

JPL/ECC/Phase-I/FHY/2021-2022/November/26

November 09, 2021

To,

The Director,

Ministry of Environment, Forests & Climate Change 3rd Floor, Vayu Block, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2021 to September' 2021)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2021 to September' 2021)

Jhabua Power Limited

(CIN : U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seonl-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthapower.com



M/s JHABUA POWER LTD.

COMPLIANCE REPORT

In respect of

ENVIRONMENTAL CLEARANCE

MoEF letter no. J-13012/105/2008-IA.II (T) dated 17th February, 2010

and

Corrigendum dated 22nd December, 2010 & 25 January 2012

COMPLIANCE PERIOD: APRIL 2021 to SEPTEMBER 2021

FOR

Jhabua Power Limited

1 x 600 MW THERMAL POWER PLANT

AT

VILLAGE:- BARELA & GORAKHPUR

TEHSIL: - GHANSORE

DISTRICT: - SEONI

MADHYA PRADESH

Compliance to conditions stipulated in Environmental Clearance

(Ref MoEF letter no. J-13012/105/2008-IA.II (T) dated 17th February, 2010 and Corrigendum dated 22nd December, 2010 & 25 January 2012)

<u>SI No.</u>	<u>Conditions</u>	<u>Compliance</u>
i	Environmental clearance is subject to submission from the Competent Authority in the state govt. that the project area does not fall within a notified tribal area.	As per corrigendum issued from MoEF dated 22nd December, 2010 this point has been deleted.
ii	No tribal land shall be acquired for the power plant.	As per corrigendum issued from MoEF dated 22nd December , 2010 this point has also been deleted.
111	A special scheme (as part of CSR activity) for sustainable livelihood of poor tribal and marginalized population within the study area shall be formulated with inbuilt monitoring mechanism of time bound implementation. The status of implementation shall be submitted to the Regional Office of the Ministry and the Competent Authority in the state govt. half yearly.	For sustainable livelihood of the community especially poor tribal and marginalized population is formulated based on need assessment done. Scheme prepared. Inbuilt monitoring mechanism is prepared and placed. Regular review of CSR activities at field level, beneficiary interaction at management level is done.
iv	Environmental clearance is subject to submission to the Regional Office of the Ministry the details of projected affected families (PAF), land losers (homestead as well as ordinary land losers) and compensation paid /	R & R plan has been submitted. There will be no rehabilitation of any family/person due to proposed project activity.

	proposed per acre and time schedule for implementation of R&R scheme.	
V	Hydro-geological study of the area shall be reviewed annually and results submitted to the Ministry and concerned agency in the State Govt. In case adverse impact on ground water quantity and quality is observed, immediate mitigating steps to contain any adverse impact on ground water shall be undertaken.	Hydro-geological study of the area is being reviewed regularly. Recent hydrogeological report of the area reviewed is enclosed as Annexure -1 . The consistent trend of change in water level from pre monsoon to post monsoon of monitoring wells shows that there is no adverse impact in the ground water table in the project area and adjoining villages because of the project site. Conjunctive use of surface water and sub-surface water is benefiting the area by increase the stream flow duration and ground water level. Quality of ground water is also well within the permissible limits.
vi	A stack of 275 m height shall be provided with continuous online monitoring equipment for SOx, NOx and RSPM (PM _{2.5} & PM ₁₀). Exit velocity of flue gases shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	275 m stack height has been constructed and continuous online stack monitoring system along with remote calibration system for the monitoring of emission is installed. The exit velocity of flue gas is maintained not less than 22m/sec. Mercury emission is also periodically monitored during the operation of power plant.
vii	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/Nm ³ .	High Efficiency Electrostatic Precipitators (ESPs) has already been installed and outlet of ESP is integrated with 275 m stack height to restrict the particulate emission below 50 mg/Nm ³ .

Viii	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.	Effective and adequate dust suppression system like water sprinkling system, Cyclone Separator & Bag Filters have been installed in the dusty areas such as in coal handling and ash handling points, transfer areas. Coal conveyer system is permanently covered to restrict the dust release whereas transportation of fly ash from the AHP to the ash pond is through high concentration slurry disposal system.
ix	Utilization of 100% fly ash generated shall be made from 2 nd year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Fly ash is being utilized as per notification for fly ash by Ministry of Environment & Forest. The fly ash utilization in the year from April -2021 to September 2021 was 61%. MoU's for 100% Fly ash utilization by various users like fly ash based bricks & building material manufacturers, Road construction Agencies & Cement Industries have been signed. More such avenues are being constantly explored. Fly ash transportation to cement industries also started through tarpaulin covered railway rake up to approx. 300 Km.
x	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry. Mercury and other	 Fly ash is being collected in the silo and then given away to the users. Unutilized fly ash is disposed off through high concentration slurry

	heavy metals (As, Hg, Cr, Pb etc.) will be monitored in the bottom ash as also in the effluents emanating from the existing ash pond. No ash shall be disposed off in low lying area.	 disposal system. Mercury and other heavy metals (As, Hg, Cr, Pb etc.) is being monitored in the bottom ash as well as effluent of ash pond by third party. We have engaged M/s Vardan Enviro Lab, Gurgaon registered with Ministry of Environment & Forest and also accredited in accordance with standard ISO/IEC/17025:2005 by National Accreditation Board for Testing and calibration laboratories. The analysis report of ash pond effluent is enclosed as Annexure -2.
xi	Ash pond shall be lined with HDP/LDP 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.	Ash pond has been lined with 250µm liner to prevent the leachate. Besides, adequate safety measures are being continuously taken to avoid any breach of the dyke. IIT Roorkee examine the Ash Dyke with respect to the structural adequacy, Stability and Risk Assessment to establish that our Ash pond is made in accordance with standard design, sustainable and operating concepts with zero failures, and are suitable & healthy with no possibilities of breach. The Structural Adequacy report of Ash Dyke of Jhabua Power Limited, certified by IIT, Roorkee is enclosed as Annexure -3.

xii	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	We have installed a closed cycle cooling system with Induced Draft Cooling Towers. Permission of installing the IDCT instead of NDCT has been approved by MoEF vide Corrigendum letter dated 17 January 2012.
xiii	COC 5.0 will be adopted.	Continuous optimization of cycle of concentration is carried out and achieved the COC of 5.
xiv	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Compliance continuously ensured. Zero Discharge condition is being maintained effectively. Separate storm water system is provided to avoid the mixing with effluent.
xv	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	Sewage treatment plant based on Fixed Film Aerobic Treatment System of adequate capacity has been installed for the treatment of raw sewage. Treated sewage water is being used for greenbelt development/plantation. The treated sewage analysis report carried out by MoEF's recognized laboratory is enclosed as Annexure -4.
xvi	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater	A rain water harvesting & recharging system, designed in consultation with Central Groundwater Authority/ Board. Authentication letter of Central Groundwater Board is already submitted

	harvesting technology within a period	with previous compliance report, is being
	of three months from the date of	implemented and followed.
	clearance and details shall be	
	furnished.	
xvii	clearance and details shall be	 implemented and followed. A well-qualified Safety management team is in place for the implementation of the safety measures. The details of the safety measures undertaken and implemented is given below; > JPL is certified under the ISO 45001:1018 for safety management system. > A safety committee is constituted and safety committee meeting is conducted regularly. > Mock drill is conducted regularly to improve the emergency handling if any. > Fire protection system like fire hydrant is installed in the fire porn
		area like BTG, T.G., CHP, AHP, BOP & Coal stock yard. Details of fire protection system are given as below;
		 Jockey pump -02 nos.
		• Electrical operated pump -02 nos.
		 Diesel operated pump – 01 no.
		• Electrical booster pump- 01 nos.
		 Diesel booster pump -01 nos.
		Electrical operated foam pouring
		system – 01 no.

	 Diesel operated foam pouring system - 01 no. Multi fire tender (5000 ltr water + 1000 ltr foam) - 02 nos. Fire extinguisher - 395 DV - 89 Fire hydrant points with fire hose & box - 154 Manual Call Points. High Velocity Water Spray system in transformers and Boiler Firing Floor. Medium Velocity Water Spray system in conveyors galleries, Oil Storage Tanks, FOPH Pump House and cable galleries Fire extinguishers are installed in the entire plant. Emergent gas flooding system in control room Fire protection & detection system in CHP conveyors galleries, cable galleries and control room. Personnel protective equipment like helmet, safety shoe, safety belt etc. is the part of the measures taken for safety management.
	like helmet, safety shoe, safety belt etc. is the part of the measures taken for safety
	management. Apart from above many other safety measures has been taken as safety management system.
xviii Storage facilities for auxiliary liquid	• Storage facilities for LDO has been

	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.	 made in the plant area in consultation with Department of Explosives, Nagpur after getting the NOC for the same. NOC of Department of Explosives, Nagpur is already submitted with previous compliance report. Disaster management plan has been prepared and in place to handle the any eventuality in case of an accident taking place due to storage of oil.
xix	Regular monitoring of ground water (especially around ash pond and plant areas) 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 data so as to ensure that the ground water quality is not adversely affected due to the project.	Half-yearly ground water Quality monitoring in core and buffer zone including around ash pond is being strictly followed for which we have engaged Ministry of Environment & Forest registered laboratory apart from accredited in accordance with standard ISO/IEC/17025:2005 by National Accreditation Board for Testing and calibration laboratories. Six monthly reports are being submitted regularly to regional office of the ministry. Ground water report of core and buffer zone is enclosed as Annexure -5 .
XX	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted	The surface water samples are collected from the river/nalla regularly and records maintained effectively. Analysis report of surface water are enclosed as

	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.	Annexure-6.
xxi	Green Belt consisting of 3 tiers of plantations of native species around plant and at least 100 m width shall be raised. Wherever 100 m width is not feasible a 50 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not less than 2500 per ha with survival rate not less than 70 %.	 We are developing greenery in and around the plant and approximately 176102 trees have been planted. Local plant species have been preferred for the plantation having following characteristics Fast growing with thick canopy cover Adequate height with longer duration of foliage Perennial and evergreen Details of green belt development and supporting photographs are enclosed as Annexure- 7.
xxii	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Power plant is commissioned and under commercial operation since 3 rd May 2016. Well-equipped Medical center with doctor and paramedical staff is in place to attend the person required First Aid round the clock, whereas urinals & toilets facilities are installed at various location in the plant for sanitation for the drivers and other contract workers. COD letter is enclosed as Annexure -8 and Photographs of medical center &

		sanitation is enclosed as Annexure -9.
xxiii	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	 The noise level in the work zone area is maintained below 75 dBA. Acoustic hood has been provided for the turbine. Earplugs /ear muffs being provided as personal protective equipment to the workers. Noise level monitoring report is enclosed as Annexure 10.
xxiv	Regular monitoring of ground level concentration of SO2, NOx, RSPM (PM _{2.5} & 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.	 Regular monitoring of ground level concentration of SO₂, NO_x, RSPM (PM_{2.5} & PM₁₀) and Hg is being carried out in the impact zone and records are being maintained. Ambient Air Quality monitoring report is enclosed as Annexure- 11. The location of the monitoring stations has been decided in consultation with Regional Office of MPPCB, Jabalpur. Letter of Regional Office of MPPCB, Jabalpur. Letter of Regional Office of monitoring stations has already been submitted with previous compliance report. Permanente Online Ambient Air

XXV	A good action plan for R&R (if applicable) with package for the project affected persons be submitted	 Quality Monitoring Station has been installed and commissioned for the continuous monitoring of PM10, PM2.5, SOx, NOx & CO along with meteorological study like % Humidity, Rainfall, Wind Velocity, Wind Velocity, Solar Radiation, Atmospheric Pressure, Maximum & Minimum temperature and connectivity is established with MPPCB & CPCB. Besides Permanent AAQMS, Mobile Van for monitoring of PM10, PM2.5, SOx, NOx & CO has also been installed & commissioned. R & R plan has been already submitted.
	and implemented as per prevalent R&R policy within three months from the date of issue of this letter.	
xxvi	An amount of Rs 12.0 Crores shall be earmarked as one-time capital cost for CSR programme. Subsequently a recurring expenditure of Rs 2.50 Crores per annum shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within one month along with road map for	Expenditure details under CSR is enclosed Annexure -12.

	implementation.	
xxvii	As part of CSR programme the company shall conduct need based assessment for the nearby villages to study economic measures with action plan which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.	 Based on need assessment identified verticals for working on agro based livelihood including improved and sustainable agricultural practices for higher yield and income generation. The capacity building of the community is done from time to time. Demonstration plots of improved seed varieties, cultivation methods, tools and equipment on farmer's field is regular feature of the CSR activities. Vegetable cultivation is becoming important income generation activity among the community due to its short gestation time. Input for same is also provided to the farmers A part from above activities breed improvement in cattle through Artificial Insemination (AI) is done for enhancing milk yields and strengthening dairy development activities. Till September 2021 calves of improved breed borned is 960.59 such progenies are in lactation which includes Gir and Sahibal breed. Under the income generation programme 84 fruit bearing orchards and 20 nos. of vegetable plots are developed on farmers land, additionally training and required input

5xxviii		for the growth and development of the orchard is also provided to the farmers. Continuous and regular monitoring of orchards along with training of farmers is also done. 56 Self Help groups of women are formed for nearby villages promoting savings and carry out income generation activities. For said purpose regular trainings and exposure visit are carried out. The members are trained for commercial stitching and doing successful activity. They are getting order of for preparation of readymade garments suppliers. Apart from this vegetable selling, general store, grocessary shop, Cloth store tent house business, goat rearing, Bricks making etc. are done by group members.
5774	Provision shall be made for the housing of construction labor within the site with all necessary	All necessary facility for workers is provided. After completion of the project activities
	infrastructure and facilities such as fuel	and start of O&M phase, part of the
	for cooking, mobile toilets, mobile STP,	temporary structure are being used for
	safe drinking water, medical health	O&M personnel and remaining has been
	care, crèche etc. The housing may be in the form of temporary structures to	removed.
	be removed after the completion of the	
	project.	
xxix	The project proponent shall advertise	Not relevant now.
	in at least two local newspapers widely circulated in the region around the	However, for records, we had published

	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	in three newspapers (Hindustan Times, Dainik Bhaskar & Nai Duniya on 28.02.2010).
	Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at <u>http://envfor.nic.in</u> .	
XXX	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Not relevant now. However, for records, copy of the clearance letter had been sent to Panchayat, Zila Parisad / Municipal Corporation, urban local Body and the Local NGO. Regarding this details have been submitted with half yearly compliance report, June 2011.
xxxi	A separate Environment Management Cell with qualified staff shall be set up for implementation of the stipulated environmental safeguards.	A separate Environment Management Cell is in place headed by DGM. Environment. Details of Environment Management cell including personnel involved, their designation, qualification and hierarchy is enclosed as Annexure -13 .
xxxii	The proponent shall upload the status of compliance of the stipulated EC	Status of compliance of the stipulated EC conditions, including results of monitored

	conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; RSPM, SO ₂ , NO _x (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.	data is hosted on company web site. The criteria pollutant levels namely; RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) is displayed at the plant operation gate.
xxxiii	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated EC conditions including results of monitored data (both in hard copies as well by e-mail) to the respective Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB.	We are regularly submitting the six monthly compliance reports on the status of compliance of the stipulated EC conditions including results of monitored data to the respective Regional Office of MOEF, Bhopal, the respective Zonal Office of CPCB and the SPCB. The receipts of last compliance report submission is enclosed as Annexure-14 .
xxxiv	The environment statement for each financial year ending 31st March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of	The environment Statement report for the year 2020 - 2021 was submitted to Madhya Pradesh State Pollution Control Board before 30 th September 2020. Submission receipt is enclosed as Annexure -15 .

	EC conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail	
XXXV	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	We are regularly submitting the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board.
xxxvi	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance	We comply and agreed to the same.

	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.	
xxxvii	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.	We comply and agreed to the same. The item-wise expenditure break-up from April 2021 to September 2021 is enclosed as Annexure -16 .
xxxviii	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.	No Longer relevant. However, the same has been complied with.
xxxix	Full cooperation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry at Bangalore / CPCB/ SPCB who would be monitoring the compliance of environmental status.	We ensure full cooperation to the Scientists / Officers from the Ministry / Regional Office of the Ministry / CPCB/ SPCB who would be monitoring the compliance of environmental status.

4	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions or modify the existing ones, if necessary.	Agreed for the same.
5	The environmental clearance accorded shall be valid for a period of 5 years to start operations by the power plant.	Power plant is commissioned and operational.
6	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection) Act, 1986.	Agreed.
7	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Agreed.
8	The above stipulations would be enforced among others under the Water (Prevention and Control of	Noted & same shall be complied with.

	Pollution) Act, 1974, the Air	
	(Prevention and Control of Pollution)	
	Act, 1981, the Environment	
	(Protection) Act, 1986 and rules there	
	under, Hazardous Wastes	
	(Management and Handling) Rules,	
	1989 and its amendments, the Public	
	Liability Insurance Act, 1991 and its	
	amendments.	
9	Any appeal against this environmental	Agreed.
	clearance shall lie with the National	5
	Environment Appellate Authority, if	
	preferred, within 30 days as prescribed	
	under Section 11 of the National	
	Environment Appellate Act, 1997.	
	Set all	

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Hydrogeological Study Report

HYDROGEOLOGICAL REPORT

SUBMITTED TO

M/S JHABUA POWER PLANT LTD.

Situated at Barela-Gorakhpur, Tehsil-Ghansore Seoni, Madhya

Pradesh



SUBMITTED BY

VARDAN ENVIRONET CGWA Accredited Institution Plot No. 82A, Sector-5, IMT Manesar, Gurgaon, Haryana-122052 Email:anshul.yadav@vardanenvironet.com Mob: 9953147268

HYDROGEOLOGICAL REPORT (SEPTEMBER 2021)



M/s Jhabua Power Ltd.

(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

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M/s Jhabua Power Ltd.

(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

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CHAPTER -1

Brief about the proposed project giving location details, coordinates, google/toposheet maps, etc. demarcating the project area.

1.1 BRIEF INTRODUCTION ABOUT COMPANY

M/s Jhabua Power Limited

Jhabua Power Limited (JPL) is a power generation company based at Seoni district in the State of Madhya Pradesh. The site is located near village Barela - Gorakhpur, Tehsil Ghansore of Seoni District. JPL currently has 600MW thermal capacity fully operational and 660MW under implementation. The plant is generating power on commercial basis. Jhabua Power Limited has at present a total tied up capacity of app 89%. This consists of: - (a) Long term tied up capacity to the tune of 71% with the states of Madhya Pradesh (35%) & Kerala (36%), and (b) Medium term PPA with PTC/Bengal (3 year starting from Mar'2019) to the tune of 18% has also been tiedup. The plant has full fuel linkage for tied up capacity with SECL & MCL (Subsidiaries of Coal India Limited). The nearest Railway station is Binaki, located in the Jabalpur Gondia section of Indian Railways and the nearest airport is at Jabalpur. The private siding of JPL is PJPB. JPL is committed towards the environment and the welfare of the community. JPL has implemented several programs in the field of infrastructure development, health, education and livelihood for the community around its area of operation.

The total project area of the project is 1861042 Sq. Meter. The Seoni Block has been categorized as "Safe" as per CGWA portal.





