01-13 00:00:00	42.48	41.68
2023-01-14 00:00:00	43.72	39.47
2023-01-15 00:00:00	42.67	38.17
2023-01-16 00:00:00	43.26	40.85
2023-01-17 00:00:00	41.74	39.38
2023-01-18 00:00:00	42.12	40.6
2023-01-19 00:00:00	43.01	40.29
2023-01-20 00:00:00	44.33	41.03
2023-01-21 00:00:00	40.22	40.33
2023-01-22 00:00:00	43.15	39.95
2023-01-23 00:00:00	43.73	39.49
2023-01-24 00:00:00	44.39	40.55
2023-01-25 00:00:00	40.63	40.08
2023-01-26 00:00:00	36.05	38.95
2023-01-27 00:00:00	44.07	39.46
2023-01-28 00:00:00	43.56	40.35
2023-01-29 00:00:00	43.46	40.56
2023-01-30 00:00:00	43.89	39.61
2023-01-31 00:00:00	44.41	40.87
Min	**36.05**	**34.29**
Max	**44.66**	**42.14**
Avg.	**42.67**	**39.82**

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2023-02-01 00:00:00	44.8	41.35
2023-02-02 00:00:00	44.39	40.36
2023-02-03 00:00:00	43.69	40.81
2023-02-04 00:00:00	44.1	41.23
2023-02-05 00:00:00	43.38	40.5
2023-02-06 00:00:00	44.18	41.22
2023-02-07 00:00:00	45.05	41.3
2023-02-08 00:00:00	44.77	41.11
2023-02-09 00:00:00	44.95	41.34
2023-02-10 00:00:00	45.61	41.02
2023-02-11 00:00:00	45.44	40.94
2023-02-12 00:00:00	39.98	42.34
2023-02-13 00:00:00	Power Issue	41.89
2023-02-14 00:00:00	44.09	41.8
2023-02-15 00:00:00	45.61	41.39
2023-02-16 00:00:00	44.48	41.16
2023-02-17 00:00:00	45.28	41.71
2023-02-18 00:00:00	44.62	41.86
2023-02-19 00:00:00	38.46	42.19
2023-02-20 00:00:00	42.08	41.71
2023-02-21 00:00:00	45.92	40.08
2023-02-22 00:00:00	44.54	40.05
2023-02-23 00:00:00	41.63	41.18
2023-02-24 00:00:00	44.37	41.26
2023-02-25 00:00:00	45.99	13.47
2023-02-26 00:00:00	45.48	SD
2023-02-27 00:00:00	45.64	SD
2023-02-28 00:00:00	42.49	SD
Min	**38.46**	**13.47**
Max	**45.99**	**42.34**
AVG	**44.11**	**40.13**

ADANI POWER LIMITED
2X660 MW KAWAI THERMAL POWER STATIONS

CONTINOUS EMISSION MONITORING RESULTS		
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^3)	**PM (mg/Nm^3)**
2023-03-01 00:00:00	34.07	42.63
2023-03-02 00:00:00	31.39	39.5
2023-03-03 00:00:00	35.52	SD
2023-03-04 00:00:00	37.4	SD
2023-03-05 00:00:00	32.96	SD
2023-03-06 00:00:00	36.57	SD
2023-03-07 00:00:00	28.14	42.44
2023-03-08 00:00:00	29.71	SD
2023-03-09 00:00:00	33.66	SD
2023-03-10 00:00:00	42.68	SD
2023-03-11 00:00:00	42.59	42.74
2023-03-12 00:00:00	43.27	42.99
2023-03-13 00:00:00	43.84	42.91
2023-03-14 00:00:00	43.52	42.28
2023-03-15 00:00:00	41.41	42.73
2023-03-16 00:00:00	35.33	42.13
2023-03-17 00:00:00	29.38	31.37
2023-03-18 00:00:00	30.24	RSD
2023-03-19 00:00:00	20.46	RSD
2023-03-20 00:00:00	RSD	RSD
2023-03-21 00:00:00	RSD	RSD
2023-03-22 00:00:00	RSD	RSD
2023-03-23 00:00:00	RSD	RSD
2023-03-24 00:00:00	RSD	RSD
2023-03-25 00:00:00	RSD	RSD
2023-03-26 00:00:00	RSD	RSD
2023-03-27 00:00:00	RSD	RSD
2023-03-28 00:00:00	RSD	RSD
2023-03-29 00:00:00	RSD	RSD
2023-03-30 00:00:00	RSD	40.25
2023-03-31 00:00:00	RSD	RSD
MIN	**20.46**	**31.37**
Max	**43.84**	**42.99**
AVG	**35.38**	**41.09**

Annexure – II

ADANI POWER LIMITED

GROUND WATER LEVEL MONITORING RESULTS

LOCATION: Piezometric Wells Along with Ash Pond

S. No.	Month & Year	Ground Water Table (BGL)		
		Location: 1	Location: 2	Location: 3
1.	October-2022	7.5 Meter	12.0 Meter	13.0 Meter
2.	November-2022	8.9 Meter	15.5 Meter	14.5 Meter
3.	Decemebr-2022	10.5 Meter	17.5 Meter	19.0 Meter
4.	January-2023	13.4 Meter	22.5 Meter	21.5 Meter
5.	February-2022	17.5 Meter	24.5 Meter	23.0 Meter
6.	March-2023	18.5 Meter	27.0 Meter	25.5 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								
Adani Power Limited								
2 x 660 MW Kawai Thermal Power Plant								
Ash Generation, Utilization and Disposal Details (MT/Month)								
S. No.	**Month**	**Total Ash Generation**	**ASH UTILIZATION**			**Dispoal In Ash Dyke**	**Total Ash Utilization**	**Percentage of Ash utilization**
			For Brick Construction	**For Cement Manufacturing**	**Reclamation of Low Lying area**			
1	Apr-22	153754	47905	99934	11000	0.00	158839	103.31
2	May-22	149207	24805	73892	55740	0.00	154437	103.51
3	Jun-22	116895	3575	97522	6800	0.00	107897	92.30
4	Jul-22	124380	0	103614	10000	0.00	113764	91.46
5	Aug-22	62397	0	55614	1500	0.00	57114	91.53
6	Sep-22	98062	0	80075	3000	0.00	83075	84.72
7	Oct-22	121272	0	90565	7000	0.00	97565	80.45
8	Nov-22	126168	32120	100436	5400	0.00	137956	109.34
9	Dec-22	111885	47277	89069	3500	0.00	139846	124.99
10	Jan-23	122253	32368	92314	2000	0.00	126682	103.62
11	Feb-23	109497	33768	82167	2300	0.00	118235	107.98
12	Mar-23	63794	23520	52169	5725	0.00	85239	133.62
Total		**1359565**	**245338**	**1017371**	**113965**	**0.00**	**1380649**	**101.55**

Adani Power Limited

Annexure: IV

Greenbelt Details:

Area (ha)	No. of Trees Planted	No. of Shrubs Planted
118.0	1,20,812	1,76,000

PLANTED SPECIES IN AND AROUND PLANT PREMISES

Sr. No.	Scientific Name	Common Name
Tress		
1.	Azadirachta indica	Neem
2.	Bauhinia blakeana	Kachnar
3.	Callistemon viminalis	Pink Bottle brush
4.	Casuarina equisetifolia	Saru/Casuarina
5.	Delonix regia	Gulmohar
6.	Phoenix dactylifera	Date Palm
7.	Punica granatum	Pomegranate
8.	Emblica officinalis	Aamla
9.	Eucalyptus hybrid	Eucalyptus
10.	Mangifera indica	Aam/ Mango
11.	Polyalthia longifolia	Ashok/ False Ashok
12.	Psidium guajava	Guava
13.	Syzygium cumini	Jamun
14.	Washingtonia filifera	Washingtonia Palm
15.	Wodyetia bifurcata	Palm
16.	Cassia seamia	Cassia
17.	Albizzia leebeck	Siris
18.	Pongamia pinnata	Karanj
19.	Cordia longifolia	Lasoora
20.	Aegle Marmelos	Bel
21.	Dalbergia sissoo	Shisham
22.	Ficus religiosa	Peepal
23.	Cassia renigera	Cassia
24.	Parkinsonia sp.	Parkinsonia
25.	Cassia 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 Trumpetbush
44.	Ziziphus mauritiana	Ber/Bor/Indian plum

adani

Foundation

Corporate Social Responsibility

Six-month Report (October 2022- March 2023)

Adani Power Rajasthan Limited, Kawai

Overview of Kawai Site

At present we are working in 28 villages, 14 Gram Panchayats, 1 Block of district Baran.
8,475 household, 42,834 population , 32 Schools, 45 Aanganwadi's, 1 District Hospital, 2 CHC, and 2 PHC.

Cluster details: All 28 village divided in to 4 clusters.

Cluster One (Core Zone)	Cluster Two (Pipe Line Zone)	Cluster Three (Anicut Area)	Cluster Four (Buffer Zone)
• Chatrapura • Baldevpura • Dhara • Nimoda • Khedligaddiyan • Salpura • Kawai • Mukundpura	• Sodalehri • Kharkhada Ramlothan • Dadwara • Bamori • Chothya • Mytha • Hatidilod • Phoollbaroda • Zarkhand	• Atru • Aton • Baldevpura (anicut) • Kunjer	• Aamapura • Bamapura • Lolahedi • Sindhani • Haniheda • Barla • Khedli bansla

Education

JNV coaching classes:

- Total 3 JNV coaching center running at Kawai, Atru & K.Ramlothan; 80 students taking coaching after selection from 120 enrolment.
- Periodic meeting with parents, weekly test, refreshment and guest lecture arrange for JNV coaching students.
- In final Parents meeting Station head APRL, Sarpanch, Principals of JNV, Model school and Mahtma Gandhi English school interacted with coaching students and their parents.

Library setup in 9 schools:

- Provide library furniture to 9 Govt. Sr. sec. schools. All school arranged library inaugural ceremony with Annual function.
- SDM, Pradhan, CBEO, Sarpanch, public leaders, school staff and all community key person appreciate this initiative and handover Appreciation certificate to program officer.

UDAAN:

- 10 exposure visits conducted with 527 participants. Reach to 113% of total target.
- Total Rs. 37170/- revenue generated and reach to 160% of total target.

UDAAN- Particulars	Consolidated 2022-23	Consolidated Project Start to Till Month
No. of Visits	30	213
No. of Beneficiary	1581	12966
Revenue collection (Rs.)	96111	207611

Sports training and competition: Total 3697 players benefited.

- District level tournament- 215 player from 19 teams.
- State level tournaments- 2124 player from 144 teams.
- Support to open Kawai cricket tournament and recognize to winners with Adani cup.
- With support of Adani total 30 player participated in State level tournaments in various games.
- Organize an event at APRL and recognize to players and their coach in presence of Station head and RBNQA assessor.

Provide Roti making machine to JNV Atru:

- Automatic Chapati Making Machine with Capacity of 2000 Roti / hour; Serving benefits to 571 students with hot and soft roti in hygienic way.

Extracurricular activities with nearby schools:

- Solar lamp distribution to Girls students of Dhara gram panchayat.
- Attended Republic day and Annual function program in various schools like- JNV atru, Govt. school Dhara, Aton, Barla and Kanvarpura.
- Celebrated Road safety week and organize awareness session and poster competition with 200 students at Govt. school Dhara.