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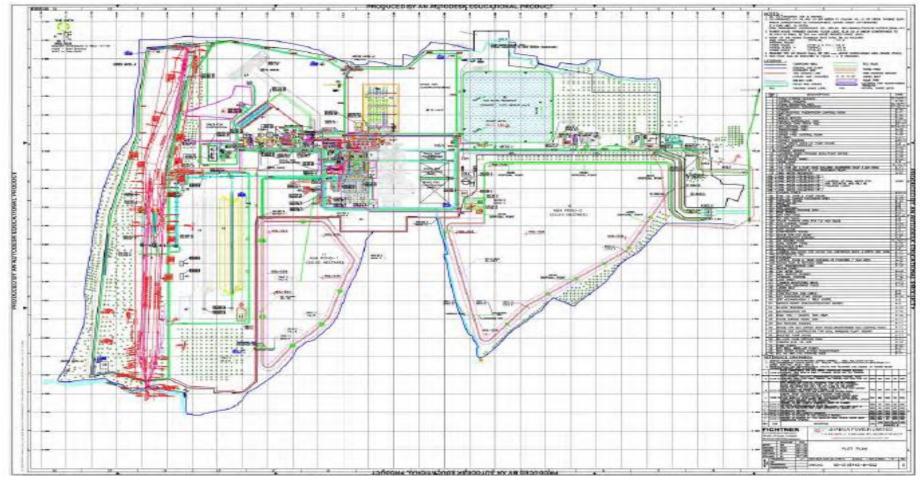


Figure 1.1: Site Plan- M/s Jhabua Power Ltd.

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1.2 PURPOSE OF THE PROJECT

M/s Jhabua Power Limited has retained M/s Vardan Environet, Gurgaon to evaluate comprehensive hydro-geological & groundwater resources evaluation studies in their project premises and around the vicinity of 5 km radius buffer zone of their project located at Seoni, Madhya Pradesh.

1.3 LOCATION AND ACCESSIBILITY

The Jhabua Power Limited- 600 MW is located at Village Barela, Gorakhpur, in Ghansore Tehsil- Seoni, Madhya Pradesh and the coordinates of the project site is **22.73788N & 79.91085E**. The location map of the study area is given in *fig 1.2*

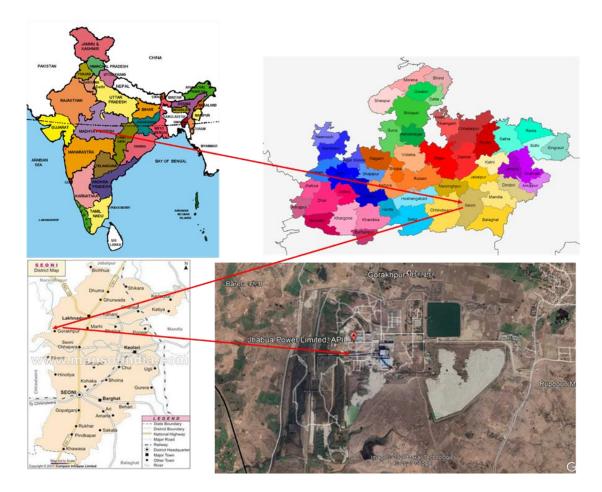


Figure 1.2: Location Map of the Project Site

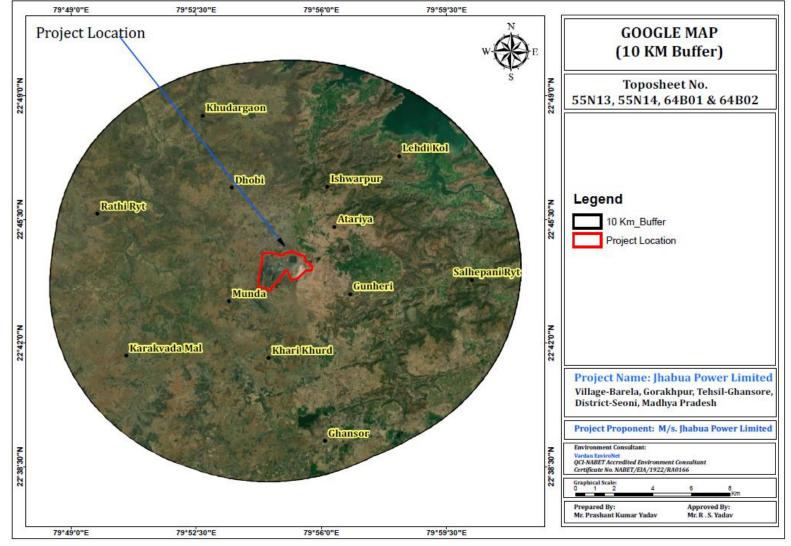


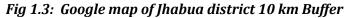
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1.4 SCOPE OF WORK

The scope of work includes the following:

- ➤ To analyse physiographic conditions of the study area with the help of field observations, GPS readings, Survey of India (SOI) Toposheet and Satellite images.
- To observe hydrogeological conditions and study of aquifer system of the area i.e. in Core and 5 km Buffer Zone.
- To work out quantitative as well as qualitative variations in groundwater with respect to aerial extent and to find out water balance.
- To suggest ways and means of creating artificial recharge to negate adverse impact on groundwater regime and their impact on groundwater regime of the area.
- > To prepare detailed Hydro-geological report and rainwater harvesting plan.

1.5 METHODOLOGY

Following methodology has been adopted to conduct hydro-geological investigation in the area:

- Physiographic studies of the industry and its surroundings with the help of latest Google images, site visit, GPS survey etc. which helps in determining physiographic gradient.
- Secondary data collection i.e., climate and rainfall, soil and topography, geology, drainage etc. for interpretation.
- Detailed hydro-geological survey in study area including geology, types of aquifers and their hydraulic parameters governing the groundwater regime of the area, depth to water level, groundwater quality, water abstraction structures and their discharge, surface water bodies, drainage pattern, major irrigation sources and their potential etc.
- > Interpretation of the ground water level data of the study area.





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CHAPTER -2

Meteorology- Drainage and Geomorphology

2.1 CLIMATE AND RAINFALL

The Climate of the study area characterized by a hot summer and general dryness except during the southwest monsoon season. The year may divide into four seasons. The cold season, December to February is followed by the hot season from March to about the middle of June. The period from the middle of June to September is the southwest monsoon. October and November form the post monsoon or transition period. The normal annual rainfall of Study area is 1323.7 mm. The maximum rainfall received during southwest monsoon period i.e., June to September. About 86.3% of the annual rainfall received during monsoon season. Only 13.7% of the annual rainfall takes place between October to May period. Thus, surplus water for ground water recharge is available only during the southwest monsoon period.

The normal maximum temperature received during the month of May is 40.3° C and minimum during the month of December is 11.3° C. The normal annual means maximum and minimum temperatures of study area are 31.3° C & 18.9° C respectively. During the southwest monsoon season the relative humidity generally exceeds 88% (August month). In the rest of the year, it is drier. The driest part of the year is the summer season, when relative humidity is less 34%. May is the driest month of the year. The wind velocity is higher during the pre-monsoon period as compared to post monsoon period. The maximum wind velocity 7.7 km/hr. observed during the month of June and minimum 3.9 km/hr during the month of December.

The average annual rainfall of the district is 1145.13 mm, and is unevenly distributed over the area. The highest rainfall recorded is 1748.34mm in the year 2013 and the lowest rainfall is recorded is 504.55 mm in the year 2007.





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(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

Table 2.1: Rainfall data in mm for last 20 years as per IMD are given below:

YEAR	RAINFALL	YEAR	RAINFALL
2001	1086.14	2011	1302.28
2002	1141.07	2012	1069.78
2003	1482.93	2013	1748.34
2004	887.47	2014	985.03
2005	1256.81	2015	1041.18
2006	1158.12	2016	1127.14
2007	504.55	2017	853.72
2008	1032.31	2018	928.44
2009	1125.41	2019	1527.28
2010	1345.54	2020	1299.15

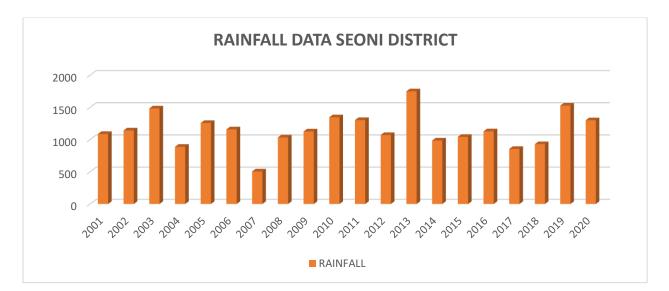


Figure 2.1: Rainfall Pattern of Seoni District (in mm)

2.2 GEOMORPHOLOGY, DRAINAGE AND SOIL

The area has undulating topography comprising hills of Satpura plateau from South to North. While the North Eastern part covered by Deccan plateau and falls at the altitude in between 325 to 740 m above MSL. The general trend of hills in the district is North-south with some isolated hillocks. Physio-graphically the area is divided into five parts.

1. Lakhnadon Plateau.

- 2. Upper Wainganga Valley.
- 3. Lower Wainganga Valley.





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4. Sagar and Hirri River Valley 5. Southern Lower Land.

The area is undulating plane, hilly and forested. The area North of Barghat is plane and Rice producing belt has covered by Bori Canal system. The Keolari block has plateau like appearance and covered by good network of canals under Sanjay Sarovar Pariyojna. The Wainganga is the main river flowing in the area having perennial flow. The other rivers are Thawari, Hiui, Sagar, Thal and Shadu and Pench. The black cotton soil, sandy loam, loams soil and moland soils are main soils in the area.

2.3 Hydrogeology of the study area

The occurrence and movement of ground water in hard rock areas is widely controlled by the secondary porosity present in them like joints, fractures, weathering and linearity etc. The Seoni district is mainly occupied by Archean rocks and Basaltic lava flows. The weathering of Archean rocks ranges from 0.50 mbgl to 10.00 mbgl. The weaker zones in Deccan traps are also developed at the contacts of two consecutive lava flows, which facilitate downward movement of ground water. In Vesicular basalts the voids provide more space for the accumulation of ground water. The Laterite is porous enough in nature and absorbs rain water very fast and loses it also. The water bearing properties of these formations varied widely depending upon their lithological properties and structural control.

2.3.1 Water Bearing Formations

The Ground Water occurs under water table and semi confined to confined conditions in all formations of the area. Topographic depressions, nature and extent of weathering, presence of joints and fractures play an important role in the occurrence and movement of ground water. The area occupied by Archean rocks is mostly undulating. The ground water in these rocks occurs under unconfined conditions, which is widely controlled by the weathering of the rocks, presence of joints, fracture and lineament in them.

The area occupied by Deccan trappean rocks, where ground water occurs under phreatic conditions in the weaker zones of weathered, vesicular, fractured and jointed parts of the flows.





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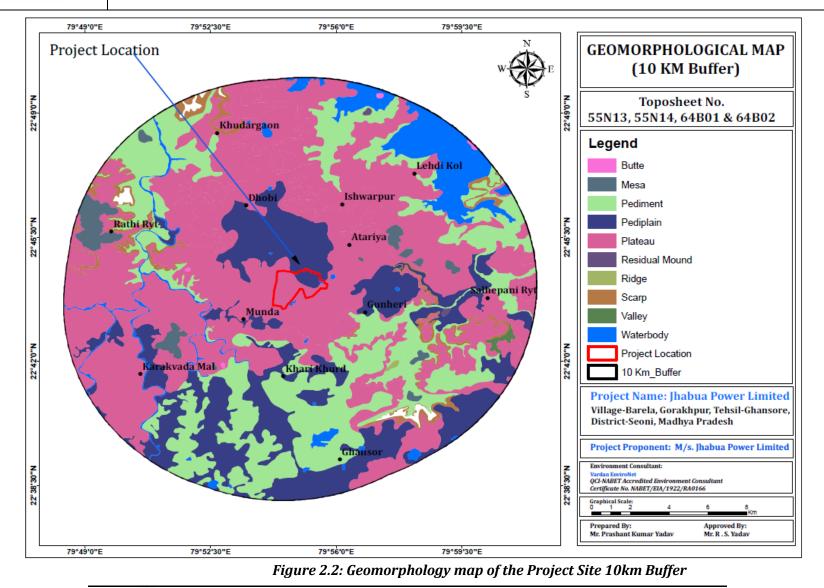
The sheet joints, basal parts of flows and inter-connection of joints and fractures controls the horizontal as well as vertical movement of ground water. The plateau like topography plays an important role in occurrence and movement of ground water. Under semi-confined conditions the ground water occurs at the contacts of two flows and at the contact of trappean rocks with Archean basement. The Laterites are highly porous in nature and allows fast movement of ground water as well.





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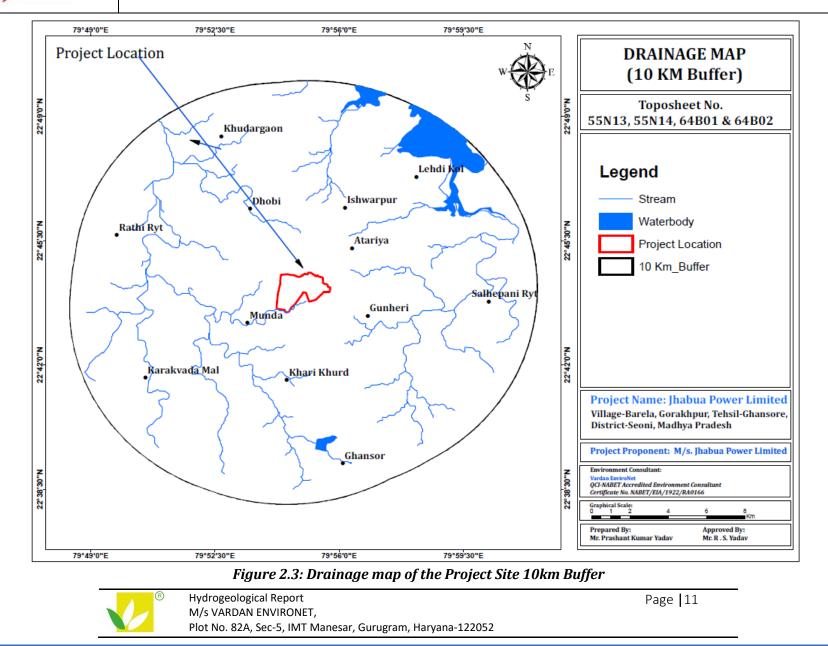
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JHABUA POWER

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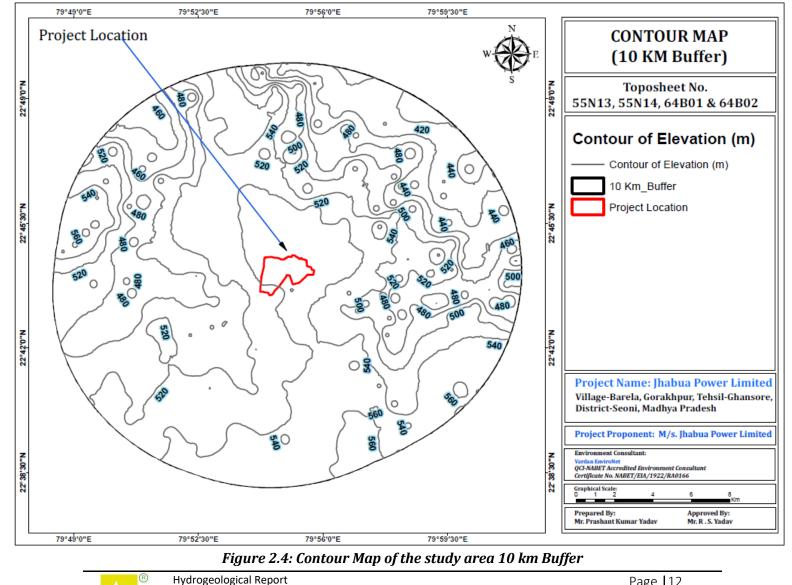
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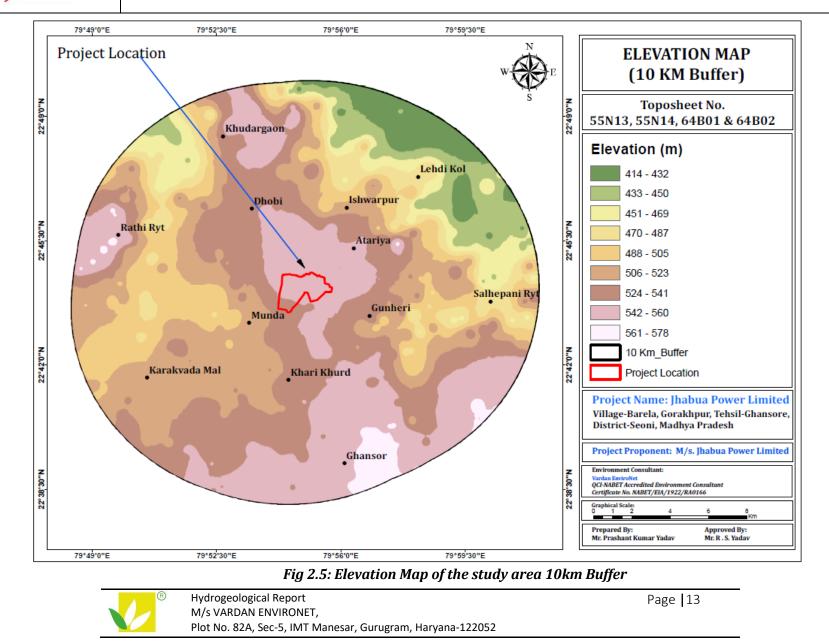


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CHAPTER-3

Geology and Hydrogeology of the Study area

3.1 REGIONAL GEOLOGY

Seoni is a part of ENE-WSE trending Central Indian Tectonic Zone (CITZ) limited by Sone-Narmada South Fault (SNSF) in the north and Central India Suture (CIS) in the north and Central India Suture (CIS) in the south, while Tan Shear Zone (TSZ) is located midway between the two. Geologically, the district comprises of Tirodi Biotite Gneiss (TBG) and Supracrustal Sausar Group (SSG) in the south eastern parts while major parts are covered with Deccan Traps with few outcrops of lameta, intertrappean beds, laterite cappings and alluvium ranging in age from Meso-Proterozoic to Recent. TBG forms the base mand of the Sausar Supracrustal and comprises grey stromatic and/or streaky gneisses with enclaves of high grade metamorphites, pink gneiss with migmatites and amphibolite. SSG is represented by Lohangi Fm, Mansar Fm, Chorbaoli Fm, Bichua Fm. Lithologically, cratonic assemblage consists of metamorphosed quartzite, pelites and carbonate and intrusive syntectonic strongly foliated granite and post-tectonic massive granite. The basement-cover contact was largely obliterated due to intense shearing and /or migmatitic foliation of TBG. Late cretaceous (Maestrichtian) strata include the Lameta Group occurring as thin bands and discontinuous patches in the south-eastern parts of the area. These are represented by cherts, cherty modular limestone, variegated clay and shale, deposited in a lacustrine environment, Along the eastern margin, the Deccan Traps overlie the Lameta sediments and along the southern margin, they are found above gneisses. The cumulative lava pile (430 m) comprises twenty-four number of flows which are classified under Amarkantak group. Based on the variation in lithological, textural and physical characteristics, the group is divided into formations such as Mandla, Dhuma, Pipardahi, Linga, Multai, Amarwara and Khamla formations. The thickness of individual flow varies from 5 m to 30 m. The basalt flows are traversed by basic dykes and are separated by wide spread persistent/impersistent fossiliferous to non-fossiliferous intertrappean. Extensive





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laterite cappings of varied thickness between 10 to 40 m on flow tops are exposed over an area of 100 sq.km. around Batwri, Amarpur and Chhiriya. The laterite of Kareligarh hill is a capping over biotite gneiss and extends in a NNE-SSW direction of about 3 km length and the width is around 300 m. The average thickness of laterite capping in this locality is about 70 m.

Lithology	Strtigraphic status	Group	Age	Nature and characteristics
Albuvium			Quatemary	Soft and unconsolidated sediments
Laterite				Medium to hard, brick red to yellowish brown, ferruginous, consolidated rock
Basic Dykes			Cainozoic	Dark grey, fine to medium grained, hard, compact manuive rock
Four basaltic lave flows, simple and compound pahoehoe flows with megacryst flow unit	Ehamla Fu			Dark grey, fine to medium, hard, compact massive non-perphyritic to moderately perphyritic
Five to seven simple and compound pahoehoe flowswith megacrystflow at base	Amarward Fm	Anuarka ntak (Deccan trap)	Palaeogene	Dark grey, fine grained hard, compact, massive, non-porphyritic to porphyritic
Two basaltic flows, simple to compound pahoehoe type	Multai Fm			Dark grey, medium grained hard, compact, massive, mega porphyritic in mature
Four basaltic flows , simple to compound type	Linga Fm			Dark grey, fine to medium grained hard , compact, massive, moderately to highly porphyritic:
Two simple basaltic flows	Pipardhi Fm			Dark grey, fine grained hard, compact, massive, one perphyritic to sparsely perphyritic
Eight basaltic flows, simple and compound, pahoshos flows with megacrys flow unit	Dhume Fm		Upper Cretaceous to Palaeogene	Dark grey, fine to medium grained hard , compact, massive, porphyritic in nature
Four basaltic flows, simple to compound pahoehoe flows with megacryst flow unit	MandiaFm			Dark grey, fine to medium grained hard, compact, massive, and moderately to sparsely porphyrinc.
Simple and compound basaltic flows	Unclassified	Amarka		Dark grey, fine grained hard , compact, massive and amygdalodal
Chert, cherty linnestone and thale	Intertrappean	ntak (Deccan		
Chert, cherty nodular limestone, variegated clay and shale	Lameta group	trap)	Late Cretaceous (Maestrichtian)	Hard, laminated and friable rocks
Granite	Intrucive		Late Meso Proterozoic	Hard compact massive porphytic racks
Foliated granite	Intrusive			Hard, Compact, Foliated rock
Crystalline limestone anddolomite	Bichua Fm			Hard and compact rocks
Muscovite-biotitic schistband quartzitic biotitegranite	Junewani Fm			Soft and flaky rocks, hard and compact rocks
Quartzites and quartze muscovite schist'	Chorboli Fm			Hard and linky rocks
Muscovite-biotite schist	Манган Ган	Saurar	Maco	Soft and finky tooks
Calc-silicate rocks	Lohangi Fm	group	Proterozoic	Hard and flaky rocks
orey stromatic and/or streaky gasess with enclaves of high grade metemorphites/pink gasesswith migmatite/Amphibolites	1 Urodi Biotite gneiss			Hard and compact, toilated and oanded rocks/hard and compact banded, foliated to massive pink megacrystic K - feldspan bearing rocks, Hard and compact, dark greenish grey, massive to moderately feliated rechs

Table 3.1: Stratigraphic Sequence of the Study Area





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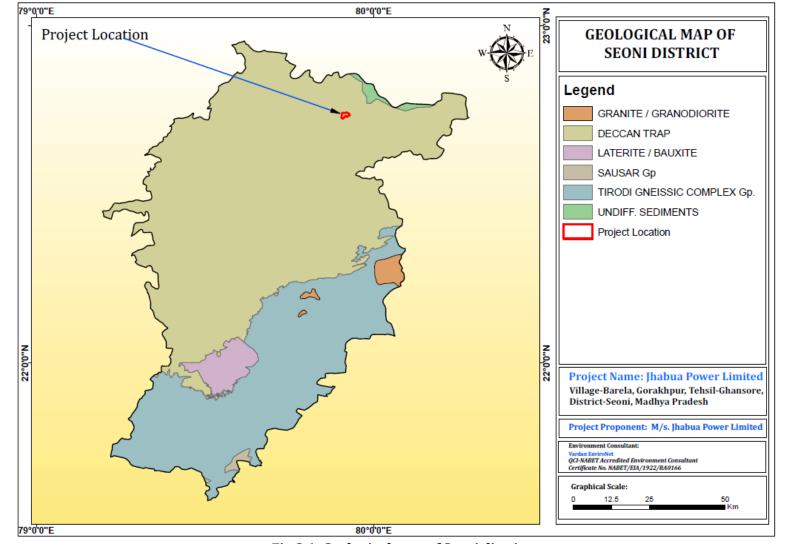


Fig 3.1: Geological map of Seoni district

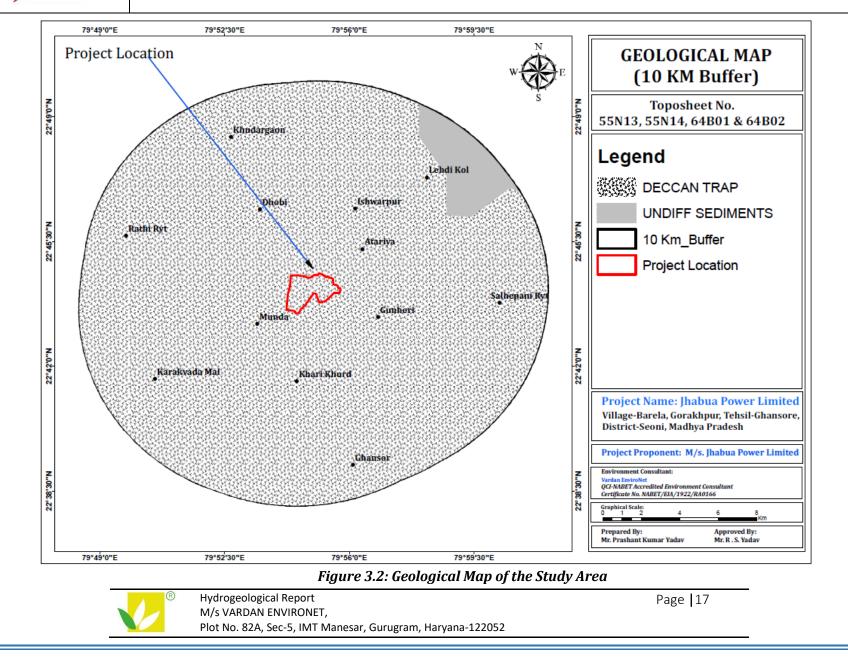


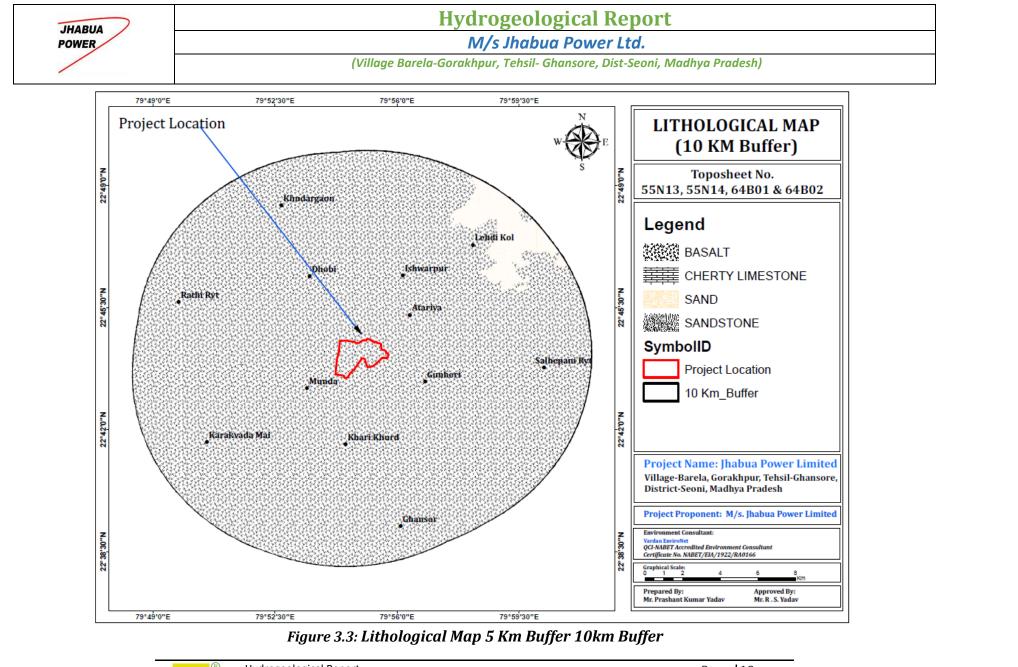
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3.2 HYDROGEOLOGY OF THE AREA

The occurrence and movement of ground water in hard rock areas is widely controlled by the secondary priority present in them like joints, fractures, weathering and linearity etc. The district is mainly occupied by Archean rocks and Basaltic lava flows. The weathering of Archean rocks ranges from 0.50 mbgl to 10.00 mbgl. The weaker zones in Deccan traps are also developed at the contacts of two consecutive lava flows, which facilitate downward movement of ground water. In Vesicular basalts the voids provide more space for the accumulation of ground water. The Laterite is porous enough in nature and absorbs rain water very fast and looses it also. The water bearing properties of these formations varied widely depending upon their lithological properties and structural control.

3.2.1 Water Bearing Formations

The Ground Water occurs under water table and semi confined to confined conditions in all formations of the area. Topographic depressions, nature and extent of weathering, presence of joints and fractures play an important role in the occurrence and movement of ground water.

The area occupied by Archean rocks is mostly undulating. The ground water in these rocks occurs under unconfined conditions, which is widely controlled by the weathering of the rocks, presence of joints, fracture and lineament in them. The area occupied by Deccan trappean rocks, where ground water occurs under phreatic conditions in the weaker zones of weathered, vesicular, fractured and jointed parts of the flows. The sheet joints, basal parts of flows and inter-connection of joints and fractures controls the horizontal as well as vertical movement of ground water. The plateau like topography plays an important role in occurrence and movement of ground water. Under semi-confined conditions the ground water occurs at the contacts of two flows and at the contact of trappean rocks with Archean basement. The Laterites are highly porous in nature and allows fast movement of ground water as well.

3.3 SITE SPECIFIC HYDROGEOLOGY

The Ground Water occurs in shallow aquifers under unconfined to semi-confined





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conditions in Deccan trap areas whereas in granitic and Archean formations it is restricted to unconfined conditions. The Ground Water in deeper levels occurs under semi-confined to confined conditions. The discharge of tube wells varies from 0.5 lps to 12 lps. The extent of aquifer restricted to their regional extends. The recharge of the deeper aquifer takes place through deep joints, fractures and contact zones, whereas the shallow aquifer recharges through weathered portion of the formation. The wells yielding in range from 3 m³ /day to 182 m³ /day.

3.4 GROUNDWATER RESOURCES

Seoni district is underlain by Deccan trap basalts and Archaean granite-gneisses. Dynamic ground water resources of the district have been estimated. There are eight assessment units (block) in the district which fall under non command (95%) and command (5 % Barghat, Dhanora, Keolari and Seoni) sub units. All the blocks of the district are categorized as safe blocks. Seoni is with highest stage of ground water development is computed as 46%. The net ground water availability in the district is 79239 ham and ground water draft for all uses is 20,456 ham, making stage of ground water development 26 % as a whole for district. After making allocation for future domestic and industrial supply for next 25 years, balance available ground water for future irrigation would be 57784 ham at 50% stage of ground water development's safe limits in the district.

Assessme nt Unit/Bloc k	Sub-unit Command/No n-Command	Net Ground Water Availabili ty (Ham)	Existi ng Gross Groun d Water Draft	Net Ground Water Availability for Future Irrigation Developme	Stage Of Ground Water Developme nt (%)	Catego ry of Block
	Command	1636	324	1280	20	Safe
SEONI	Non-Command	12389	6023	6181	49	Safe
	Total-Block	14025	6348	7461	45	Safe





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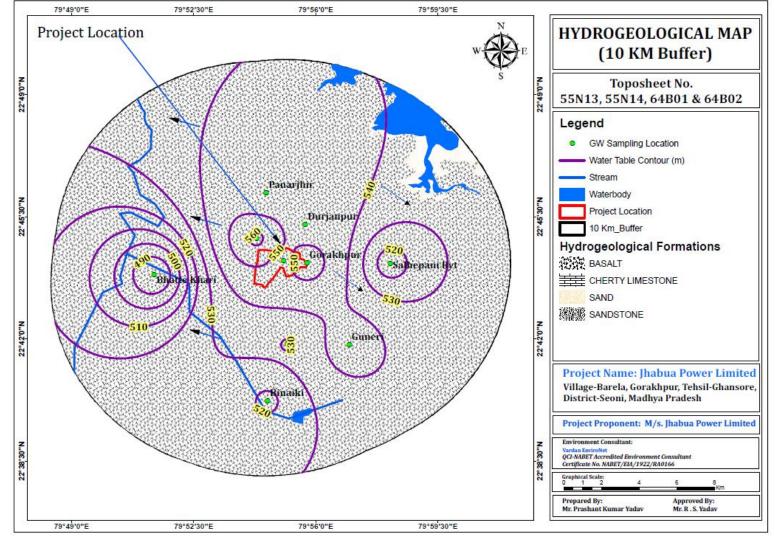
As per the Dynamic Ground Water Resources of India, 2017 the study area falls under SAFE category.





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3.5 GROUNDWATER LEVEL MONITORING

Ground water occurs within sand formation gravels. Groundwater is one of the Earth's widely distributed and most important natural resource. The largest source of fresh water in the world lies underground. At the same time, development of groundwater is very old. Increased demand of groundwater for various purposes has stipulated development of groundwater resources. Aquifers are formed as alluvium which constitute good aquifers form locales for storage of ground water.

3.5.1 Observation and Interpretation of Ground water level Monitoring

A detailed groundwater level monitoring has been carried during pre and post monsoon season at about 8 different places within buffer zone from existing dug wells and bore wells. Ground water monitoring locations along with their hydro geological details is given in *Table: 3.3*

Pre monsoon depth to water level - On the basis of the depth to water level of the pre monsoon depth to water level was monitored between 8.2 to 10.6 mbgl.

Post monsoon depth to water level- On the basis of the depth to water level of the post monsoon depth to water level ranges between 2.1 to 3.6 mbgl.

Based on the field investigation, contour map for depth to water level (mbgl) of pre and post monsoon of the study area is represented in *Figure 3.5 & 3.6*.





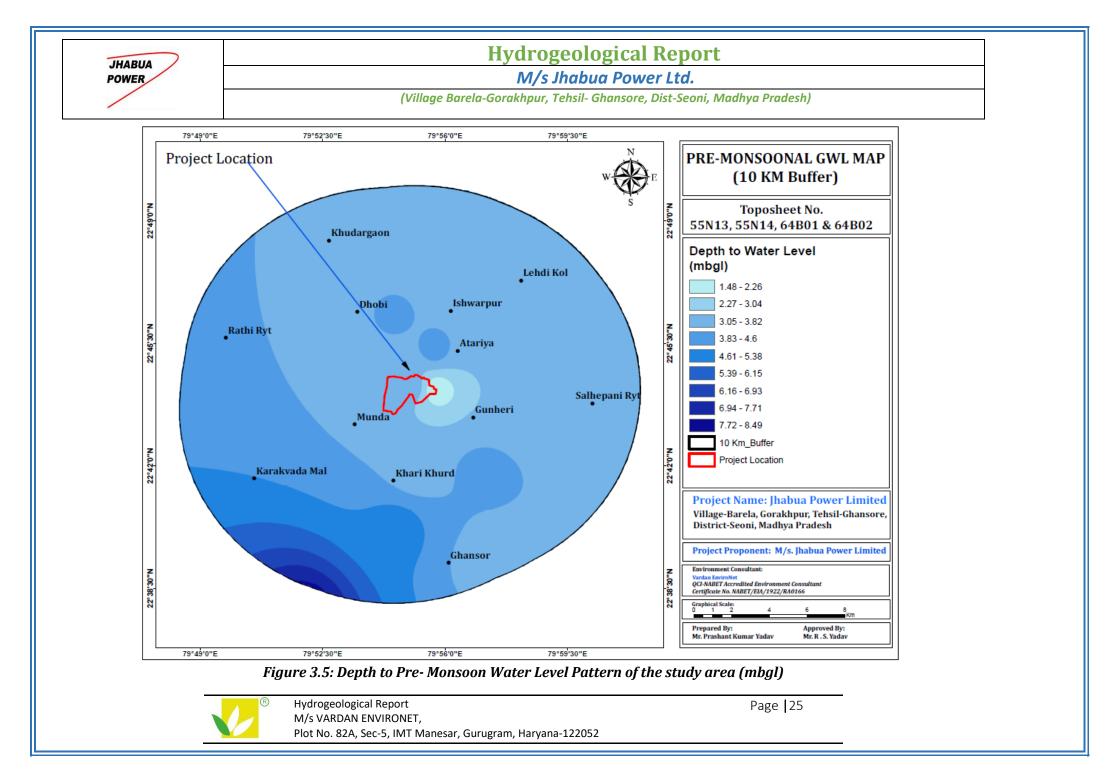
M/s Jhabua Power Ltd.

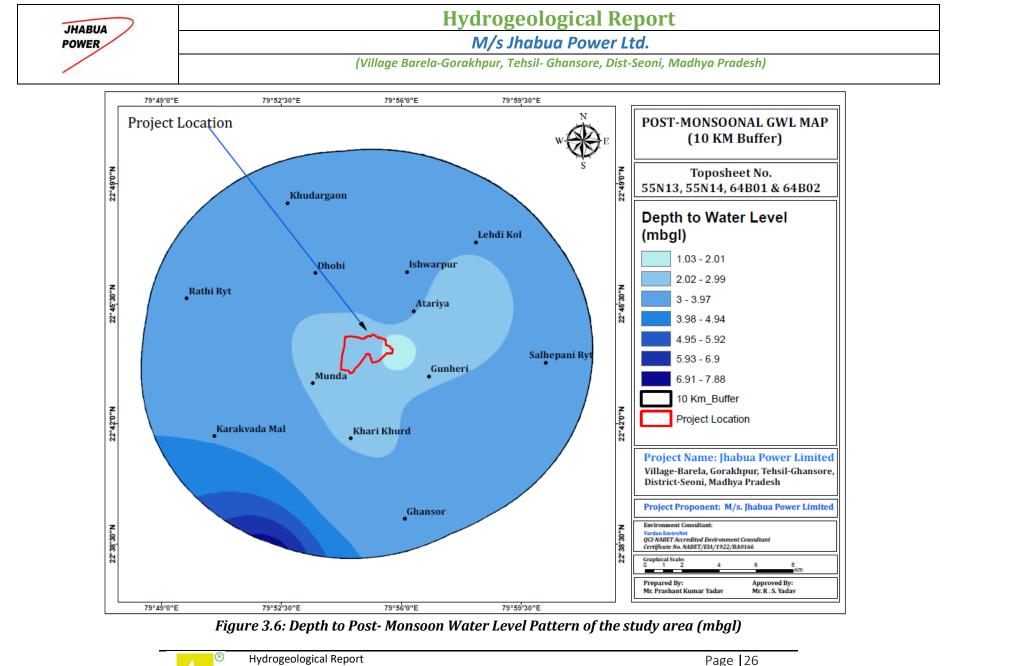
(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