Education

Meeting for JNV coaching

JNV coaching classes

Library inauguration

Library @Dilidhathi

Station head @ UDAAN visit

State level games @Baran

State level selected players

Solar lamp distribution

Adani Vidyalaya, Kawai

- **Academic activities:**
  - Students participated in Hummingbird and Science Olympiad examination 2022.
  - Certificate distributed to children of various competitions and activities.
  - Students visited to Daily need shop for money and product knowledge.
  - Prize distribution of IGKO Olympiad examination.
  - Conduct Extra classes for Humming-Bird Level-2 examination.
  - FINAL BID ADIEU to class 5th : Cultural program and farewell party organized for 5th class students.
  - Students participated in various activities and select Miss & Mr. AVK.
  - As schedule Parents Teachers Meeting conducted. PA-3 and PA -4 papers were shown to the parents.
  - Result declared and organize exhibition of Art-Craft and other activities as prepare by students in this academic session.
- **Event celebration and extracurricular activities @ AVK:**
  - All National days, Occasion and Festivals celebrated @AVK like- Diwali, Childrens day, Republic day, Holi, national science day, Energy conservation week, Road safety week etc.
  - Music, Art & craft classes ongoing for all students.
  - Organize talent hunt competition on Christmas eve; all students participated and awarded to best performer by jury.
  - Poster making competition, Grid art and house EVS activity & movie show arrange for all students.
  - Grain and cloths distribution to housekeeping staff by AVK children on eve of New year.
  - Organize an event and recognize to all winners of Fathers' day fireless cooking activity.
  - Summer camp organized at AVK: (16 to 23rd March 2023)
  - Conduct various activities in summer camp like- Art & craft, Dance & Singing, Gaming, Yoga classes and many more fun activities.
- **Trainings and Learning activities for teachers:**
  - Training on energy conservation by APRL team.
  - Fire & safety workshop by Safety department APRL.
  - Workshop on electrical safety by Electrical department APRL.

Adani Vidyalaya, Kawai

Workshop for Teachers

Certificate to students

Magic show- Children day

Music classes @AVK

Energy conservation week

Final BID ADIEU to class 5

Republic day celebration

Parents-Teachers meeting

Community Health

- **Mobile health care unit:-**
  - MHCU covered 28 villages in a week and provide doorstep health facilities to community.

Month	Village OPD				Other services				
	Male	Female	Children	Total	School & other camp	Blood sugar testing	Referred cases	Home visits	Awareness session
October	686	574	392	1652	14	20	1	5	4
November	1174	1096	810	3080	20	14	1	6	8
December	1181	1036	815	3032	11	18	1	8	9
January	1014	945	703	2662	16	56	1	8	4
February	1000	886	616	2502	32	22	0	5	5
March	1100	850	700	2650	24	12	0	5	5
Total	6155	5387	4036	15578	117	142	4	37	35

- **Multi speciality health camp:-**
  - In association with Health department under Government scheme "AAYUSHMAN BHARAT HEALTH WELLNESS PROGRAM" organize Health Mela in Atru block.
  - Total 2804 Beneficiary Treated of various dieses in 06 health mela.
  - The service provided in the camps were various disciplines like:- Gynaecology, Skin, Eye, Paediatrics, Dental, Orthopaedics, Psychologist, Ayurvedic, ENT & General health.
  - We also provided 48 type testing facilities & awareness about running Government schemes.

Community Health

MHCU ongoing service

Home visit by MHCU

School health camp

Awareness session

Registration @Health camp

Eye checkup @Health camp

Vaccination @Health camp

Appreciation by Block CMHO

Community Health (Case Study)

Case Study

- **Name - Sultan Begum**
- **Age - 84 years**
- **Site Name – Atru**

Sultan Begum lives in Atru, she is healthy and going strong with the age of 84years still. She is a regular beneficiary of our MHCU from last 5 Years. Our team visits her every week, to provide her medical assistance. When she first visited our van, about 5 years ago, suffering from hypertension type1 and chronic COPD. She was struggling with herself. She consulted our staff at MMU-Kawai, she was regularly monitored, checked and visited at her home.

Proper consultation, prescription and regular medicine helped in improving her health. Now, Her health conditions are improving and she carries out her daily chores by herself. She walks to our van and bless us for our assistance. She gets her routine medicine and she wish us well.

Our MHCU staff has been working tirelessly to deliver assistance to the most vulnerable and to the people in need as they reside remotely without any medical aid. This has been an exemplary attempt of Adani Foundation with the help of HelpAge India for a better and healthy community. Medical Consultation with suitable treatment compliance including free medicines, counselling and regular health check-up has made this project a success.

Community Health (Case Study)

Case Study

- **Name - Balram s/o Kishan Lal**
- **Age - 40 years**
- **Site Name – Salpura**

Balram lives in Salpura, he is healthy but instead suffering from a serious illness in his left foot. He is suffering from Mycetoma Foot and Actinomycosis in lower lymph. He is a regular beneficiary of our MHCU from last 2 Years. Our team visits him once in 15 days, to provide him medical assistance. When he first visited our van, about 2 years ago, suffering from mycetoma foot, he was in critical condition. He consulted our staff at MMU-Kawai, he was regularly monitored and checked.

Proper consultation, prescription and regular medicine helped in improving his health. Now, His health conditions are improving, he walks to our van for ointment and other medication. He gets his routine medicine and He wish us well.

Our MHCU staff has been working tirelessly to deliver assistance to the most vulnerable and to the people in need as they reside remotely without any medical aid. This has been an exemplary attempt of Adani Foundation with the help of HelpAge India for a better and healthy community. Medical Consultation with suitable treatment compliance including free medicines, counselling and regular health check-up has made this project a success. .

Community Health (Case Study)

Case Study

- **Name – Nand kishore**
- **Age - 80 years**
- **Site Name – Kunjer**

Nand Kishor Ji lives in Kunjer, he is healthy now but suffering from COPD(Chronic Obstructive Pulmonary Disease) from past 7-8 years. He is a regular beneficiary of our MHCU from last 7 Years. Our team visits him once every week, to provide him medical assistance. He first visited our van, about 7 years ago, suffering from COPD, as he was in critical condition. He had regular cough, breathlessness sometimes chest pain. He consulted our staff at MMU-Kawai, he was regularly monitored and checked.

Proper consultation, prescription and regular medicine helped in improving his health. Now, His health conditions are better. He takes precautions according to the consultation given to him. He gets his routine medicine and He wish us well.

Our MHCU staff has been working tirelessly to deliver assistance to the most vulnerable and to the people in need as they reside remotely without any medical aid. This has been an exemplary attempt of Adani Foundation with the help of HelpAge India for a better and healthy community. Medical Consultation with suitable treatment compliance including free medicines, counselling and regular health check-up has made this project a success. .

Sustainable Livelihood

PASHUDHAN: –

We are implementing cattle breed improvement programme since 2017 in 27 villages.

- ❖ 566 Cattle covered thru Artificial insemination during Oct.- March 2023.
- ❖ 205 new calf born during Oct.- March 2023.
- ❖ 242 cattle found pregnant during Oct.- March 2023.
- ❖ 24 training conducted for farmers during Oct.- March 2023.
- ❖ Station head-APRL visited to Nimoda village to see the Bio-Gas project.
- ❖ Feed supplementary distributed to 150 farmers and Fodder seed provided to 100 farmers.
- ❖ 15 Animal health camp organized in nearby villages..
- ❖ Provide Azolla grass to 15 farmers and Wormi-compost to 15 farmers.
- ❖ Mineral mixture provided to 300 farmers.

Sr. No.	Particular	Achievement till March 2023
1	Artificial Insemination	4403
2	Pregnant	2253
3	Calves	1581
4	Vaccination	7958

Sustainable Livelihood

KRISHI KOUSHAL: -

- Fodder seed distributed to 350 Farmers. And Nepier grass distributed to 30 Farmers.
- Beneficiary sign board installation- 12 location. And Vegetable seed distribution to 9 farmers.

Institution Building –

- FPO BOD visit to Hadoti mahila FPO at Anta. And Conduct exposure visit to Saras dairy Baran- 45 women participated.
- In regular interval meetings organized with FPO Board members.
- Organize 5 capacity building training for village facilitator. And Organize 1 training session for FPO share holders.
- 27 Village level meetings conducted with FPO shareholders.
- Defreezer support to 2 milk centers.

Women empowerment program – 31st March 2023

- Organize an event at APRL premises where more than 300 women FPO shareholders participated.
- District collector, Local MLA, Deputy director- Agriculture Dept., Station head-APRL, Members of Shanti-Urja club, and many HOD's of APRL participated.
- DM and MLA appreciate the efforts of Adani foundation and ensure for support and linkage to FPO and other social programs of Adani with Govt. schemes.

Sustainable Livelihood

Training for FPO members

Fodder seed distribution

Training for FPO shareholders

Exposure visit to Saras dairy

Monthly village level meeting

Exposure visit for FPO

Women's day program

Farmers training

Community Infrastructure Development

Construction of Boundary wall & theme based Painting work at Dhara school–

- Work completed boundary wall, stage, ground leveling and theme based painting work.
- Students and villagers enjoying the new look of their school as demonstrate "भारतीय शिक्षा रेल".
- Teachers, Gram panchayat and Education department appreciate to this theme-based renovation.
- To provide essential facilities in schools which are really need of basic education and take an initiative for development of education system through improve basic infrastructure.

Water Pond Deepening & Embankment–

- Pond deepening work completed.
- Improve infrastructure for community of core zone with water conservation.

Construction of CC road at Salpura–

- Work completed CC road and tree guard structure on bank of road.
- Provide safe pathway to salpura village community.

Community Infrastructure Development

Before- Govt. Sr. sec. school Dhara

After- Govt. Sr. sec. school Dhara

Train look of school

Stage construction @ school

CC road @Salpura

Pond deepening @Dhara

RBNQA Assessment

Ramkrishna Bajaj National Quality Awards–

- APRL pursue for RBNQA; Assessment session organize on 19th to 21st December 2022.
- CSR department participated to demonstrate sustainability and societal contribution of APRL.
- Team Kawai provides all required things to business and engage to Assessment team with community.

Conduct field visit for Assessment team-

- During 6- hour field visit we demonstrate the all-core field in front of Assessor.
- Assessor visited to total 5 villages and seen our- Multi-speciality health camp, quality infrastructure development, Orchard development project, Diary development and FPO project.
- Arrange small event at plant where Assessor interacted with teachers & students who selected for state level games.
- As feedback Assessor appreciate our efforts and encourage the Goodness of Adani foundation.

RBNQA team @Khedli gaddiyan

RBNQA team @CHC Kawai

RBNQA team @Nimoda

RBNQA team with State players

Award and Accolades

Awarded on District level Republic Day program -

- District administration Baran recognize for providing support in NAYA SAVERA Health Project & Mobile heath care program and awarded at Republic day district level event.
- The appreciation letter handed over by Sh. Pramod jain Bhaya (Cabinet minister- Rajasthan Government) in presence of District Collector Mr. Narendra Gupta, many Govt. institutions and huge gathering on republic day.

Awarded on Republic Day Block level program -

- Subdivision office and Nagar palika Atru recognize our effort about Animal husbandry related program and awarded at Republic day block level event.
- The appreciation letter handed over by local MLA Mr. Panachand Meghwal in presence of SDM of Atru block.