Table: 3.3: Depth to Ground Water Level of inventory well of the Study Area

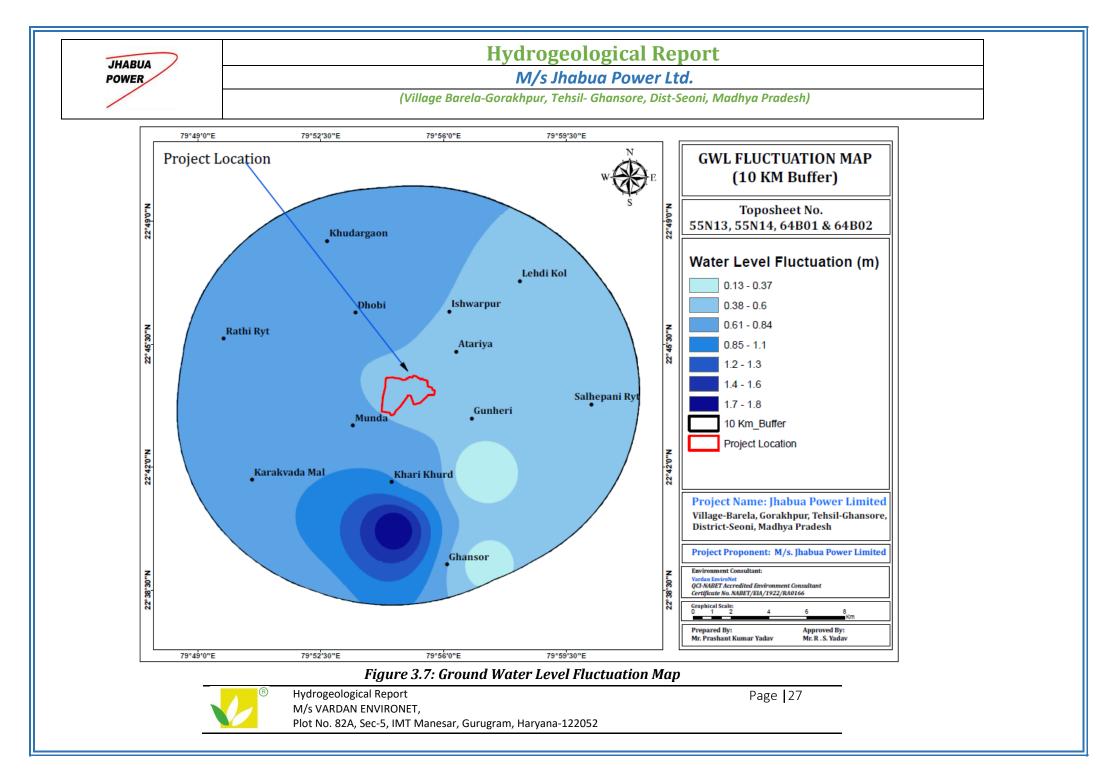
Location	LAT_DEG	LONG_DEG	Pre- Monsoonal Ground Water Level (mbgl)	Post- Monsoonal Ground Water Level(mbgl)	Fluctuation
Project Site	22.73744	79.91783	3.52	2.98	0.54
Ghansora	22.6542	79.952	4.30	3.10	1.2
Panarjhir	22.76984	79.90949	3.90	3.21	0.69
Binaiki	22.67042	79.91016	5.19	3.4	1.79
Durjanpur	22.75478	79.92813	4.12	3.54	0.58
Guneri	22.69733	79.94919	4.05	3.92	0.13
Dola	22.69744	79.919	3.25	2.47	0.78
Gorakhpur	22.73636	79.92905	1.48	1.03	0.45
Ghansori	22.6542	79.9525	3.32	3.05	0.27
Mehta	22.6306	79.8661	8.56	7.95	0.61







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3.6 WATER LEVEL TREND ANALYSIS & QUALITY ISSUES

3.6.1 Depth to water level pre and post monsoon (10 years)

On the basis of the depth to water level of the study area, the pre monsoon depth to water level ranges between 4.09 mbgl to 7.76 mbgl and post-monsoonal water level ranges between 2.71 mbgl to 4.84 mbgl. Pre and Post monsoon depth to water level graph is prepared and enclosed below:

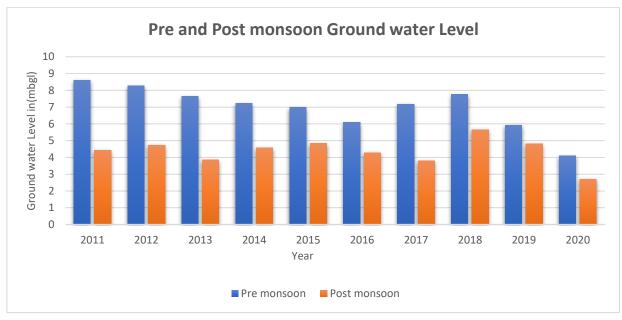


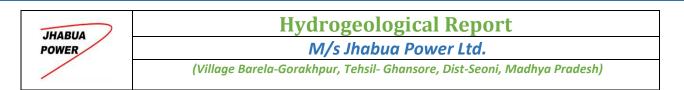
Figure 3.8: Graph showing trend in water level in last 10 years in Pre and Post Monsoon 3.6.2 GROUND WATER TREND ANALYSIS (10 YEARS)

The ground water levels observed over a period provides valuable information on the behaviour of the ground water regime, which is constantly subjected to changes due to recharge and discharge phenomenon. When the recharge exceeds discharge, there will be a rise in the ground water storage and vice versa. The decline in water level may be due to increase in draft (for different purposes) or decrease in precipitation (less recharge to ground water). On the other hand, a rise in water level may be due to an increase in rainfall and/or due to changes in irrigation practices.

3.6.3 HYDROGRAPH OF THE WATER LEVEL (10 YEARS)

A hydrograph is a graph showing stage discharge volume of runoff, or other properties of water flow with respect to time. Water Level data of the study area for pre monsoon, post





monsoon, lean period and monsoon for last 10 years has been accumulated and plotted in graphical representations.

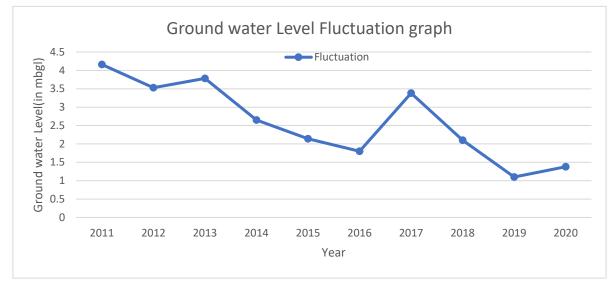


Figure: 3.9: Ground Water Level Fluctuation Graph in last 10 year

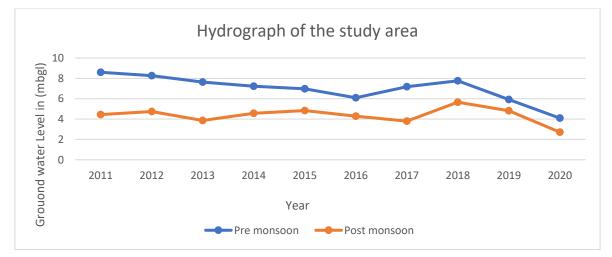


Figure 3.10: Hydrograph water level for Pre & post monsoon

3.7 GROUNDWATER QUALITY ANALYSIS

3.7.1 Ground water quality

Primary sources of potable water in the area are mainly tube wells. Groundwater samples were collected from nearby study area. The analysis of the samples has been





M/s Jhabua Power Ltd.

(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

carried out in NABL certified approved lab. **M/s VARDAN ENVIRONET,** IMT Manesar, Gurugram, Haryana (122052)

Ground Water Quality Test Report has been attached as Annexure-I

3.7.2 Results of Ground Water Analysis

The chemical quality of underground water has been evaluated by chemically analyzing the water samples collected from existing borewells. The Physio-chemical quality of groundwater was compared with drinking water standard (IS: 10500- 2012). Analysis results of ground water reveal the following:

The physio-chemical quality of groundwater was compared with drinking water standard (IS: 10500- 2012). The results of chemical analysis of all the parameters of the groundwater samples show under permissible value.

3.7.3 Conclusion of Chemical test Result: -

The chemical data report show that all the parameters are under the permissible limits and can be used as drinking purpose.



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(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

CHAPTER-4

Summary and Conclusion

SUMMARY AND CONCLUSION

- Jhabua Power Limited (JPL) is a power generation company based at Seoni district in the State of Madhya Pradesh. The site is located near village Barela - Gorakhpur, Tehsil Ghansore of Seoni District. JPL currently has 600MW thermal capacity fully operational and 660MW under implementation. The plant is generating power on commercial basis.
- The Climate of the study area characterized by a hot summer and general dryness except during the southwest monsoon season.
- The average annual rainfall of the district is 1145.13 mm, and is unevenly distributed over the area. The highest rainfall recorded is 1748.34mm in the year 2013 and the lowest rainfall is recorded is 504.55 mm in the year 2007.
- The area has undulating topography comprising hills of Satpura plateau from South to North. While the North Eastern part covered by Deccan plateau and falls at the altitude in between 325 to 740 m above MSL.
- The area North of Barghat is plane and Rice producing belt has covered by Bori Canal system. The Keolari block has plateau like appearance and covered by good network of canals under Sanjay Sarovar Pariyojna.
- The Wainganga is the main river flowing in the area having perennial flow.
- The black cotton soil, sandy loam, loams soil and moland soils are main soils in the area.
- Water bearing formations are mainly Alluvium and Deccan Trap.
- Plant uses the surface water for the operation, process & domestic use from Bargi Dam (Rani Avanti bai dam)".





Hydrogeological Report M/s Jhabua Power Ltd.

(Village Barela-Gorakhpur, Tehsil- Ghansore, Dist-Seoni, Madhya Pradesh)

- A detailed groundwater level monitoring has been carried during pre and post monsoon season at about 8 different places within buffer zone from existing dug wells and bore wells.
- Pre monsoon depth to water level was observed between 8.2 to 10.6 mbgl.
- Post monsoon depth to water level ranges between 2.1 to 3.6 mbgl.
- The net ground water availability in the district is 79239 ham and ground water draft for all uses is 20,456 ham, making stage of ground water development 26 % as a whole for district. After making allocation for future domestic and industrial supply for next 25 years, balance available ground water for future irrigation would be 57784 ham at 50 % stage of ground water development's safe limits in the district.
- The predictable pattern of progress in water level from pre storm to post rainstorm of checking wells shows that there is no antagonistic effect in the ground water table in the venture region and bordering towns in view of the project site. In spite of the fact that Rain Water Harvesting designs ought to be fused in the project site to limit the intense variance in water level.
- Water level fluctuation is also very low in the study area.
- As per the Dynamic Ground Water Resources of India, 2017 the study area falls under Safe category.





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Test Report

	HABUA/GW/01	Report No.	: VEL/W/2102130003/A
Name & Address of the Par	ty : M/s Jhabua Power Limited	Format No	: 7.8 F-01
	Village-Barela, Gorakpur District-Seoni MP	Party Reference No	i: NIL b Var Ban Enviro
		Report Date	: 23/02/2021
		Period of Analysis	: 13/02/2021-23/02/2021
EnviroLab Vardan Envi		Receipt Date	: 13/02/2021
Sample Description	: GROUND WATER	Sampling Date	: 08/02/2021
Location	: Project Site	Sampling Quantity	: 2 Ltr. +300 MI
Sample Collected by	: Vardan EnviroLab Team	Sampling Type	: Grab
Preservation	: Suitable Preservation	virol.ab Vardan Envir	· Grab
Sampling and Analysis Protocol	: IS 10500 -2012	b Vardan EnviroLab V oLab Vardan EnviroL	/ardan EnviroLab Var ab Vardan EnviroLab

S.No.	Parameters	Protocols	Results	Units	IS:1	0500-2012
rol.z tan l viro	ab Varda n EnviroLab Var EnviroLab Vardan Enviro Lab Vardan EnviroLab V	urdan EnviroLab Vardan EnviroLab Vardan EnviroLa roLab Vardan EnviroLab Vardan EnviroLab Vardan Vardan EnviroLab Vardan EnviroLab Vardan Enviro	ab Vardan Envir EnviroLab Vard Lab Vardan Env	oLab Va an Envir Grotab	Acceptable Limits	Permissible Limits
1	pHilab Vardan Epvirola	IS 3025 (P-11): 1983 Reaff. 2017	7.27	Envirot	6.5 to 8.5	No Relaxation
2	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL-5)	mg/l	NA	NA
3	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	342.0	mg/l	500	2000
4	Total Alkalinity (as CaCO3)	IS: 3025 (Part 23): 1986, Reaff. 2019	155.2	mg/l	200	600
5	Total Hardness (as CaCO3)	IS: 3025 (Part 21): 2009, Reaff. 2019	184.3	mg/l	200	600
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	8.0	mg/l	45	No Relaxation
7	Chloride (as Cl)	IS: 3025 (Part 32): 1988, Reaff. 2019	57.43	mg/l	250	1000
8	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	35.71	mg/l	200	400
9	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	62.20	mg/l	75	200
10	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	7.07	mg/l	ab 30 dan	100
11	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.6	mg/l	1.0	1.5
12	Total Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.24	mg/l	0.3	No Relaxation
13	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05
14	Mercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005 mg/l)	mg/l	0.001	No Relaxation
15	Lead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation
16	Cadmium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation
17	Chromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation
18	Copper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5
19 2	Zinc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15
20 5	Selenium (as Se)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com







Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

ample	e Number : VEL/JHABUA/C	GVV/01	Report No		: VEL/W/2102	130003/A
S.No.	D. Parameters Protocols Results L	Protocols	Results	Units	IS:10500-2012	
n En rola		Envirol pLab Va	Acceptable Limits	Permissible Limits		
20	InviroLab Vardau Erwi	rotab Vardan EnviroLab Vardan Vardan EnviroLah Vardan Enviro	mg/l)		Carelas From	Calab Vard
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V 1 dan FiroLab Var	5
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	ab Vardan	ola 0.3 di nvirolab V
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	an Entirol. nvirolab V

*BDL-Below Detection Limit, **DL-Detection Limit

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RAJ KUMARYADAV (Authorized Signatory)

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: IS 10500 -2012

Test Report

Sample Number : VEL/JHAE	BUA/GW/01	Report No.	: VEL/W/2102130003/B
Name & Address of the Party	: M/s Jhabua Power Limited	Format No	: 7.8 F-01
	Village-Barela, Gorakpur District-Seoni MP	Party Reference No	: NIL
		Report Date	: 23/02/2021
		Period of Analysis	: 13/02/2021-23/02/2021
EnviroLab Vardan Enviro		Receipt Date	: 13/02/2021
Sample Description	: GROUND WATER	Sampling Date	: 08/02/2021
Location	: Project Site	Sampling Quantity	: 2 Ltr. +300 MI
Sample Collected by	: Vardan EnviroLab Team	Sampling Type	Grab
Preservation	: Suitable Preservation	viroLab Vardan Envir	oLab Vardan EnviroL

S.No.	Parameters	Protocols	Results	Units	IS:10	500-2012
dan wird	nviroLab Vardan Enviro Lab Vardan EnviroLab Va	Lab Vardan EnviroLab Vardan rdan EnviroLab Vardan Enviro	EnviroLab Varc Lab Vardan En	in Envi iroLab	Acceptable Limits	Permissible Limits
n 1 N n En Irola dan	Total Coliform (By MPN Method)	IS:1622	Absent	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA
2	E-Coli	IS:1622	Absent	per 100 ml	Absent/100 ml	Absent/100 ml
3	Cyanide (as CN)	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05 mg/l)	mg/l	0.05	No Relaxation
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	5	15
5	Odour	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	0.2	1.0

*BDL-Below Detection Limit, **DL-Detection Limit

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Sampling and Analysis

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Test Report

Sample Number : VEL/JHABUA/GW/02			Report No	0.	: VEL/W/2102130004/A		
Name	& Address of the Party : M/s	Jhabua Power Limited	Format N	0	: 7.8 F-01		
	n EnviroLab Vardan (Villa	age-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	lo : NIL		
			Report Da	ate	: 23/02/2021		
			Period of	Analysis	: 13/02/2021	-23/02/2021	
nvire	olab Vardan EnviroLab \	/ardan Envirolab Vardan Envir	Receipt D	ate	: 13/02/2021		
and the		OUND WATER	Sampling	Date	: 08/02/2021		
Locati	tvirol ab Mardan Envirol	age- Barela	Sampling	A MALER CASE	: 2 Ltr. +300	MinviroLab V	
10.02	CID FOR LINE SAFEED OLLED SAF	dan EnviroLab Team able Preservation	Sampling	Туре	: Grab		
	ing and Analysis : IS 1	0500 -2012	oLab Vasdan En WiroLab Vardar				
S.No.	Parameters	Protocols	Results	Units	IS:1	0500-2012	
dan nviro	EnviroLab Vardan EnviroLab Va Lab Vardan EnviroLab V	olab Vardan Envirolab Vardan Envirol Jardan Envirolab Vardan Enviro	EnviroLab Vard Lab Vardan En	an Envli FiroLab	Acceptable Limits	Permissible Limits	
1	pH ² and Vardan Environ	IS 3025 (P-11): 1983 Reaff. 2017	7.07	Enviror	6.5 to 8.5	No Relaxation	
2	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	NA	
3	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	b V 278.0 Envi	mg/l	500	2000	
4	Total Alkalinity (as CaCO3)	IS: 3025 (Part 23): 1986, Reaff. 2019	106.7	mg/l	200	600	
5	Total Hardness (as CaCO3)	IS: 3025 (Part 21): 2009, Reaff. 2019	126.1	mg/l	200	600	
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	3.01	mg/l	45	No Relaxation	
7	Chloride (as CI)	IS: 3025 (Part 32): 1988, Reaff. 2019	52.64	mg/l	250	1000	
8	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	28.72	mg/l	200	400	
9	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	31.10	mg/l	75	200	
10	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	nder 11.79 ab Vardan Envi	mg/l	30	oLeb Vardan	
11	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.54	mg/l	1.0	1.5	
12	Total Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.21	mg/l	0.3	No Relaxation	
13	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05	
14	Mercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005 mg/l)	mg/l	0.001	No Relaxation	
15	Lead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation	
16	Cadmium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation	
17	Chromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation	
18	Copper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5	
19	Zinc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15	
20	Selenium (as Se)	ARHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation	

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Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com







Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

	e Number : VEL/JHABUA/O		Report No	install.	: VEL/W/2102	10000-111
S.No.	Parameters Protocols Results Units	Protocols	Results	Units	IS:10500-2012	
n En rota		Envirol stab Va	Acceptable Limits	Permissible Limits		
20	ab Vardan Envirol ab	rotab Vardan Envirotab Vardan Vardan Envirol ab Vardan Enviro	mg/l)	in Envir	Cardan Fey	ol ab Vards
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V. 1 dan inoLab Varu	5
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	0.1	0.3
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	an En 1 iroLa nviroLab V

*BDL-Below Detection Limit **DL-Detection Limit

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Test Report

rdan EnviroLab Vardan	EnviroLab Vardan EnviroLab Vardan EnviroLab Vardan	in EnviroLab Vardan EnviroLab	Acceptable Permissib Limits Limits	
S.No. Parameters	Protocols	Results Units	IS:10500-2012	
Sampling and Analysis Protocol	: IS 10500 -2012	EnviroLab Vardan EnviroLab	Lab Vardan EnviroLab Var Lab Vardan EnviroLab	
Preservation	: Suitable Preservation		roLab Vardan Envirol.	
Sample Collected by	: Vardan EnviroLab Team	Sampling Type	Grab Grab Vard	
Location	: Village- Barela	Sampling Quantity	2 Ltr. +300 MI	
Sample Description	: GROUND WATER	Sampling Date	: 08/02/2021	
		Receipt Date	: 13/02/2021	
		Period of Analysis	: 13/02/2021-23/02/2021	
		Report Date	: 23/02/2021	
	Village-Barela, Gorakpur District-Seoni Mf		•	
Name & Address of the Party	: M/s Jhabua Power Limited	Format No	• 7.8 F-01	
Sample Number : VEL/JHA	BUA/GW/02	Report No.	: VEL/W/2102130004/B	