HADOTI KHEL GORAV SAMMAN-

- Rajasthan physical Teachers association recognize us with "HADOTI KHEL GORAV SAMMAN" for provide support to uplift the sports activities in Baran district.
- The award handed over by Zilla Pramukh Mrs. Urmila jain Bhaya in presence of Mayor of Baran Mrs. Jyoti paras, deputy mayor Sh. Naresh Goyal and Deputy director Education dept, Sh. Rampal meena.

Awarded with BHAMASHAH SAMMAN -

- Nearby 9 Govt. schools recognized our valuable effort and awarded with BHAMASHAH SAMMAN.
- SDM, Pradhan, CBEO, Sarpanch, public leaders, school staff and all community key person appreciate our initiatives and handover Appreciation certificate.

PANCHAM HADOTI GORAV SAMMAN-

- New Kota international society recognize us with "PANCHAM HADOTI GORAV SAMMAN" for provide support to society under various CSR programs in Baran district.
- The award handed over by MLA- Kota Mr. Sandeep sharma in presence of Amit Dhariwal, Harikrishna Birla, and many prominent people of Kota zone.

Award and Accolades

District level award on Republic day

Hadoti Khel Gorav Samman @Baran

Pancham Hadoti Gorav Samman @Kota

Block level award on Republic day

Bhamashah award @UPS Kanvarpura

Bhamashah award @GSSS Aton

Media Coverage

Media Coverage

अडानी फाउंडेशन के प्रोजेक्ट उड़ान के तहत अदानी प्लांट का किया भ्रमण

अदानी फाउंडेशन द्वारा दड़ा में चारदीवारी निर्माण हेतु भूमि पूजन

अदानी फाउंडेशन कवाई द्वारा 5 गांव में बायोगैस संयंत्र की स्थापना

अदाणी फाउंडेशन द्वारा स्वास्थ्य पर दिया गया प्रशिक्षण

कवाई में अदानी फाउंडेशन ने आयोजित किया स्वास्थ्य व स्वच्छता पर प्रशिक्षण

अदानी फाउंडेशन द्वारा उन्नत पशुपालन पर प्रशिक्षण

बीज उत्पादन की उन्नत तकनीक बताई

अदानी पावर प्लांट में छात्रों ने किया भ्रमण

नि:शुल्क स्वास्थ्य जांच शिविर में 719 लोगों ने उठाया लाभ

अदाणी फाउंडेशन के उड़ान कार्यक्रम से 209 विद्यालयों के 12700 विद्यार्थी लाभान्वित

अदानी फाउंडेशन कवाई द्वारा वाग्धारा संस्था के साथ मिलकर मार्च 2022 में 6 गांव में बायोगैस संयंत्र की स्थापना की गई

अदाणी फाउंडेशन हाड़ौती खेल गौरव सम्मान से सम्मानित

Budget V/s Actual FY 2022-2023

Sr No	Activities	Cost Centre	Internal Order	Proposed Budget F.Y.2022-23			Expenses up to March-2023 (in Lacks)	% of utilization	Remarks
				Capex	Opex	Total			
A.	General Management and Administration	35004401		16.50	32.47	48.97	56.66	115.71%	
B.	Education	35004000		0.00	20.60	20.60	21.08	102.33%	
C.	Community Health	35004101		0.00	93.18	93.18	103.24	110.80%	
D.	Sustainable Livelihood Development	35004301		0.00	66.44	66.44	74.29	111.82%	
E.	Community Infrastructure Development	35004201		0.00	54.66	54.66	51.75	94.68%	
	Total Budget:			**16.50**	**267.35**	**283.85**	**307.03**	**108.16%**	

adani

Growth with Goodness

Annexure-VI

adani
Power

Ref: APRL/PK/GOVT/RSPCB/00591

Date: 27th September 2022

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

Subject: Environmental Statement for the Financial Year 2021-22.

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 2021-22, 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
Room no, 345 to 347, Mini Secretariate, Jhalawar - (Rajasthan)

Encl : As above

क्षेत्रीय कार्यालय
रा. प्र. नि. मं.
झालावाड़

Adani Power Rajasthan Ltd
NH 90, Atru Road
Village Kawai, Tehsil Atru
Baran 325 219
Rajasthan, India
CIN U40104GJ2008PLC052743

Tel +91 744-27-78600

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

ENVIRONMENT STATEMENT

FOR FINANCIAL YEAR

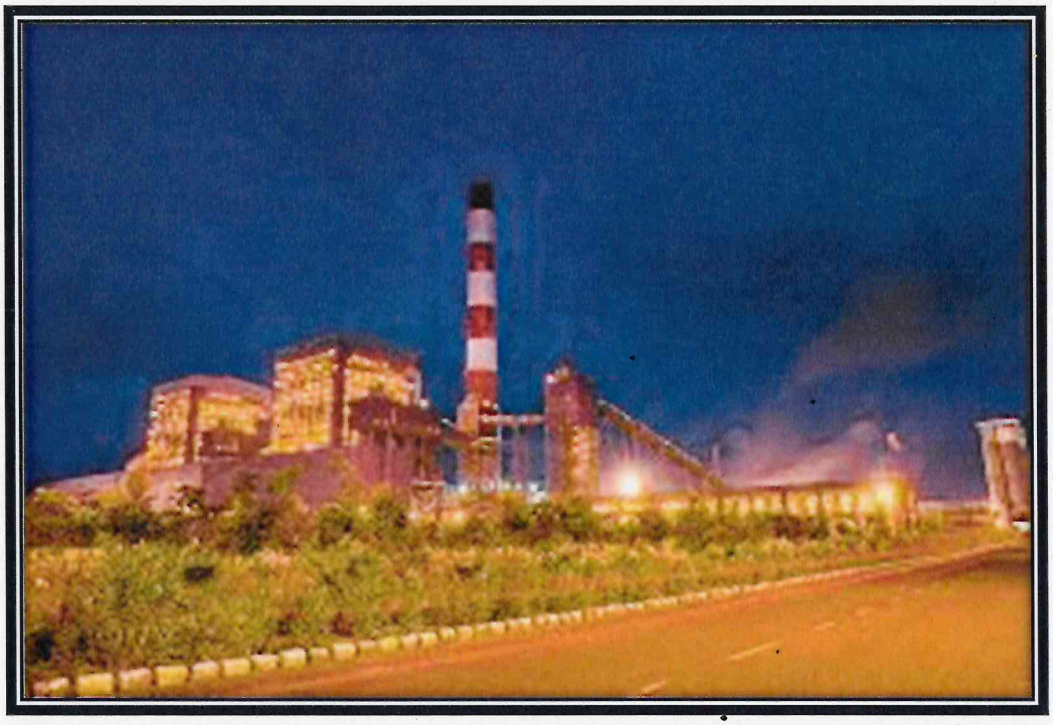
2021 – 2022

1320 (2×660) MW

KAWAI THERMAL POWER PLANT

Submitted to:

Rajasthan State Pollution Control Board, Jaipur



Submitted By:

adani

Power

ADANI POWER RAJASTHAN LIMITED

Village: Kawai, Taluka: Atru

Baran, Rajasthan

ENVIRONMENTAL STATEMENT

FORM V
(See Rule 14)

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

Environmental Statement for the financial year (April 2021 to March 2022)

PART - A

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

- Name : Sh. Pramod Saxena (Station Head)
- Address : NH-90, Atru Road, Village Kawai, Tehsil Atru, Distt. Baran 325219 (Rajasthan)

ii) Industry category
- Primary- (STC Code) : 08AAGCA9379P1ZP (Large Scale– Red Category)
- Secondary-(STC Code) :- NA

iii) Production Capacity-Units : 1320 (2x660) MW Electricity Generation

iv) Year of establishment :
Unit#1 Commissioned on 28th May 2013
Unit#2 Commissioned on 31st December 2013
(Consent to operate is valid up to 29.02.2024).

v) Date of the last environmental statement submitted: **22.09.2021**

PART B

Water and Raw Material Consumption:

1. Water consumption **m^3/d**
   a) Process : 935.19
   b) Cooling : 50818.72
   c) Domestic : 492.14

Name of Products	Process water consumption per unit of product output	
	During the previous financial year (2020-21)	During the current financial year (2021-22)
	(1)	(2)
Power	2.27 KL/MWh	2.28 KL/MWh

2. Raw Material Consumption

Name of Raw Materials*	Name of Products	Consumption of raw material per unit of output	
		During the previous financial year (2020-21)	During the current financial year (2021-22)
(1) Coal	Electricity Generation	564.21 gm/kwh	581.84 gm/kwh
(2) Fuel Oil	Electricity Generation	0.03 ml/kwh	0.05 ml/kwh

*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
(b)	Air (Particulate Matter in mg/Nm^3)	**Unit#1:** 2.02 TPD **Unit#2:** 2.04 TPD	**Unit#1:** 31.33 **Unit#2:** 30.20	Within Limit specified in CTO

- **Water-** No discharge of wastewater. Plant is designed on Zero Discharge concept.

Note- 100% effluent is treated and recycled back. Hence, there is no discharge of effluent in the environment.

PART - D

Hazardous Wastes:

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

Sr. No.	Hazardous Wastes	Total Quantity	
		During the previous financial year (2020-21)	During the current financial year (2021-22)
a)	From Process • Used/Spent Oil	• 7.08 KL (Generated) • 13.84 KL (disposed) • 0.79 KL (Balance)	• 24.592 KL (Generated) • 23.717 KL (disposed) • 1.037 KL (Balance)
	• Discarded Containers	• 03 Nos. (Generated) • 68 Nos. (disposed) 04 Nos. (Balance)	• 117 Nos. (Generated) • 115 Nos. (disposed) 06 Nos. (Balance)
b)	From pollution control facilities	NA	NA

PART – E

Solid Wastes:

Sr. No.	Solid Wastes	Total Quantity (Tons)	
		During the previous financial year (2020-21)	During the current financial year (2021-22)
a)	From Process (Bottom Ash)	3,73,106 MT (Disposed to Bricks manufacturers)	3,63,740 MT (Disposed to Bricks manufacturers)
b)	From pollution control facilities (Ash from ESP)	11,89,727 (Dispose to Cement manufacturer)	10,22,481 (Dispose to Cement manufacturer)
c)	Quantity recycled or re-utilized within the unit recycled or re-utilized		
	Disposal in reclamation of low-lying area within Plant premises	42,810 MT (In reclamation of low-lying area in Plant premises)	1.78,600 MT (In reclamation of low-lying area in Plant premises)

PART – F

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

- Hazardous waste (Used/Spent oil) is being dispose off through authorized recyclers. (Please Refer Part - D for Hazardous waste generation and disposal)

- Fly Ash utilized by following Industries
  - A INFRASTRUCTURE LTD
  - ACC LTD
  - AMBUJA CEMENTS LTD
  - BIRLA CORPORATION LTD
  - DCM SHRIRAM LTD
  - J K CEMENT WORKS ALIGARH
  - J K CEMENT WORKS MANGROL
  - J K CEMENT WORKS NIMBAHERA
  - J K LAKSHMI CEMENT LTD
  - JAGDISH JINDAL AND COMPANY
  - KARNEE ENTERPRISES
  - MANGAL ROAD LINES
  - MANGALAM CEMENT LTD
  - NUVOCO VISTAS CORPORATION LTD
  - PARIN TRADING CORPORATION
  - SHRI HARI ISHWARDAS TRANSPORT
  - SHRIRAM CEMENT WORKS
  - THE INDIA CEMENTS LTD
  - UDAIPUR CEMENT WORKS LTD
  - ULTRATECH CEMENT LTD
  - ULTRATECH NATHDWARA CEMENT LTD
  - VEDAVYA ROADLINES
  - VIRAT SUPPLIERS
  - WONDER CEMENT LTD

PART – G

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

- Kawai Thermal Power Station of 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 Electrostatic Precipitator (ESP).