	EnviroLab Vardan Enviro GLab Vardan EnviroLab V	Lab Vardan EnviroLab Vardan ardan EnviroLab Vardan Enviro	EnviroLab Varo Lab Vardao En	lan Envi rirotab	Acceptable Limits	Permissible Limits
1 rol lan	Total Coliform (By MPN Method)	IS:1622	Absent	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA
2	E-Coli	IS:1622	Absent	per 100 ml	Absent/100 ml	Absent/100 ml
3	Cyanide (as CN)	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05 mg/l)	mg/l	0.05	No Relaxation
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	5	15
5	Odour	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	0.2	Envir 1.0 b Va dan EnviroLa

*BDL-Below Detection Limit, **DL-Detection Limit

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Test Report

Samp	le Number : VEL/JHAB	UA/GW/03	Report N	о.	: VEL/W/21	02130005/A
Name	& Address of the Party	: M/s Jhabua Power Limited	Format N	0	: 7.8 F-01	
		Village-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL	
			Report D	ate	: 23/02/2021	
			Period of	Analysis	: 13/02/2021	-23/02/2021
			Receipt D	ate	: 13/02/2021	
Samp	le Description	: GROUND WATER	Sampling	Date	: 08/02/2021	
Locat	ion	: Village- Panarjhir	Sampling	Quantity	: 2 Ltr. +300	MI
Samp	le Collected by	: Vardan EnviroLab Team wardan Enviro	Sampling	Туре	: Grab	
Prese	rvation	: Suitable Preservation	EnviroLab Varc			
Samp Proto	ling and Analysis col	: IS 10500 -2012				
S.No	Parameters	Protocols	Results	Units	IS:1	0500-2012
rirol Idan	ab Vardan EnviroLa EnviroLab Vardan E	b Vardan EnviroLab Vardan Enviro Inviro: ab Vardan EnviroLab Vardar	Lab Vardan Envi EnviroLab Vard	lan Envir	Acceptable	Permissible
nvin	oLab Vardan Envirol	Lab Vardan EnviroLab Vardan Envir	oLab Vardan En	viroLab	Limits	Limits dat
1	рН	IS 3025 (P-11): 1983 Reaff. 2017	7.22		6.5 to 8.5	No Relaxation
2	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	Envir NA b Va
3	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	297.0	mg/l	500	2000
4	Total Alkalinity (as CaCo	D3) IS: 3025 (Part 23): 1986, Reaff. 2019	126.1	mg/l	200	600
5	Total Hardness (as CaC	O3) IS: 3025 (Part 21): 2009, Reaff. 2019	135.8 dar	mg/l	200	600
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	3.43	mg/l	45	No Relaxation
7	Chloride (as Cl)	IS: 3025 (Part 32): 1988, Reaff. 2019	71.79	mg/l	250	1000
8	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	41.08	mg/l	200	400
9	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	38.9	mg/l	75	200
10	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	ab Vardan Envi	mg/l	30	100
11	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.51	mg/l	1.0	1.5
12	Total Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.23	mg/l	0.3	No Relaxation
13	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05
14	Mercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.0005 mg/l)	mg/l	0.001	No Relaxation
15	Lead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation
16	Cadmium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation
17	Chromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation
18	Copper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5
19	Zinc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15
20	Selenium (as Se)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sample Number : VEL/JHABUA/GW/03			Report No.		: VEL/W/2102130005/A		
S.No.	Parameters	Protocols	Results	Units	IS:10500-2012		
	riroLab Vardan EnviroLa b Vardan EnviroLab Vard		virollah Vardan Ib Vardan Envir	Enviro pLab V	Acceptable Limits	Permissible Limits	
20	ab Varidan Envirol ab V	rdan Envitol ab Vardan Enviro	mg/l)	irol ab	Cardan Envi	in ab Vard	
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V 1 dim drol ab Var	5	
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2	
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	0.1	0.3	
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0	
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002	
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	lan En t iroL InviroLab V	

*BDL-Below Detection Limit, **DL-Detection Limit

JF SH

***End of Report**

RAJ KUMAR YADAV

CAUTHORIZED MANAGEST

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ab Vardan Er

Vardan EnviroLab



ml sample

Absent/100

ml

0.05

5

Agreeable

Agreeable

0.2

RAJKUM

Absent/100 ml

No Relaxation

15

Agreeable

Agreeable

1.0

(Authorized Signatory)

Page No. 1/

YADAV

per 100

ml

mg/l

Hazen

Unit

Qualitat

ive

Qualitat

ive

mg/l

Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sample Number : VEL/JHAI Name & Address of the Party Sample Description		s of the Party : M/s Jhabua Power Limited Village-Barela, Gorakpur District-Seoni MP		Report No. Format No Party Reference No Report Date Period of Analysis Receipt Date		: VEL/W/2102130005/B : 7.8 F-01 : NIL : 23/02/2021 : 13/02/2021-23/02/2021 : 13/02/2021		
Sample Description Location Sample Collected by Preservation Sampling and Analysis Protocol		: Village- Panarjhir : Vardan EnviroLab Team : Suitable Preservation		Sampling Date Sampling Quantity Sampling Type		: 13/02/2021 : 08/02/2021 : 2 Ltr. +300 MI : Grab		
S.No.	Parameters	viroLab Va ib Varcan EnviroLab Lab Varda	Protocols Environment Protocols Environment Protocols Environment Protocols	Results	Units	IS:10 Acceptable Limits	500-2012 Permissible Limits	
n 1 arda m En	Total Coliform (By MPN Method)	rinoLati Va 5 EnviroLa viroLati Va	IS:1622	Absent	MPN/10 0 ml	Shall not be Detectable in any 100	NA	

IS:1622

APHA 23rd Edition 2017, 4500CN D

IS 3025: 1983 (P-4) RA.. 2017

IS 3025 (P-5): RA. 2018

IS 3025(P-8):1984 RA. 2017

APHA 23rd Edition 2017, 5540C

*BDL-Below Detection Limit, **DL-Detection Limit

Anionic Surface Active Agent

***End of Report**

Absent

*BDL(**DL-0.05

mg/l)

*BDL(**DL 1.0

Hazen)

Agreeable

Agreeable

*BDL(**DL-0.05

mg/l)

(Checked By)

Mal

HRALSANIYA

E-Coli

Colour

Odour

Taste

Cyanide (as CN)

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wiroLab Vardan EnviroLab Vardan EnviroLab Vardan EnviroLab Vardan EnviroLab Varda G M LAB OPERATION Indan EnviroLab Vardan En

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

	IHABUA/GW/04		Report No.		: VEL/W/2102130006/A		
Name & Address of the Party	: M/s .	Jhabua Power Limited	Format N	0	: 7.8 F-01		
	Villag	ge-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL		
			Report Da	ate	: 23/02/2021		
			Period of	Analysis	: 13/02/2021	-23/02/2021	
nviroLab Vardan Envir			Receipt D	ate	: 13/02/2021		
Sample Description		UND WATER	Sampling	Date	: 08/02/2021		
Location	IVI OLS	ge- Binaiki	Sampling	Quantity	: 2 Ltr. +300	MI aviroLab V	
Sample Collected by Preservation		an EnviroLab Team	Sampling	Туре	: Grab		
Sampling and Analysis		ble Preservation 500 -2012	oLab Vardan En				
Protocol S.No. Parameters	n Envi	Protocols	Basulta	Linite	16.4	0500 2012	
S.No. Parameters		Frotocois	Results	Units	13.1	0500-2012	
dan EnviroLab Vardan		Lab Vardan EnviroLab Vardan	EnviroLab Varo	an Envi	Acceptable	Permissible	
nviroLab Vardan Enviro	oLab Va	rdan EnviroLab Vardan Envir	Lab Vardan En	viroLab	Limits	Limits	
1 pH	wiroLa	IS 3025 (P-11): 1983 Reaff. 2017	7.49	Enviroi	6.5 to 8.5	No Relaxation	
2 Total Suspended Solid	ls	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	NA	
3 Total Dissolved Solids	ab Van	IS 3025 (P-16): 1984 Reaff 2017	318.0	mg/l	500	2000	
4 Total Alkalinity (as Ca	CO3)	IS: 3025 (Part 23): 1986, Reaff. 2019	164.9	mg/l	200	600	
5 Total Hardness (as Ca	CO3)	IS: 3025 (Part 21): 2009, Reaff. 2019	174.6	mg/l o	200	600 b V	
6 Nitrate (as NO3)	IN ENVI	IS: 3025 (Part 34): 1988, Reaff. 2019	8.0	mg/l	45	No Relaxation	
7 Chloride (as Cl)	ab Vari	IS: 3025 (Part 32): 1988, Reaff. 2019	62.21	mg/l	250	1000	
8 Sulphate (as SO4)	Enviro Lab Va	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	35.71	mg/l	200	400	
9 Calcium (as Ca)	n Epvi	IS: 3025 (Part 40): 1991 Reaff. 2019	50.54	mg/l	75	200	
10 Magnesium (as Mg)	wiroLa ab Vari	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	11.79 da	mg/l	al 30 dan rdan Envi	100	
11 Fluorides (as F)	Enviro	APHA 23rd Edition 2017, 4500 FD	0.64	mg/l	1.0	1.5	
12 Total Iron (as Fe)	viroLa	IS 3025(P-53): 2003 Reaffirm 2019	0.24	mg/l	0.3	No Relaxation	
13 Arsenic (as As)	n Envir wiroLa	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05	
14 Mercury (as Hg)	Enviro Lab Va	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.0005 mg/l)	mg/l	0.001	No Relaxation	
15 Lead (as Pb)	n Envi viroLa	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation	
16 Cadmium (as Cd)	ab Vari Enviro	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation	
17 Chromium (as Cr)	viroLa n Envi	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation	
18 Copper (as Cu)	ab Var	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5	
19 Zinc (as Zn)	Lab V. virola	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15	
20 Selenium (as \$e) PAL	SANI	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation	

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TRANSICAL MANAGER nv Note: Terms & conditions refer on backside of test report. RAJ KUMARONO AV

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sample Number : VEL/JHABUA/GW/04			Report No.		: VEL/W/2102130006/A	
S.No.	. Parameters	Protocols	Results	Units	IS:10500-2012	
in En				Enviro oLab V	Acceptable Limits	Permissible Limits
20	Lon Varrian Envirol ah	Vardan EnviroLab Vardan Enviro	mg/l)	iroLab	Varriao Foul	rolah Vard
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	lab V1rdan i riroLab Vard	inviro 5 ab V Ian Envirol
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	0.1	0.3
24	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002
25	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	n EnviroLat roLab Vard

*BDL-Below Detection Lim/L **DL-Detection Limit

(Checked By)

End of Report

RAJ KUMAR YADAV

(Authorized Signatory)

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Page No. 2/2

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Vardan EnviroLab



Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sampl	e Number : VEL/JHAE	BUA/GW/	04	Report N	0.	: VEL/W/210	2130006/B	
Name & Address of the Party		: M/s Jhabua Power Limited		Format No		: 7.8 F-01		
		Villag	e-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL		
				Report Da	ate	: 23/02/2021		
				Period of	Analysis	: 13/02/2021-	23/02/2021	
				Receipt D		: 13/02/2021	rolab Vada	
Sampl	e Description	: GRO	UND WATER	Sampling Date		: 08/02/2021		
		: Villag	e- Binaiki	Sampling Quantity		: 2 Ltr. +300 MI		
		: Varda	n EnviroLab Team	Sampling	and the second second	: Grab		
Preser	vation of ab Vandan	: Suitat	ble Preservation	EnviroLab Varo	lan Envir	· Glab		
Sampli Protoc	ing and Analysis ol	: IS 10	500 -2012					
				the second s		and the second	and the second se	
S.No.	Parameters	viroLa	Protocols	Results	Units	IS:10	500-2012	
S.No.	Parameters	iviroLa ab Varc Envirol Lab Va	Protocols Protocols Protocols Protocols Protocols Protocols Protocols Protocols Protocols Protocols Protocols Protocols	Results	Units	IS:10 Acceptable Limits	9500-2012 Permissible Limits	
S.No.	Parameters Total Coliform (By MPM Method)	viroLa Enviro Lab Va ViroLa NiroLa NiroLa Enviro Enviro	Protocols IS:1622	Results Absent	Units MPN/10 0 ml	Acceptable	Permissible	
riroL rdan nviro	Total Coliform (By MPN	wiroLa ab Varo Enviro Lab Va N Envir wiroLa Enviro Lab Varo Enviro Lab Varo	an EnviroLab Vardan EnviroL ab Vardan EnviroLab Vardan Idan EnviroLab Vardan Enviro	ab Vardan Envi EnviroLab Vard Lab Vardan En	MPN/10	Acceptable Limits Shall not be Detectable in any 100	Permissible Limits	
niroL ndan nviro anda an En tiroL ndan	Total Coliform (By MPN Method)	wiroLa Enviro Lab Varo Lab Va n EnviroLa EnviroLa ViroLa viroLa b Varo	IS:1622	Absent	MPN/10 0 ml	Acceptable Limits Shall not be Detectable in any 100 ml sample Absent/100	Permissible Limits NA	

Anionic Surface Active Agent *BDL-Below Detection Limit, **DL-Detection Limit DIN

***End of Report

Agreeable

Agreeable

*BDL(**DL-0.05

mg/l)

Qualitat

ive

Qualitat

ive

mg/l

Agreeable

Agreeable

0.2

IS 3025 (P-5): RA. 2018

IS 3025(P-8):1984 RA. 2017

APHA 23rd Edition 2017, 5540C

RAJ KUMAR YADAV

R

(Authorized Signatory)

Agreeable

Agreeable

1.0

Checked By) AL MANA

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6

7

Odour

Taste

Page No. 1/

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Vardan EnviroLab





Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sample Number : VEL/JHABUA/G		JA/GW/05	Report No	ο.	: VEL/W/2102130007/A		
Name &	Address of the Party	: M/s Jhabua Power Limited	Format N	0	: 7.8 F-01		
		Village-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL		
			Report Da	ate	: 23/02/2021		
			Period of	Analysis	: 13/02/2021	-23/02/2021	
nvirol	Lab Vardan Envirol		Receipt D	ate	: 13/02/2021		
the relies of	Description	GROUND WATER	Sampling	Date	: 08/02/2021		
Location	droLab Vardan Env	: Village- Durjunpur	Sampling	Quantity	: 2 Ltr. +300	Minvino Lab V	
		Vardan EnviroLab Team	Sampling	Туре	: Grab		
Preserva Samplin Protoco	ng and Analysis	Suitable Preservation					
S.No.	Parameters	Protocols	Results	Units	IS:1	0500-2012	
firol.a		a Vardan EnviroLab Vardan Enviro	Lab Vardan Envir	oLab Va	Acceptable	Permissible	
nvirol		ab Vardan EnviroLab Vardan Envir	oLab Vardan En	ricoLab	Limits	Limits	
1 1	pH	IS 3025 (P-11): 1983 Reaff. 2017	7.56	Envirol	6.5 to 8.5	No Relaxation	
2 1	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	NA	
3 1	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	360.0	mg/l	500	2000	
4 1	Total Alkalinity (as CaCC	3) IS: 3025 (Part 23): 1986, Reaff. 2019	155.6	mg/l	200	600	
5 1	Total Hardnes <mark>s</mark> (as CaCC	03) IS: 3025 (Part 21): 2009, Reaff. 2019	194.0 dan	mg/l	200	600	
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	8.54	mg/l	45	No Relaxation	
7 0	Chloride (as Cl)	IS: 3025 (Part 32): 1988, Reaff. 2019	67.0	mg/l	250	1000	
8 5	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	39.2	mg/l	200	400	
9 0	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	62:20	mg/l	75	200	
10 N	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	9.43 and an Envir	mg/l	30 Gar	Cave 100 b V. oLab Vardan	
11 F	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.69	mg/l	1.0	1.5	
12 T	fotal Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.36	mg/l	0.3	No Relaxation	
13 A	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05	
14 IV	lercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.0005 mg/l)	mg/l	0.001	No Relaxation	
15 L	ead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation	
16 C	admium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation	
17 C	hromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation	
18 C	opper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5	
19 Zi	inc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15	
20 Se	elenium (as Se) PAL	SAN APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation	

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

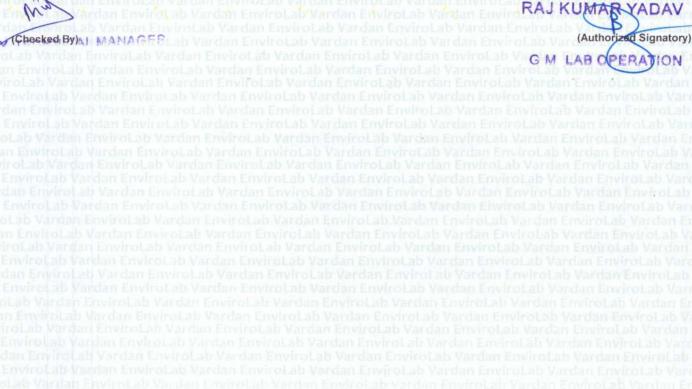
Test Report

ample Number : VEL/JHABUA/GW/05			Report No.		: VEL/W/2102130007/A		
S.No.	, Parameters	Protocols	Results	Units	IS:10500-2012		
		Lab Vardan EnviroLab Vardan Er erdan EnviroLab Vardan Envirol	viroLab Vardan ab Vardan Envis	Coviro ocab V	Acceptable Limits	Permissible Limits	
20	anvirol.20 vargan trivi	Vardan Envirol ab Vardan Enviro	mg/l)	Gratab	OLAU YAIRA	n EnviroLei Iolah Vard	
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V 1rdan i virol ab Var	nviro 5 b V	
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2	
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mġ/l)	mg/l	Var 0.1 Em Jab Vardan I	0.3	
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0	
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002	
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	lan En¶iroL InviroLab V	

*BDL-Below Detection Limit, **DL-Detection Limit DINESH PALSANIYA

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End of Report



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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sampl	e Number : VEL/JHAE	BUA/GW/0	05	Report N	lo.	: VEL/W/210	2130007/B
Name	& Address of the Party		habua Power Limited	Format I	No	: 7.8 F-01	
		Village	e-Barela, Gorakpur District-Seoni MP	Party Re	ference No	: NIL	
				Report D	ate	: 23/02/2021	
				Period o	f Analysis	: 13/02/2021-	-23/02/2021
militi	oLab Vandan Enviro	Lab Va		Receipt	Date	: 13/02/2021	
	e Description	IT E TAVIT	IND WATER	Samplin	g Date	: 08/02/2021	
Locati	WiroLab Vardan En		- Durjunpur	Samplin	g Quantity	: 2 Ltr. +300	MInviroLat
Preser	e Collected by vation	: Suitab	n EnviroLab Team le Preservation	Sampling	д Туре	: Grab	
Protoc	ing and Analysis ol	: IS 105	00 -2012				
S.No.	Parameters	viroLa	Protocols	Results	Units	IS:10	0500-2012
rdan	EnviroLab Vardan Lab Vardan Enviro	Enviro. Lab Va	ah Elwirolao Vardan Elwirol ab Vardan Envirolab Vardan rdan Envirolab Vardan Enviro	EnviroLab Var Lab Vardan Er	dan Envi MiroLab	Acceptable Limits	Permissib Limits
	the state of the second st		10 1000		The second second second		the Party of the Article of the Arti
in 1 in Iarda an Er Virol. rdan	Total Coliform (By MPN Method)	n Envir viróLa ab Vard Enviro	IS:1622 Vardan EnviroLab Vardan EnviroL	Absent	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA EnviroLat oLab Vard
	In a second second share to be readed	n Envir viróLa ib Varo Envirol Lab Va viroLab	IS:1622 IS:1622	Absent		Detectable in any 100	NA Absent/100

lar vii	i EnviroLab Yardan Enviro cLab Vardan EnviroLab V	ab Vardan EnviroLab Vardan Ardan EnviroLab Vardan Enviro	EnviroLab Var /Lab Vardan En	dan Envi WiroLab	Acceptable Limits	Permissible Limits
1	Total Coliform (By MPN Method)	IS:1622	Absent	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA Envirolab OLab Vardan
2	E-Coli	IS:1622	Absent	per 100 ml	Absent/100 ml	Absent/100 ml
3	Cyanide (as CN)	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05 mg/l)	mg/l	0.05	No Relaxation
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	5	15
5	Odour	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	0.2	1.0

*BDL-Below Detection Limit, **DL-Detection Limit

'End of Report'

RAJ KUMAR (Authorized Signatory)

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Page No. 1/1

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Samp	le Number : VEL/JHABUA/G	N/06	Report No	D.	: VEL/W/210	02130008/A
Name	& Address of the Party : M/s	Jhabua Power Limited	Format N	0	: 7.8 F-01	
	ın EnviroLah Vardan (Vill	age-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL	
			Report Da	ate	: 23/02/2021	
			Period of	Analysis	: 13/02/2021	-23/02/2021
			Receipt D	ate	: 13/02/2021	
Samp	le Description : GR	OUND WATER	Sampling	Date	: 08/02/2021	
Locat	ion : Villa	age- Guneri	Sampling	Quantity	: 2 Ltr. +300	MI
Samp	le Collected by : Var	dan EnviroLab Team	Sampling	Туре	: Grab	
Prese	rvation : Sui	table Preservation				
Samp Proto		0500 -2012				
S.No	The state of the s	Protocols	Results	Units	IS:1	0500-2012
dan	ab Vardan EnviroLab Va EnviroLab Vardan Envir	rdan EnviroLab Vardan EnviroL oLab Vardan EnviroLab Vardan	ab Vardan Envir EnviroLab Vard	oLab Va an Envir	Acceptable Limits	Permissible Limits
1	pH	IS 3025 (P-11): 1983 Reaff. 2017	7.40	Envirol	6.5 to 8.5	No Relaxation
2	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	NA
3	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	353.0	mg/l	500	2000
4	Total Alkalinity (as CaCO3)	IS: 3025 (Part 23): 1986, Reaff. 2019	155.6	mg/l	200	600
1.111		<u>Cardao entinen an varioan enver</u>	Lab Variant Pro	ALC: NO	200	600
5	Total Hardness (as CaCO3)	IS: 3025 (Part 21): 2009, Reaff. 2019	174.6	mg/l		
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	7.31	mg/l	45	No Relaxation
7	Chloride (as Cl)	IS: 3025 (Part 32): 1988, Reaff. 2019	76.57	mg/l	250	1000
8	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	38.11	ermg/lei Pirolab	200	400 ab
9	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	62.20	mg/l	75	200
10	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	4.72	mg/l	30 rdan Envir	100
11	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.82	mg/l	1.0	1.5
12	Total Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.26	mg/l	0.3	No Relaxation
13	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05
14	Mercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.0005 mg/l)	mg/l	0.001	No Relaxation
15	Lead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation
16	Cadmium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation
17	Chromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation
18	Copper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5
19	Zinc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15
20	Selenium (as Se)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation

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Note: Terms & conditions refer on backside of test report.