- Chimney of 275 m height is constructed.
- Other pollution control equipment's 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.
- Utilization of Rainwater collected during monsoon in Rainwater Harvesting Pond.
- Recycling and reusing of treated water in plant operation.
- Organic waste is being utilize in Organic waste convertor machine to further manure development.
- Wastepaper is being recycled through paper recycling machine.

PART – H

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

- Propose to Install 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.

PART - I

Miscellaneous

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

1. 1,13,526 trees and 1,70,000 shrubs planted up to financial year 2021-22 with 90% survival. Regular plantation is being carried out within plant premises.
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 80 m height in both the flue cane of 275 m Chimney.
5. Ambient noise levels are being monitored at 10 identified locations within the plant premises.
6. Integrated management system implemented (QMS as per ISO 9001:2015, EMS as per ISO 14001:2015, OH & S as per ISO 45001:2018, EnMS as per ISO 50001:2018 & WEMS as per 46001:2019) 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/MoEF&CC on regular basis.

11. 5S Implementation for waste minimization
12. IFC Performance Standards (PS-1 to PS-8) has been implemented on Environment and social sustainability.
13. Single use plastic is banned in plant premises.
14. MoEFCC, RSPCB approved third Party Environment Monitoring is being carried out at quarterly basis.

Authorized Signatory
(Adani Power Rajasthan Limited)

National Accreditation Board for Testing and Calibration Laboratories

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: 29/03/2023 **Valid Until:** 28/03/2025

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

Name of Legal Identity : ADANI POWER RAJASTHAN LIMITED

Signed for and on behalf of NABL

N. Venkateswaran
Chief Executive Officer

Adani Power Limited

Annexure-VIII

Expenditure for Environmental Protection & CSR

(Fig. in Rs. Lacs)

Sr. No.	Particular	Expenditure from (October-2022 to March-2023)
1.	Rural Development/CSR Activities (Education, community health, Sustainable Livelihood, community Infrastructure development etc.)	212.55
2.	Green belt Development (Horticulture)	60.91
3.	Legal, Consent fees	40.09
4.	Third party monitoring, Services and Equipment & Instruments maintenance, Communication cost.	8.3
5.	Insurance, training, and external environmental Management (IMS)	4.56
6.	Cost involved in emission treatment and disposal (AHP, ETP, CHP etc.)	738.71
Total		**1065.12**

Annexure - IX

भारत सरकार
Government of India
वाणिज्य और उद्योग मंत्रालय
Ministry of Commerce & Industry
पेट्रोलियम तथा विस्फोटक सुरक्षा संगठन (पैसो)
Petroleum & Explosives Safety Organisation (PESO)
आम्रपाली सर्कल, पावर हाउस के पास, वैशाली नगर
जयपुर- 302021
Amrapali Circle, Near Power House, Vaishali Nagar,
Jaipur - 302021

E-mail : **dyccejaipur@explosives.gov.in**
Phone/Fax No : **0141 - 2356731,2356781**

संख्या /No. : **P/HQ/RJ/15/2337 (P295058)**

दिनांक /Dated : **30/12/2022**

सेवा में
/To,

M/s. M/s Adani Power Rajasthan Limited.,,
Kawai Thermal Power Project Near Salpura Railway S,
Kawai,
Kawai,
Taluka: Atru,
District: BARAN,
State: Rajasthan
PIN: 325219

विषय /Sub : **Plot No, Plot No. 504, Khasara No. 1337, Survey No. 1337,, NA, Village-Kawai, Teh-Atru,, Antah, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219** में स्थित विद्यमान पेट्रोलियम वर्ग **B,C** अधिष्ठापन में अनुज्ञप्ति सं **P/HQ/RJ/15/2337 (P295058)** के नवीकरण के संदर्भ में ।
Existing Petroleum Class **B,C** Installation at **Plot No, Plot No. 504, Khasara No. 1337, Survey No. 1337,, NA, Village-Kawai, Teh-Atru,, Antah, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219** - Licence No. **P/HQ/RJ/15/2337 (P295058)** - **Renewal** regarding.

महोदय
/Sir(s),

कृपया आपके पत्र क्रमांक **OIN1245678** दिनांक **26/12/2022** का अवलोकन करें ।
Please refer to your letter No.: **OIN1245678**, dated **26/12/2022**

अनुज्ञप्ति संख्या **P/HQ/RJ/15/2337 (P295058)** दिनांक **16/04/2019** को दिनांक **31/12/2032** तक नवीनीकृत कर इस पत्र के साथ अग्रषित की जा रही है ।
Licence No. **P/HQ/RJ/15/2337 (P295058)** dated **16/04/2019** is forwarded herewith duly renewed upto **31/12/2032**.

कृपया पेट्रोलियम नियम 2002 के अधीन बनाए गए नियम 148 में दी गई प्रक्रिया का कडाई से पालन करें । अनुज्ञप्ति के नवीकरण हेतु समस्त दस्तावेजों को अनुज्ञप्ति की वैधता समाप्त होने की तिथि से कम से कम 30 दिन पूर्व कार्यालय को प्रेषित करें ।
Please follow the procedure strictly as laid down in rule 148 of the Petroleum Rules, 2002 and submit complete documents for the Renewal of the licence **so as to reach this** office on or before the date on which Licence expires.

कृपया पावती दें।
Please acknowledge the receipt.