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Test Report

ample	e Number : VEL/JHABUA/O	GW/06	Report No		: VEL/W/2102130008/A	
S.No.	Parameters	Protocols	Results	Units	IS:10500-2012	
n En irol.	droLab Vardan Enviro b Vardan EnviroLab V	Lan Vardan EnviroLab Vardan Er Arcan EnviroLab Vardan EnviroL	virol ab Vardan B Vardan Envít	Envirol ol.ab Va	Acceptable Limits	Permissible Limits
20	als Vardan Envirol ab	Toyab Vardan EnviroLab Vardan Nasilan Envirol ab Vardun Enviro	mg/l)	in crive	Variate Film	tolah Vard
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V 1 dan E rirotab Var	5
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	Var 0.1	0.3
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	lan Entirol. InviroLab V

*BDL-Below Detection Limit, **DL-Detection Limit

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RAJ KUMARKADAV

TC-6652



Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sampl	e Number : VEL/JHABUA/G	N/06	Report N	lo.	: VEL/W/210	2130008/B
Name	& Address of the Party : M/	s Jhabua Power Limited	Format N		• 7.8 F-01	
	n EmiroLab Vardan Vil	age-Barela, Gorakpur District-Seoni MP	Party Re	ference No	: NIL	
			Report D	ate	: 23/02/2021	
			Period of	Analysis	: 13/02/2021	-23/02/2021
			Receipt I	Date	: 13/02/2021	iroLab Varda
Sampl	e Description : GR	OUND WATER	Sampling Date		: 08/02/2021	
Locati	areal bly Vandars Fravinsi	age- Guneri	Sampling	Quantity	: 2 Ltr. +300	MI
Sampl	e Collected by : Val	dan EnviroLab Team	Sampling	ј Туре	: Grab	oLab Vardan
Preser	Carlo Pranta P Pranta Pranta P Pranta Pranta P Pranta Pranta P	table Preservation			oLab Vard	
Sampli Protoc		0500 -2012				
S.No.	Parameters	Protocols	Results	Units	IS:10	0500-2012
riroL rdan nviro	b Vardan EnviroLab Va InviroLab Vardan Envir Lab Vardan EnviroLab	rcan EnviroLab Vardan EnviroL oLab Vardan EnviroLab Vardan Zardan EnviroLab Vardan Enviro	ab Vardan Envi EnviroLab Vard Lab Vardan En	rol.ab Va Ian Envii Virol.ab	Acceptable Limits	Permissible Limits
in 1 anda in Lin iroL	Total Coliform (By MPN Method)	IS:1622	Absent .	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA
2	E-Coli and an EnviroLab Trollab Vardan EnviroL	Nardan Enviro <mark>IS:1622 dan Enviro</mark> Vardan Envirot ab Vardan En	Absent	per 100 ml	Absent/100 ml	Absent/100 ml
3	Cyanide (as CN)	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05 mg/l)	mg/l	0.05	No Relaxation
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	olaisvard Vardan Env	15 Totab Varda
5	Odour	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	0.2	1.0

*BDL-Below Detection Limit, **DL-Detection Limit

End of Report

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Note: Terms & conditions refer on backside of test report.

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TC-6652

RAJ KUMPAR PABAV

ATION

Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sample Number : VEL/JF	ABUA/GW/07	Report No.	: VEL/W/2102130009/A
Name & Address of the Par		Format No	: 7.8 F-01
	Village-Barela, Gorakpur District-Seoni MP	Party Reference No	: NIL I Vardan Envir
		Report Date	: 23/02/2021
		Period of Analysis	: 13/02/2021-23/02/2021
		Receipt Date	: 13/02/2021
Sample Description	: GROUND WATER	Sampling Date	: 08/02/2021
Location	: Village- Dola	Sampling Quantity	: 2 Ltr. +300 MI
Sample Collected by	: Vardan EnviroLab Team	Sampling Type	: Grab
Preservation	: Suitable Preservation	viroLab Vardan Envi	
Sampling and Analysis	: IS 10500 -2012		

S.No.	Parameters	Protocols	Results	Units	IS:10500-2012	
	Sovardan EnviroLab Vari SoviroLab Vardan Enviro Lab Vardan EnviroLab Va	dan EnviroLab Vardan EnviroL Lab Vardan EnviroLab Vardan Irdan EnviroLab Vardan Enviro	ab Vardan Envir EnviroLab Vard Lab Vardan Em	oLab V an Eovi riroLab	Acceptable Limits	Permissible Limits
1	pHolab Vardan EnviroLa	IS 3025 (P-11): 1983 Reaff. 2017	7.42	Engino	6.5 to 8.5	No Relaxation
2	Total Suspended Solids	IS: 3025 (Part 17): 1984, Reaff. 2017	*BDL(**DL- 5)	mg/l	NA	NA
3	Total Dissolved Solids	IS 3025 (P-16): 1984 Reaff 2017	344.0	mg/l	500	2000
4	Total Alkalinity (as CaCO3)	IS: 3025 (Part 23): 1986, Reaff. 2019	174.6	mg/l	200	600
5	Total Hardness (as CaCO3)	IS: 3025 (Part 21): 2009, Reaff. 2019	194.0	mg/l	200	600
6	Nitrate (as NO3)	IS: 3025 (Part 34): 1988, Reaff. 2019	8.54	mg/l	45	No Relaxation
7	Chloride (as Cl)	IS: 3025 (Part 32): 1988, Reaff. 2019	57.43	mg/l	250	1000
8	Sulphate (as SO4)	IS: 3025 (Part 24): 1986, Reaff. 2019 Turbidity Method	41.08	mg/l	200	400
9	Calcium (as Ca)	IS: 3025 (Part 40): 1991 Reaff. 2019	58,32	mg/l	75	200
10	Magnesium (as Mg)	IS: 3025 (Part 46): 1994, Reaff. 2009 (EDTA method)	11.78 11.78 11.78	mg/l	30	Envi 100 b V
11	Fluorides (as F)	APHA 23rd Edition 2017, 4500 FD	0.69	mg/l	1.0	1.5
12	Total Iron (as Fe)	IS 3025(P-53): 2003 Reaffirm 2019	0.24	mg/l	0.3	No Relaxation
13	Arsenic (as As)	APHA (23rd edition-2017), 3114 C	*BDL(**DL-0.005 mg/l)	mg/l	0.01	0.05
14	Mercury (as Hg)	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.0005 mg/l)	mg/l	0.001	No Relaxation
15	Lead (as Pb)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.005 mg/l)	mg/l	0.01	No Relaxation
16	Cadmium (as Cd)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.002 mg/l)	mg/l	0.003	No Relaxation
17	Chromium (as Cr)	APHA 23rd Edition Year 2017 Method No. 3113 B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	No Relaxation
18	Copper (as Cu)	APHA 23rd Edition Year 2017 Method No. 3111B	*BDL(**DL-0.02 mg/l)	mg/l	0.05	1.5
19	Zinc (as Zn)	APHA (23rd edition-2017), 3030D, 3113 B	*BDL(**DL-0.20 mg/l)	mg/l	5.0	15
20	Selenium (as Se) SANIYA	APHA (23rd edition-2017), 3114C	*BDL(**DL-0.005	mg/l	0.01	No Relaxation

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

ample	Number: VEL/JHABUA/G	SW/07	Report No	Report No.		: VEL/W/2102130009/A	
S.No.	Parameters	Protocols	Results	Units	IS:10500-2012		
	reiroLab Vardan EnviroLat ab Vardan EnviroLab Vard	Lab Vardan EnviroLab Vardan Er arcan EnviroLab Vardan EnviroL	viroLab Vardan Ib Vardan Envir	Enviro oLah Vi	Acceptable Limits	Permissible Limits	
20	InviroLap Vardan Lovi	roteb vardan Envirotab Vardan	mg/l)	IN ENVI	oLab Varo.	n Enviroitat collab Mard	
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V1:dap Protab Vac	nying 5 Ian Envirol	
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2	
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	0.1	0.3	
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0	
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002	
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	lan Envirol.	

*BDL-Below Detection Limit, **DL-Detection Limit

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Provincial Vardan Envirolab Vardan Env

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

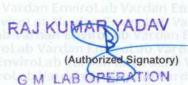
Test Report

Sample Description Location Sample Collected by Preservation Sampling and Analysis		: GROUND V : Village- Dol : Vardan Env : Suitable Pre : IS 10500 -2	a iroLab Team eservation	III EIIVIPOLEG V	ng Date ng Quantity	: 13/02/2021 : 08/02/2021 : 2 Ltr. +300 N : Grab	inoLab Vard EnviroLab V dan EnviroL AloviroLab V oLab Vardan n EnviroLal iroLab Varda
Protoc	ol		Protocols	Results	Units	IS:10	500-2012
S.No.	the Report of the Street of the	b Vardan F		ab Vardan Em	inoLab Va	urdan Envir	Permissible
S.No.	EnviroLab Vardan Lab Vardan Enviro	EnviroLab V Lab Vardar		EnviroLab Va Lab Vardan E	rdan Envi nyiroLab	Acceptable Limits	Limits

	Method)	b Lab Vardan EnviroLab Varda b Vardan EnviroLab Vardan En dan EnviroLab Vardan EnviroL Lab Vardan EnviroLab Vardan	n EnviroLab Va viroLab Varda ab Vardan Envi EnviroLab Vard	0 ml	Detectable in any 100 ml sample	Can EnviroLab Va EnviroLab Va oLab Vardan an EnviroLab
2	E-Coli Lan Envirolta	IS:1622 Varda <mark>1 Env</mark> ersa Portan En	Absent	per 100 ml	Absent/100 ml	Absent/100 ml
3	Cyanide (as CN)	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05 mg/l)	mg/l	0.05	No Relaxation
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	Vardan Em	an Env15 Lab groLab Varda
5	Odour National Variant Environ	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	ab 0.2 dan Virduab Va	Envir 1.0 b Va dan EnviroLa

*BDL-Below Detection Limit, **DL-Detection Limit DINESH PALSANIYA

YA ***End of Report**



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Inder EnviroLab Vardan EnviroLab Vardan

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

: IS 10500 -2012

Test Report

Sample Number : VEL/JH	IABUA/GW/08	Report No.	: VEL/W/2102130010/A
Name & Address of the Part	 W : M/s Jhabua Power Limited Village-Barela, Gorakpur District-Seoni MP 	Format No Party Reference No	: 7.8 F-01 : NIL
		Report Date	: 23/02/2021
		Period of Analysis	: 13/02/2021-23/02/2021
		Receipt Date	: 13/02/2021
Sample Description	: GROUND WATER	Sampling Date	: 08/02/2021
Location	: Village- Gorakhpur	Sampling Quantity	: 2 Ltr. +300 MI
Sample Collected by	:Vardan EnviroLab Team	Sampling Type	: Grab
Preservation	: Suitable Preservation	viroLab Vardan Envir	olab Vardan Envirola

Protocol IS:10500-2012 S.No. Parameters Protocols Results Units Acceptable Permissible Limits Limits 1 pH IS 3025 (P-11): 1983 Reaff. 2017 7.51 6.5 to 8.5 No Relaxation 11 2 *BDL(**DL- 5) **Total Suspended Solids** IS: 3025 (Part 17): 1984, Reaff. 2017 NA mg/l NA **Total Dissolved Solids** IS 3025 (P-16): 1984 Reaff 2017 3 336.0 mg/l 500 2000 Total Alkalinity (as CaCO3) IS: 3025 (Part 23): 1986, Reaff. 2019 4 161.5 mg/l 200 600 IS: 3025 (Part 21): 2009, Reaff. 2019 Total Hardness (as CaCO3) 174.6 5 mg/l 200 600 Nitrate (as NO3) IS: 3025 (Part 34): 1988, Reaff. 2019 6 8.33 mg/l 45 No Relaxation 7 Chloride (as Cl) IS: 3025 (Part 32): 1988, Reaff. 2019 43.07 1000 mg/l 250 IS: 3025 (Part 24): 1986, Reaff. 2019 8 Sulphate (as SO4) 34.59 mg/l 200 400 **Turbidity Method** 9 Calcium (as Ca) IS: 3025 (Part 40): 1991 Reaff. 2019 58.31 mg/l 75 200 IS: 3025 (Part 46): 1994, Reaff. 2009 10 Magnesium (as Mg) 7.07 mg/l 30 100 (EDTA method) APHA 23rd Edition 2017, 4500 FD 11 Fluorides (as F) 0.66 mg/l 1.0 1.5 IS 3025(P-53): 2003 Reaffirm 2019 12 Total Iron (as Fe) 0.24 mg/l 0.3 No Relaxation 13 APHA (23rd edition-2017), 3114 C *BDL(**DL-0.005 Arsenic (as As) mg/l 0.01 0.05 mg/l) APHA (23rd edition-2017), 3114C *BDL(**DL-0.0005 14 Mercury (as Hg) 0.001 No Relaxation ma/l ma/l) 15 Lead (as Pb) APHA (23rd edition-2017), 3030D, *BDL(**DL-0.005 mg/l 0.01 No Relaxation 3113 B mg/l) APHA (23rd edition-2017), 3030D, Cadmium (as Cd) *BDL(**DL-0.002 16 0.003 No Relaxation mg/l 3113 B mg/l) 17 Chromium (as Cr) APHA 23rd Edition Year 2017 *BDL(**DL-0.02 mg/l 0.05 No Relaxation Method No. 3113 B mg/I)18 Copper (as Cu) APHA 23rd Edition Year 2017 *BDL(**DL-0.02 0.05 mg/l 1.5 Method No. 3111B mg/l) 19 Zinc (as Zn) APHA (23rd edition-2017), 3030D, *BDL(**DL-0.20 5.0 15 mg/l 3113 B mg/l) 20 Selenium (as Se) APHA (23rd edition-2017), 3114C *BDL(**DL-0.005 mg/l 0.01 No Relaxation

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Sampling and Analysis

Note: Terms & conditions refer on backside of test report.

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TC-6652

RAJ KUMARANDANE

M LAB OPERATION







Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

S.No.	Parameters	Protocols	Results	Units	IS:10500-2012	
n En Irol	viroLab Vardan EnviroLah Vardan Ib Vardan EnviroLab Vardan Envir	n Vardan EnviroLab Vardan Er Ian EnviroLab Vardan EnviroL	vireLab Vardan ab Vardan Ervit	Enviro oLab Va	Acceptable Limits	Permissible Limits
20	LoviroLab vardab Enviro ab Varitao EnviroLab V	ab vargan EnviroLab Vargan Adag Envirol ab Vargan Enviro	mg/l)	in Envi	Vardan Feu	n EnviroLa
21	Turbidity	IS 3025 (Part 10): 1984, Ref: 2017, (Nephelometeric Method)	*BDL(**DL 1.0 NTU)	NTU	ab V1rdan F riroLab Varo	5
22	Aluminium	IS 3025 (Part-55): 2003, Reaff. 2019	*BDL(**DL-0.03 mg/l)	mg/l	0.03	0.2
23	Manganese (as Mn)	IS: 3025 (Part 46): 1994, Reaff. 2019 (EDTA method)	*BDL(**DL-0.05 mg/l)	mg/l	0.1	rola 0.3 nvirolab V
24	Boron (as B)	APHA 23rd Edition Year 2017 Method No. 4500B	*BDL(**DL-0.2 mg/l)	mg/l	0.5	1.0
25	Phenolic Compound	APHA 23rd Edition 2017, 5530C	*BDL(**DL-0.001 mg/l)	mg/l	0.001	0.002
26	Free Residual Chlorine	IS: 3025 (Part 26): 1986 RA 2019	*BDL(**DL-0.2 mg/l)	mg/l	0.2	lan Envirol.