भवदीय /Yours faithfully,

((डॉ. जी. के. पाण्डे)
(Dr. G. K. PANDEY))
विस्फोटक नियंत्रक
Controller of Explosives
कृते उप मुख्य विस्फोटक नियंत्रक
For Dy. Chief Controller of Explosives
जयपुर/Jaipur

Note:-This is system generated document does not require signature.
(अधिक जानकारी जैसे आवेदन की स्थिति, शुल्क तथा अन्य विवरण के लिए हमारी वेबसाइट : http://peso.gov.in देखें)
(For more information regarding status,fees and other details please visit our website: http://peso.gov.in)

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

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

अनुज्ञप्ति सं. (Licence No.) : **P/HQ/RJ/15/2337(P295058)** फीस रूपए (Fee Rs.) **56250**/- per year

M/s. M/s Adani Power Rajasthan Limited.,, Kawai Thermal Power Project Near Salpura Railway S, Kawai, Kawai, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219 को केवल इसमें यथा विनिर्दिष्टु वर्ग और मात्राओं में पेट्रोलियम **7075.00 KL** आयात करने के लिए और उसका, नीचे वर्णित और अनुमोदित नक्शा संख्या **P/HQ/RJ/15/2337(P295058)** तारीख **07/07/2017** जो कि इससे उपाबद्ध हैं, में दिखाए गए स्थान पर भण्डारकरण के लिए पेट्रोलियम अधिनियम, 1934 के उपबंधों या उसके अधीन बनाए गए नियमों तथा इस अनुज्ञप्ति की अतिरिक्त शर्तों के अधीन रहते हुए, यह अनुज्ञप्ति अनुदत्त की जाती हैं ।

Licence is hereby granted to **M/s. M/s Adani Power Rajasthan Limited.,, Kawai Thermal Power Project Near Salpura Railway S, Kawai, Kawai, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219** valid only for the importation and storage of **7075.00 KL** Petroleum of the class and quantities as herein specified and storage thereof in the place described below and shown on the approved plan No **P/HQ/RJ/15/2337(P295058)** dated **07/07/2017** attached hereto subject to the provisions of the Petroleum Act, 1934 and the rule made thereunder and to the further conditions of this Licence.

यह अनुज्ञप्ति 31st day of December **2032** तक प्रवृत रहेगी ।
The Licence shall remain in force till the 31st day of December **2032**

पेट्रोलियम का विवरण /Description of Petroleum	अनुज्ञप्त मात्रा (किलोलीटरों में) /Quantity licenced in KL
वर्ग क प्रपुंज पेट्रोलियम /Petroleum Class A in bulk	**NIL**
वर्ग क प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class A, otherwise than in bulk	**NIL**
वर्ग ख प्रपुंज पेट्रोलियम /Petroleum Class B in bulk	**75.00 KL**
वर्ग ख प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class B, otherwise than in bulk	**NIL**
वर्ग ग प्रपुंज पेट्रोलियम /Petroleum Class C in bulk	**7000.00 KL**
वर्ग ग प्रपुंज पेट्रोलियम से भिन्न /Petroleum Class C,otherwise than in bulk	**NIL**
कुल क्षमता /Total Capacity	**7075.00 KL**

December 4, 2012

Chief Controller of Explosives

1). Amendment dated - 16/04/2019

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

अनुज्ञप्त परिसर जिसकी विन्यास सीमाएं अन्य विशिष्टयां संलग्न अनुमोदित नक्शों में दिखाई गई हैं **Plot No: Plot No. 504, Khasara No. 1337, Survey No. 1337,, NA, Village-Kawai, Teh-Atru,, Antah, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219** स्थान पर अवस्थित है तथा उसमें निम्नलिखित **1 Above Ground tank(s) for CLASS B , 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, Survey No. 1337,, NA, Village-Kawai, Teh-Atru,, Antah, Taluka: Atru, District: BARAN, State: Rajasthan, PIN: 325219** and consists of **1 Above Ground tank(s) for CLASS B , 4 Above Ground tank(s) for CLASS C** together with connected facilities.

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

नवीनीकरण के पृष्ठांकन के लिए स्थान
SPACE FOR ENDORSEMENT OF RENEWALS

पेट्रोलियम अधिनियम, १९३४ के उपबन्धों या उनके अधीन बनाए गए नियमों या इस अनुज्ञप्ति की शर्तों का उल्लंघन न होने की दशा में यह अनुज्ञप्ति फ़िस में बिना किसी छूट के दस वर्ष तक नवीकृत की जा सकेगी। This licence shall be renewable without any concession in fee for ten years in the absence of contravention of any provisions of the Petroleum Act, 1934 or of the rules framed thereunder or of any of the conditions of this licence.	नवीकरण की तारीख Date of Renewal	समाप्ति की तारीख Date of Expiry of license	अनुज्ञापन प्राधिकारी के हस्ताक्षर और स्टाम्प Signature and office stamp of the licencing authority.
1).	16/12/2013	31/12/2016	Sd/- Dr. Yogesh khare Jt. Chief Controller of Explosives For Dy. Chief Controller of Explosives Jaipur
2).	22/11/2016	31/12/2019	Sd/- Nitin Goyal Dy. Controller of Explosives For Dy. Chief Controller of Explosives Jaipur
3).	09/01/2020	31/12/2022	Sd/- Dr. G. K. PANDEY Controller of Explosives For Dy. Chief Controller of Explosives Jaipur
4).	30/12/2022	31/12/2032	Dr. G. K. PANDEY Controller of Explosives For Dy. Chief Controller of Explosives Jaipur

यदि अनुज्ञप्ति परिसर इसमें उपाबद्ध विवरण और शर्तों के अनुरुप नहीं पाए जाते है और जिन नियमों और शर्तों के अधीन यह अनुज्ञप्ति मंजूर की गई है उनमे से किसी का उल्लंघन होने की दशा में यह अनुज्ञप्ति रद्द की जा सकती है और अनुज्ञप्तिधारी प्रथम अपराध 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 पश्चातवर्ती अपराध 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, दण्डनीय 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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