End of Report

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Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

Sampl	e Number : VEL/JHAB	BUA/GW/	08	Report N	о.	: VEL/W/210	2130010/B
Name	& Address of the Party	: M/s J	habua Power Limited	Format N	0	: 7.8 F-01	
		Villag	e-Barela, Gorakpur District-Seoni MP	Party Ref	erence No	: NIL	
				Report Da	ate	: 23/02/2021	
				Period of	Analysis	: 13/02/2021-	23/02/2021
				Receipt D	ate	: 13/02/2021	
Sampl	e Description	: GRO	UND WATER	Sampling	Date	: 08/02/2021	
Locati	on	: Villag	e- Gorakhpur	Sampling	Quantity	: 2 Ltr. +300 I	VII
Sampl	e Collected by	: Varda	n EnviroLab Team	Sampling	Туре	: Grab	
Preser	vation and build and an	: Suital	ble Preservation			pi.ab Varda	in EnviroLab
Sampl Protoc	ing and Analysis ol	: IS 10	500 -2012				
S.No.	Parameters	viroLa	Protocols	Results	Units	IS:10)500-2012
rirola Idan Inviro	ib Vardan Envirol. Envirolab Vardan Lab Vardan Enviro		an EnviroLab Vardan EoviroL ab Vardan EnviroLab Vardan rdan EnviroLab Vardan Enviro	ib Vardan Envi EnviroLab Varc Lab Vardan En	ioLab Va Ian Envir ViroLab	Acceptable Limits	Permissible Limits
in En firoL	Total Coliform (By MP! Method)	viroLa n Envir viroLa ab Varo Envirol	IS:1622	Absent	MPN/10 0 ml	Shall not be Detectable in any 100 ml sample	NA
2	E-Coli Coli Enviro	Lab Va	idan Enviro IS:1622 idan Enviro Vandan EnviroLab Vardan En	Absent	per 100 ml	Absent/100 ml	Absent/100 m
3	Cyanide (as CN)	I LAVI	APHA 23rd Edition 2017, 4500CN D	*BDL(**DL-0.05	mg/l	0.05	No Relaxation

	ab Vardan EnviroLab Vard	an EnviroLab Vardan Envirot	mg/l)	noLab V:	irdan Envie	
4	Colour	IS 3025: 1983 (P-4) RA 2017	*BDL(**DL 1.0 Hazen)	Hazen Unit	olai5Vardi Vardan Env	m Erw 15 La IroLab Vard
5	Odour	IS 3025 (P-5): RA. 2018	Agreeable	Qualitat ive	Agreeable	Agreeable
6	Taste	IS 3025(P-8):1984 RA. 2017	Agreeable	Qualitat ive	Agreeable	Agreeable
7	Anionic Surface Active Agent	APHA 23rd Edition 2017, 5540C	*BDL(**DL-0.05 mg/l)	mg/l	0.2	1.0

*BDL-Below Detection Limit, DL-Detection Limi

End of Report

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Note: Terms & conditions refer on backside of test report.

Ph: 0141-2983404, 9810355569, 9953147268 E-mail: jaipur@vardanenvironet.com





Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

S.No. Test Parameters	b Vardan EnviroLab Vardan Enviro	est Method	Results Ur
ampling and Analysis Protocol	: IS 2296		
Parameter Required	: As Per Work Order		· outdois i reservation
Sample Collected by	: Vardan EnviroLab Team	Preservation	: Suitable Preservation
_ocation	: Near Ash Pond (Up Stream)	Sampling Type	: Grab
Sample Description	: GROUND WATER	Sampling Quantity	: 2 Ltr. +300 MI +200 ml
		Sampling Date	: 08/02/2021
		Receipt Date	: 13/02/2021
Name of the Project	sviroLab Vardur EnviroLab Vardan	Period of Analysis	: 13/02/2021-23/02/2021
		Report Date	: 23/02/2021
	Village-Barela, Gorakpur District-Seoni MP	Party Reference No	: NIL
Name & Address of the Party	: M/s Jhabua Power Limited	Format No	: 7.8 F-01
million and Marthack Criticizes	3UA/SW/05 .	Report No.	: VEL/W/2102130015/A

olab Vardan EnviroLab Vardan Enviro PriroLab Vardan EnviroLab Vardan Enviro	rdan EnviroLab Vardan EnviroLab Vardan EnviroLab Vardan EnviroLab		
Lead as Pb	APHA (23rd edition), 3030D,3113B, 2017	*BDL(**DL0.005)	mg/l
Arsenic as As	APHA (23rd edition), 3030D,3114C, 2017	*BDL(**DL0.005)	mg/l
Chromium as Cr	APHA (23rd edition), 3030D,3113B, 2017	*BDL(**DL0.02)	mg/l
Mercury as Hg	APHA (23rd edition),3114C, 2017	*BDL(**DL0.0005)	mg/l
	Arsenic as As Chromium as Cr	Arsenic as As APHA (23rd edition), 3030D,3114C, 2017 Chromium as Cr . APHA (23rd edition), 3030D,3113B, 2017	Arsenic as As APHA (23rd edition), 3030D,3114C, 2017 *BDL(**DL0.005) Chromium as Cr APHA (23rd edition), 3030D,3113B, 2017 *BDL(**DL0.02)

*BDL-Below Detection Limit, **DL-Detection Limit

End of Report

Way

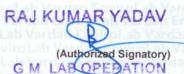
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Note: Terms & conditions refer on backside of test report.



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Vardan En



*BDL(**DL0.02)

*BDL(**DL0.0005)

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Page No. 1/

mg/l

mg/l



Laboratory: Plot No. 24 & 25, Narayan Vihar, B-Block, Jaipur (Rajasthan) 302020 MoEF & CC Recognized | ISO 9001 | ISO 45001

Test Report

n En arda	Lead as Pb	virollab Vardan Emi Envirollab Vardan Vardan Envirollab Vardan Enviro	APHA (23rd edition),	3030D,3113B, 2017	*BDL(**DL0.005)	mg/l
S.No.	Test Parameters	b Vardan EnviroLal InviroLab Vardan E Lab Vardan Enviro	Test M	ethod Anolab Vardan Envi Vardan Envi	Results	Unit
Sampli Protoco	ng and Analysis ol	: IS 2296	EnviroLab Vardan E			
Parame	eter Required	: As Per Work Order		b Vardan EnviroLab	· Suitable Preserva	
Sample	e Collected by	: Vardan EnviroLab Tear	nviroLab Vardan Erw	Preservation	: Grab : Suitable Preserva	tion
Location		: Near Ash Pond (Down Stream)		Sampling Type	: 2 Ltr. +300 MI +200 ml	
Sample	e Description	: GROUND WATER		Sampling Date Sampling Quantity	: 08/02/2021	Enviro
				Receipt Date	: 13/02/2021	
Name o	of the Project	EsviroLab Vardan E		Period of Analysis	: 13/02/2021-23/02	/2021
				Report Date	: 23/02/2021	
		Village-Barela, Gorakp	ur District-Seoni MP	Party Reference No	: NIL	
Name & Address of the Party : M/s Jł		: M/s Jhabua Power Lim	ited	Format No	• 7.8 F-01	
Sample	e Number : VEL/JHAE	BUA/SW/06		Report No.	: VEL/W/21021300	16/A

*BDL-Below Detection Limit, **DL-Detection Limit

DINESH PALSANIYA ***End of Report***

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Chromium as Cr

Mercury as Hg

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AviroLab Vardan EnviroLab Vardan EnviroL

APHA (23rd edition), 3030D,3113B, 2017

APHA (23rd edition),3114C, 2017

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Annexure -2

Ash Pond Effluent Report



Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /WW/03	Report No.:	VEL/WW/2109150003
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F-01
	Village- Barela, Gorakpur Dist- Seoni,	Party Reference No.:	NIL
	MP	Reporting Date:	18/09/2021
Sample Description:	Waste Water	Receipt Date:	15/09/2021
Sampling Location :	Ash Pond Effluent	Sampling Date:	11/09/2021
Sample Collected by:	Vardan EnviroLab Representative	Sample Quantity:	1 Ltr
		Parameter Required:	As per Work Order

S.No.	Test Parameters	Test Method	Result	Unit
	avius Bronolus - uno alv Vanitas Em Indette	an Covinatian vinasi Sovinciab Vartim Emoralish Iardan Sovinci ib Vardan Untitiolish Vardan Enviro	farbim kmirst Spe Rapital Eri	
1	рН	APHA, 23 rd edition 4500H+ B Electrometric Method: 2017	7.12	
2	Total Suspended Solids	APHA 2540 D Gravimetric Method	26.1	mg/l
3	Oil & Grease	APHA 5520 B Partition Gravimetric Method:2017	*BDL(DL-0.5)	mg/l
4	Lead (as Pb)	APHA, 23 rd edition, 3111 B Direct Air- Acetylene Flame Method:2017	0.07	mg/l
5	Chromium (as Cr)	APHA, 23 rd edition, 3111 B Direct Air- Acetylene Flame Method:2017	0.16	mg/l
6	Arsenic (as As)	APHA, 23 rd edition, 3111 B Direct Method:2017	*BDL(DL- 0.002)	mg/l
7	Mercury (as Hg)	APHA, 23 rd edition, 3111 B Direct Method:2017	*BDL(DL- 0.002)	mg/l

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VEL/E/I/TR/PN1364

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Annexure -3

Structural Adequacy report of Ash Dyke certified by IIT, Roorkee



Dr. P.K. GARG Ph.D (Bristol U.K) FIE, FIWRS, FIS, HG5, FINCA, FSIS MIUT MIAH, MISG, ISTE, MISRS, MISET

Professor

भारतीय प्रौद्योगिकी संस्थान रुड़की

(पूर्व रुड़की विश्वविद्यालय) जनपद अभियांत्रिकी विभाग रुड़की – 247 667 उत्तराखण्ड भारत INDIAN INSTITUTE OF TECHNOLOGY , ROORKEE (Formerly University of Roorkee) DEPARTMENT OF CIVIL ENGINEERING ROORKEE – 247667 , UTTRAKHAND , ROORKEE Fax :+91-1332-273560,285462, Tel :+91-1332-285462 O),275080,285026(R) Email : gargpfce@iltr.ernet.in

Date: 04.03.2020

Certification of Report

Ref-No. SGPL/NOC/19-20/020

Corresponding to the Site: Jhabua Power Limited Address: Village -Barela, Tehsil-Ghansore District –Seoni, Madhya Pradesh PIN - 480997

A team of M/s Spatial Geotech Pvt. Ltd. under my coordination and supervision, has inspected and gone through the factory premises of Jhabua Power Ltd. located at the above mentioned address physically and has verified the structure, its design and durability as well as strength of the structure with reference to the established norms. We have found, on completion of the due verification and inspection, that the **a**sh dykes are stable, healthy and accordingly possibilities of any breach is negligible.

Ash Dyke Design Standards

A comparative statement of design standards of ash pond and its dyke and status of the same at site is given in table below.

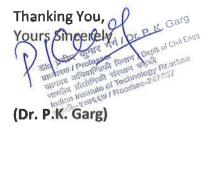
CEA Standards	Site Status	Remarks
Ash dyke		0
Starter dyke have a capacity to	Dyke have the capacity to store ash	Nil
		डा॰ प्रतिष यहुगार तो I Dr. P. K. Garg प्रत्यापक (Professor यातपर अगितानिकी रिलाग / Dept. of Califord यातपर अगितानिकी रात्यान करनी
		510 प्रभः 1 Professor सार्व्यापक 1 Professor सार्ग्यापक केलियानियाने सांस्थान करन्मी भारतीय गोर्ग्यापक of Tachnology Professor भारतीय गांवस्थापक of Tachnology (1997)

Dyke unstream slone		
Dyke upstream slope		
11.5cm brick layer	Stone pitching	This will be structurally more stable
5cm sand cushion	Engineering sand material is used	Nil
750 micro m HDPE	250 micron HDPE used, along with stone pitching	This will give more stability and prevent leaching
Slope 2H : 1V	Slope 2H : 1V	
•	Slope 2H : 1V	Nil
Bottom of the pond		
30 cm sand	Sand cushion is given	Nil
su cm sand	Sand cushion is given	NII
500 micro m HDPE	250 micron HDPE used	Supported with additional engineering
		Supported with
Slope 2H : 1V Bottom of the pond 30 cm sand 500 micro m HDPE		Nil
Bottom of the pond		
· · · · · · · · · · · · · · · · · · ·		INII
Slope 2H : 1V	Slope 2H : 1V	
	stone pitching	-
750 micro m HDPE		-
5cm sand cushion	Engineering sand material is used	
11.5cm brick layer	Stone pitching	· · ·
Dyke upstream slope		
Dyke upstream slope		
	4m occupied by road	
Top width 6.0m	Width is 6m maintained of which	Nil
FRL is 1.5m below dyke top at all stages	1.5m free space is planned at all stages of filling	Nil
	movement of vehicle	
earth 0.3m	diameter rock which enable	for construction
Top surface of the dyke is with	Top surface is with earth and small	Fly ash is not utilized
Ultimate capacity is for 25 years	Capacity planned for entire life span of plant	Nil
-		
ash pond		for construction
embankment extracted from	embankment	for construction
Starter dyke is with earthen	Starter dyke is made out of earthen	Fly ash is not utilized
	3m stages	more volume handing
Raising will be in stage of 3m	Initial height is 5m, raising plan is on	5m height enabling
Store ash for 5 years	for the operation period of the plant	

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5 cm concrete panels of 1.5 m	Stone pitching is more stable	Nil
x 1.2 m		
A rock toe of 75cm using	Rock toe provided	Facilitate water
graded stones of 100 to		recharge and prevent
400mm over 15cm sand		inundation of outside
graded filter		area
Slope 2.25H : 1V with berm	1.5H : 1V provided	Nil
1.5m with 2H : 1V		
50 m wide green belt	50 to 100m thick vegetation cover	Native trees used for
	provided	vegetating the area
Steel bridge	Provided	Nil
Ash pond stability		
Horizontal seismic coefficient	Designs are made in accordance	Nil
1.5	with seismic coefficient 1.5	



Annexure -4

Treated Sewage Water Report



[®] Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /WW/02	Report No.:	VEL/WW/210915000
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F-01
	Village- Barela, Gorakpur Dist- Seoni,	Party Reference No.:	NIL
ration in the sub-	MP	Reporting Date:	18/09/2021
Sample Description:	Waste Water	Receipt Date:	15/09/2021
Sampling Location :	Treated Sewage Water Field Hostel	Sampling Date:	11/09/2021
Sample Collected by:	VardanEnviroLab Representative	Sample Quantity: Parameter Required:	2 Ltr As per Work Order

S.No.	Test Parameters	Test Method	Result	Unit	Prescribed Limit
1	рН	APHA, 23 rd edition 4500H+ B Electrometric Method: 2017	7.09	al an terda Var-155 Terr Vinglah vari	5.5-9.0
2	Total Suspended Solids	APHA 2540 D Gravimetric Method	4.7	mg/l	100.0
3	Oil & Grease	APHA 5520 B Partition Gravimetric Method:2017	3.1	mg/l	10.0
4	BOD (3 Days @27°C)	APHA 5210 C Ultimate BOD Test:2017	7.0.	mg/l	30.0
5	COD	APHA 5220 B Open Reflux Method:2017	24.6 /	mg/l	250.0
6	Ammonical Nitrogen (as NH3-N)	IS 3025 (P-34), Titrimetric Method, RA: 2017	5.69 🧹	mg/l	50.0
7	Total Kjeldahl Nitrogen (as NH3)	IS 3025 (P- 34), Kjeldhal Method, 1988, RA:2019	5.9 /	mg/l	100.0
8	Phosphate (as PO4)	APHA, 23 rd edition, 4500PC: 2017	0.20	mg/l	rdan la 🚥 🖬 👘
9	Fecal Coliform	IS: 1622,1981, RA:2019	Absent	MPN/100ml	Shall not be detectable in any 100 ml sample

(Checked By)

(Authorized Signatory)

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Annexure -5

Ground Water Report



Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/GW/01	Report No.:	VEL/W/210915000
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
		Period of Analysis:	15-20/09/2021
Sample Description:	Ground Water	Receipt Date:	15/09/2021
Sampling Location:	Project Site	Sampling Date:	10/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis	IS-10500-2012		
Protocol:			

	Parameter	Vanden Envirotati Verdan Lini	mullite Version i Sh	Unit	Limits of IS:10500 -2012	
S. No.		Test-Method	Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.34		6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	318.0	mg/l	500	2000
3.	Alkalinity as CaCO3	APHA 23 rd Edition, 2320 B	141.8	mg/l	200	600
4.	Total Hardness as CaCO3	APHA 23rdEdition, 2340 C	178.48	mg/l	200	600
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	7.47	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl [·] B	59.44	mg/l	250	1000
7.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	30.95	mg/l	200	400
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	54.43	mg/l	75	200
9.	Magnesium as Mg	APHA 23rdEdition, 2340 B	10.31	mg/l	30	100
10.	Fluoride as F	APHA 23 rd Edition,2017, 4500-F ⁻ D	0.58	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23rdEd.,2017, 3500 Fe- B	0.21	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmīum (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23 rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

TEST RESULTS

(Checked By)

(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sampl	e No.: VEL/GW/01	tolaho Yerketi Envirtelaki Kari	an Electron all Ma	Rep	ort No.: VEL/	W/2109150001
La vistar EnviroI av Car		argan Elle traca Contration Environal Vender Hi Environal Varian Devironal Vender Environ	nvirollub Verdat Inn Vandan Erivi	n Lovivol in	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18,	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20,	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23 rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24,	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	nol all Varda	Agreeable	Agreeable
28.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	an Ensurol a	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	- 1
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



(Authorized Signatory)

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Preservation:

Protocol:

Sampling & Analysis IS-10500-2012

Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /GW/02	Report No.:
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:
"window Vindon Errore".	Village-Barela,Gorakhpur, District-	Party Reference No.:
	Seoni,MP	Reporting Date:
		Period of Analysis:
Sample Description:	Ground Water	Receipt Date:
Sampling Location:	Village- Barela	Sampling Date:
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:

Refrigerated

VEL/W/2109150002 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021 10/09/2021 Grab

2.0 Ltr.

Sample Quantity:

	Parameter	Test-Method	Smithelialy Windy	Unit	Limits of IS:10500 -2012	
S. No.			Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1.	pH (at 25 ºC)	APHA 23 rd Edition, 4500-H ⁺ B	7.11	n Enwire	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	239.0	mg/l	500	2000
3.	Alkalinity as CaCO3	APHA 23 rd Edition, 2320 B	90.6	mg/l	200	600
4.	Total Hardness as CaCO3	APHA 23rdEdition, 2340 C	108.64	mg/l	200	600
5.	Nitrate as NO3	IS 3025 (P-34) 1988:RA.2019	4.15	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl ⁻ B	46.44	mg/l	250	1000
7,	Sulphate as SO4	APIIA 23 rd Edition, 4500 E	23.61	mg/l	200	400
8.	Calcium as Ca	APHA 23rdEdition, 3500 Ca B	26.44	mg/l	75	200
9.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	10.34	mg/l	30	100
10.	Fluoride as F	APHA 23 rd Edition,2017, 4500-F [.] D	0.52	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.17	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23 rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

TEST RESULTS

(Authorized Signatory)

Checked By)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Sampl	e No.: VEL/GW/02	<u>Test Re</u>		Ren	ort No.: VEL/	W/210915000
m en verschit Variaen Cara Nuca estationan Davidacia		olah Verlay Sykooliii) Verd 5 Yardur Ervitolup verder B	en lietting av Vi	เรียง เอางายชี้ เรื่อางกิดปลไฮ	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rdEdition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23 rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	Froulises als	Agreeable	Agreeable
28.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	al ub Armedu	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.

(Checked By)

(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/GW/03	Report No.:	VEL/W/21
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
myler Litt Vendah Shiftat.a	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/203
		Period of Analysis:	15-20/09/
Sample Description:	Ground Water	Receipt Date:	15/09/20
Sampling Location:	Village- Panarjhir	Sampling Date:	10/09/20

Sample Collected by Preservation: Sampling & Analysis Protocol:

Vardan EnviroLab Representative Refrigerated IS-10500-2012

Sampling Type: Sample Quantity:

109150003 021 9/2021 021 021

Grab

2.0 Ltr.

	Parameter	Lab Parislan Envirol. In Varian	EnviroLab Varok	Unit	Limits of IS	Limits of IS:10500 -2012	
S. No.		Test-Method	Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)	
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H ⁺ B	7.16		6.5 to 8.5	No Relaxation	
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	272.0	mg/l	500	2000	
3.	Alkalinity as CaCO3	APHA 23 rd Edition, 2320 B	118.2	mg/l	200	600	
4.	Total Hardness as CaCO3	APHA 23 rd Edition, 2340 C	120.28	mg/l	200	600	
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	2.42	mg/l	45	No Relaxation	
6.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl [.] B	65.02	mg/l	250	1000	
7.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	37.71	mg/l	200	400	
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	34.21	mg/l	75	200	
9.	Magnesium as Mg	APHA 23rdEdition, 2340 B	8.44	mg/l	30	100	
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.50	mg/l	1.0	1.5	
11.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.21	mg/l	0.3	No relaxation	
12.	Arsenic as As	APHA (23rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05	
13.	Mercury as Hg	APHA (23 rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation	
14.	Lead as Pb	APHA 23rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation	
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation	
16.	Copper as Cu	APHA 23 rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5	
17.	Zinc as Zn	APHA 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15	

TEST RESULTS

(Authorized Signatory)

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VEL/E/I/TR/PN1374

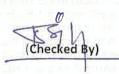
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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Comm	a Na - VEL /CW//02	Test Re	port	Dam	ant No . VEL /	W/210015000
Sampi	e No.: VEL/GW/03		An The Mot State	кер	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23,	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rdEdition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23 rd Edition, 2150 B	Agreeable		Agreeable	Agreeable
28.	Taste	APHA 23rdEdition, 2160 B	Agreeable	seit ale trande	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



(Authorized Signatory)

V E L / E / I / T R / P N 1 3 7 5

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Preservation:

Protocol:

Sampling & Analysis

Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/GW/04	Report No.:
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakpur, District- Seoni,MP	Format No.: Party Referenc Reporting Date
	Ground Water	Period of Analy Receipt Date:
Sampling Location:	Village- Binaiki	Sampling Date:
Sample Collected by	Vardan EnviroLab Representative	Sampling Type

Refrigerated

IS-10500-2012

ce No.: e:

ysis: e: e: Sample Quantity:

VEL/W/2109150004 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021

10/09/2021 Grab 2.0 Ltr.

	olalı Yaman Envir	Lab Vardan EnviroLab Varden	En moLab Variat	Unit	Limits of IS:10500 -2012	
S. No. Parameter	Parameter	Test-Method	Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1,	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.38	nt isravino	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	296.0	mg/l	500	2000
3.	Alkalinity as CaCO ₃	APHA 23 rd Edition, 2320 B	149.7	mg/l	200	600
4.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	162.96	mg/l	200	600
5.	Nitrate as NO3	IS 3025 (P-34) 1988:RA.2019	6.64	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rdEdition, 4500-Cl ⁻ B	55.73	mg/l	250	1000
7.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	28.28	mg/l	200	400
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	48.21	mg/l	75	200
9.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	10.31	mg/l	30	100
10.	Fluoride as F	APHA 23 rd Edition,2017, 4500-F ⁻ D	0.62	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.22	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23 rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23 rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5

APHA 23rd Ed. 2017

TEST RESULTS



Zinc as Zn

(Authorized Signatory)

mg/l

5

17.

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15

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardanenvironet.com, bd@vardanenvironet.com

BDL(DL 0.01)



Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

0		Test Re	port			11/040045000
Sampl	e No.: VEL/GW/04		IN ENVIREMENT	Rep	W/210915000	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23 rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rdEdition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27,	Odour	APHA 23 rd Edition, 2150 B	Agreeable	r Croutitou alb	Agreeable	Agreeable
28.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	nt sheen to	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rdEdition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of Party: VEL /GW/05 M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

Sample Description: Sampling Location: Sample Collected by Preservation: Sampling & Analysis Protocol: Ground Water Village- Durjanpur Vardan EnviroLab Representative Refrigerated IS-10500-2012 Report No.: Format No.: Party Reference No.: Reporting Date:

Period of Analysis: Receipt Date: Sampling Date: Sampling Type: Sample Quantity: VEL/W/2109150005 7.8 F 01 NIL 20/09/2021 15-09-2021 to 20-09-021

15/09/2021 10/09/2021 Grab 2.0 Ltr.

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.48	sje Værda	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	337.0	mg/l	500	2000
3.	Alkalinity as CaCO ₃	APHA 23 rd Edition, 2320 B	137.9	mg/l	200	600
4.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	182.36	mg/l	200	600
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	6.64	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rdEdition, 4500-Cl B	59.44	mg/l	250	1000
7.	Sulphate as SO ₄	APHA 23 rd Edition, 4500 E	33.8	mg/l	200	400
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	54.43	mg/l	75	200
9.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	11.25	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.64	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.33	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23 rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23 rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23 rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

TEST RESULTS

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(Authorized Signatory)

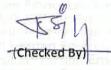
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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Sampl	e No.: VEL/GW/05	Test Re	port	Rep	ort No.: VEL/	W/210915000
	Here also and the second second	Buib Protate Environation Park	10 En-4121_EV 42	BUH Estyral	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23 rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27:	Odour	APHA 23 rd Edition, 2150 B	Agreeable	inter Feivinn	Agreeable	Agreeable
28.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	Envisolab	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rdEdition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of Party: VEL /GW/06 M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

Sample Description: Sampling Location: Sample Collected by Preservation: Sampling & Analysis Protocol: Ground Water Village- Guneri Vardan EnviroLab Representative Refrigerated IS-10500-2012 Report No.: Format No.: Party Reference No.: Reporting Date:

Period of Analysis: Receipt Date: Sampling Date: Sampling Type: Sample Quantity: VEL/W/2109150006 7.8 F 01 NIL 20/09/2021 15-09-2021 to 20-09-021 15/09/2021

15/09/2021 10/09/2021 Grab 2.0 Ltr.

	COLOR OF COLOR OF COLOR	Current standing community in provide		Unit	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.34		6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	327.0	mg/l	500	2000
3.	Alkalinity as CaCO ₃	APHA 23 rd Edition, 2320 B	134.0	mg/l	200	600
4.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	162.96	mg/l	200	600
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	6.72	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl ⁻ B	66.87	mg/l	250	1000
7.	Sulphate as SO ₄	APHA 23 rd Edition, 4500 E	35.61	mg/l	200	400
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	55.98	mg/l	75	200
9.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	5,59	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.78	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.25	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23 rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

TEST RESULTS

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

2.2	Vention Istationate via	Test Re	port	vii aush Varn		
Sampl	e No.: VEL/GW/06		ALLER VILLAR	Rep		W/210915000
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23 rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rdEdition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	Enviration	Agreeable	Agreeable
28.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	rotali #ania	Agreeable	Agreeable
29,	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rdEdition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23 rd Ed.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxatio

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /GW/07	Report No.:	VEL/W/2109150007
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
		Period of Analysis:	15-20/09/2021
Sample Description:	Ground Water	Receipt Date:	15/09/2021
Sampling Location:	Village- Dola	Sampling Date:	10/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.

Sampling & Analysis IS-10500-2012

Protocol:

TEST RESULTS

	rolal Vardan Lovy	Test-Method	EnviroLab Varda	Unit	Limits of IS:10500 -2012	
S. No.	Parameter		Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H ⁺ B	7.33		6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	318.0	mg/l	500	2000
3.	Alkalinity as CaCO ₃	APHA 23rdEdition, 2320 B	157.6	mg/l	200	600
4,	Total Hardness as CaCO3	APHA 23 rd Edition, 2340 C	182.36	mg/l	200	600
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	7.4	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rdEdition, 4500-Cl ⁻ B	50.15	mg/l	250	1000
7.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	37.71	mg/l	200	400
8.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	55.98	mg/l	75	200
9.	Magnesium as Mg	APHA 23rdEdition, 2340 B	10.3	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition, 2017, 4500-F D	0.65	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23rdEd.,2017, 3500 Fe- B	0.22	mg/l	0.3	No relaxation
12,	Arsenic as As	APHA (23 rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23 rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23 rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17	Zinc as Zn	APHA 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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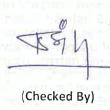


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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

C		Test Re	port	n'ny di Ven	an, Enviry ,		
Sampl	e No.: VEL/GW/07			Rep	ort No.: VEL/W/210915000		
	Parameter	Test-Method	Result	Unit	Limits of IS	5:10500 -2012	
S. No.					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)	
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation	
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5	
20.	Aluminium as Al	APHA 23 rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2	
21.	Manganese as Mn	APHA 23 rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3	
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1	
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA	
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA	
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation	
26.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15	
27.	Odour	APHA 23rdEdition, 2150 B	Agreeable	Tours an	Agreeable	Agreeable	
28.	Taste	APHA 23rdEdition, 2160 B	Agreeable	not un starou	Agreeable	Agreeable	
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0	
30.	Phenolic Compounds	APHA 23rdEdition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002	
31	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1	
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation	

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/GW/08	Report No.:	VEL/W/2109150008
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
		Period of Analysis:	15-20/09/2021
Sample Description:	Ground Water	Receipt Date:	15/09/2021
Sampling Location:	Village- Gorakhpur	Sampling Date:	10/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis	IS-10500-2012		
Protocol:			

TEST RESULTS

	in Lais Yantan Enviri	ilah Vimferi Envirri, 15 Verdan	invirot_ah Ymph	Unit	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result		Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
1.	pH (at 25 °C)	APHA 23rdEdition, 4500-H+ B	7.46	n Enviro	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rdEdition, 2540 C	311.0	mg/l	500	2000
3.	Alkalinity as CaCO3	APHA 23 rd Edition, 2320 B	145.8	mg/l	200	600
4.	Total Hardness as CaCO3	APHA 23 rd Edition, 2340 C	166.84	mg/l	200	600
5.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	5.89	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rdEdition, 4500-Cl [·] B	39.01	mg/l	250	1000
7.	Sulphate as SO4	APHA 23rdEdition, 4500 E	30.47	mg/l	200	400
8.	Calcium as Ca	APHA 23rdEdition, 3500 Ca B	52.87	mg/l	75	200
9.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	8.42	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.64	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23rdEd.,2017, 3500 Fe- B	0.22	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114C,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3114C,2017	BDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23 rd Edition2017,3030D,3111B	BDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23 rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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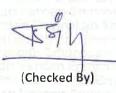
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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sampl	e No.: VEL/GW/08		Internation States	Rep	ort No.: VEL/	W/2109150008
	Cap Minana Education	e Verslat Erwinslag Jeneau	A nation and the second se	Porarab	Limits of IS:10500 -2012	
S. No.	Parameter	Test-Method	Result	Unit	Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114C,2017	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23 rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rdEdition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23 rd Edition 2017)3500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total.Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detactable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detactable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
26.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rdEdition, 2150 B	Agreeable	EnviroLab	Agreeable	Agreeable
28.	Taste	APHA 23rdEdition, 2160 B	Agreeable	rol ab Vanda	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rdEdition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23 rd Ed.,2017, 3111 B	BDL(DL 0.002)	mg/l	0.05	No relaxation

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



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Annexure -6

Surface Water Report



Protocol:

Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

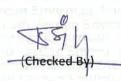
Test Report

Sample Number:	VEL /SW/01	Report No.:	VEL/W/2109150009
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
		Period of Analysis:	15-20/09/2021
Sample Description:	Surface Water	Receipt Date:	15/09/2021
Sampling Location:	Pariyat River	Sampling Date:	11/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.

Sampling & Analysis IS-10500-2012

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA 23rdEdition, 4500-H+ B	7.39	220
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	253.0	mg/l
3.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	6.8	mg/l
4.	Alkalinity as CaCO ₃	APHA 23 rd Edition, 2320 B	141.8	mg/l
5.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	182.36	mg/l
6.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	2.42	mg/l
7.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl [.] B	24.15	mg/l
8.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	6.67	mg/l
9.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	32.66	mg/l
10.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	24.47	mg/l
11.	Fluoride as F	APHA 23 rd Edition,2017, 4500-F ⁻ D	0.58	mg/l
12.	Iron as Fe	APHA 23rdEd.,2017, 3500 Fe- B	0.12	mg/l
13.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l
14.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l
15.	Zinc as Zn	APHA 23 rd Ed. 2017,	BDL(DL 0.01)	mg/l

TEST RESULTS



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

ample No	o.: VEL/SW/01		Report No.: VEL/W/2109150009		
S. No.	Parameter	Test-Method	Result	Unit	
16.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	
17.	Arsenic (as As)	APHA 23rdEdition, 3030 D,3114 C.201	7 BDL(DL 0.002)	mg/l	
18.	Selenium (as Se)	APHA 23 rd Edition, 3114 C.2017	BDL(DL 0.001)	mg/l	
19.	Mercury (as Hg)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.0005)	mg/l	
20.	Lead(as Pb)	APHA 23 rd Edition, 3030 D,3113 B.201	7 BDL(DL 0.002)	mg/l	
21.	Turbidity	APHA 23rdEdition, 2130 B	5.0	NTU	
22.	Residual Free Chlorine	APHA 23 rd Edition, 3500 Cl B	BDL(DL 0.15)	mg/l	
23.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	
24.	Colour	APHA 23 rd Edition, 2120 B	BDL(DL 1.0)	Hazen	
25.	Odour	APHA 23rdEdition, 2150 B	Agreeable		
26.	Taste	APHA 23rdEdition, 2160 B	Agreeable		
27.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	
28.	Phenolic Compounds	APHA 23rdEdition, 5530 C	BDL(DL 0.0004)	mg/l	
29.	BOD(3 days at 27°C)	APHA 23rdEdition, 2017, 5210 C	5.23	mg/l	
30.	COD	APHA 23rdEdition, 2017, 5220 B	22.55	mg/l	
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l	
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	



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VEL/E/T/R/PN1367

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Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	
Name & Address of Party:	

Sample Description:

Sampling Location:

Sample Collected by

Sampling & Analysis

Preservation:

Protocol:

VEL /SW/02 M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

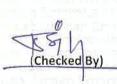
Surface Water Tomar River Nr. Village - Pati Vardan EnviroLab Representative Refrigerated IS-10500-2012

Report No.: Format No.: Party Reference No.: **Reporting Date:** Period of Analysis: **Receipt Date:** Sampling Date: Sampling Type: Sample Quantity:

VEL/W/2109150010 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021 11/09/2021 Grab 2.0 Ltr.

5. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.46	
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	208.0	mg/l
3.	Total Suspended Solids	APHA 23rdEdition, 2540 D	6.0	mg/l
4.	Alkalinity as CaCO3	APHA 23 rd Edition, 2320 B	145.8	mg/l
5.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	116.4	mg/l
6.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	6.87	mg/l
7.	Chloride as Cl	APHA 23 rd Edition, 4500-Cl [.] B	27.86	mg/l
8.	Sulphate as SO4	APHA 23rdEdition, 4500 E	7.52	mg/l
9.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	26.44	mg/l
10.	Magnesium as Mg	APHA 23 rd Edition, 2340 B	8.45	mg/l
11.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.51	mg/l
12.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.11	mg/l
13.	Cadmium (as Cd)	APHA (23 rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l
14.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l
15.	Zinc as Zn	APHA 23rd Ed. 2017,	BDL(DL 0.01)	mg/l

TEST RESULTS



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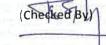
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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Sample No.: VEL/SW/02			Report No.: VEL/W/2109150010		
S. No.	Parameter	Test-Method	Result	Unit	
16.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	
17.	Arsenic (as As)	APHA 23rdEdition, 3030 D,3114 C.201	7 BDL(DL 0.002)	mg/l	
18.	Selenium (as Se)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.001)	mg/l	
19.	Mercury (as Hg)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.0005)	mg/l	
20.	Lead(as Pb)	APHA 23rdEdition, 3030 D,3113 B.201	7 BDL(DL 0.002)	mg/l	
21.	Turbidity	APHA 23 rd Edition, 2130 B	2.0	NTU	
22.	Residual Free Chlorine	APHA 23rdEdition, 3500 Cl B	BDL(DL 0.15)	mg/l	
23.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	
24.	Colour	APHA 23rdEdition, 2120 B	BDL(DL 1.0)	Hazen	
25.	Odour	APHA 23 rd Edition, 2150 B	Agreeable		
26.	Taste	APHA 23 rd Edition, 2160 B	Agreeable	**	
27.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	
28.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	
29.	BOD(3 days at 27°C)	APHA 23rdEdition, 2017, 5210 C	4.32	mg/l	
30.	COD	APHA 23rdEdition, 2017, 5220 B	24.6	mg/l	
31.	Boron	APHA 23rdEdition, 4500 C	BDL(DL 0.01)	mg/l	
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l	



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of Party: VEL /SW/03 M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

Vardan EnviroLab Representative

Surface Water

Refrigerated

IS-10500-2012

Nala Nr. Village - Binaiki

Report No.: Format No.: Party Reference No.: Reporting Date:

Period of Analysis: Receipt Date: Sampling Date: Sampling Type: Sample Quantity: VEL/W/2109150011 7.8 F 01 NIL 20/09/2021

15-20/09/2021 15/09/2021 11/09/2021 Grab 2.0 Ltr.

Sample Description: Sampling Location: Sample Collected by Preservation: Sampling & Analysis Protocol:

TEST RESULTS

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.32	
2.	Total Dissolved Solids	APHA 23rdEdition, 2540 C	355.0	mg/l
3.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	20.5	mg/l
4.	Alkalinity as CaCO ₃	APHA 23 rd Edition, 2320 B	193.1	mg/l
5.	Total Hardness as CaCO ₃	APHA 23 rd Edition, 2340 C	209.52	mg/l
6.	Nitrate as NO ₃	IS 3025 (P-34) 1988:RA.2019	7.17	mg/l
7.	Chloride as Cl	APHA 23rdEdition, 4500-Cl ⁻ B	39.01	mg/l
8.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	8.28	mg/l
9.	Calcium as Ca	APHA 23 rd Edition, 3500 Ca B	62.2	mg/l
10.	Magnesium as Mg	APHA 23rdEdition, 2340 B	13.12	mg/l
11.	Fluoride as F	APHA 23 rd Edition,2017, 4500-F [.] D	0.63	mg/l
12.	Iron as Fe	APHA 23 rd Ed.,2017, 3500 Fe- B	0.13	mg/i
13,	Cadmium (as Cd)	APHA (23rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l
14.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l
15.	Zinc as Zn	APHA 23 rd Ed. 2017,	0.24	mg/l



(Authorized Signatory)

VELL/E/I/TR/PN1390

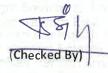
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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Sample No	0.: VEL/SW/03	Report No.: VEL/W/2109150011		
S. No.	Parameter	Test-Method	Result	Unit
16.	Manganese as Mn	APHA 23 rd Edition, 3111 B	0.12	mg/l
17.	Arsenic (as As)	APHA 23rdEdition, 3030 D,3114 C.201	7 BDL(DL 0.002)	mg/l
18.	Selenium (as Se)	APHA 23 rd Edition, 3114 C.2017	BDL(DL 0.001)	mg/l
19.	Mercury (as Hg)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.0005)	mg/l
20,	Lead(as Pb)	APHA 23rdEdition, 3030 D,3113 B.201	7 BDL(DL 0.002)	mg/l
21.	Turbidity	APHA 23 rd Edition, 2130 B	8.0	NTU
22,	Residual Free Chlorine	APHA 23 rd Edition, 3500 Cl B	BDL(DL 0.15)	mg/l
23.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l
24.	Colour	APHA 23rdEdition, 2120 B	5.0	Hazen
25.	Odour	APHA 23 rd Edition, 2150 B	Agreeable	to the sector
26.	Taste	APHA 23rdEdition, 2160 B	Agreeable	
27.	Anionic Detergents as MBAS	APHA 23 rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l
28.	Phenolic Compounds	APHA 23 rd Edition, 5530 C	BDL(DL 0.0004)	mg/l
29.	BOD(3 days at 27°C)	APHA 23 rd Edition, 2017, 5210 C	7.14	mg/l
30.	COD	APHA 23rdEdition, 2017, 5220 B	42.64	mg/l
31.	Boron	APHA 23 rd Edition, 4500 C	BDL(DL 0.01)	mg/l
32.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /
Name & Address of Party:	M/s J

VEL /SW/04 M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

Sample Description: S Sampling Location: 1

Sample Collected by Preservation: Sampling & Analysis Protocol: Surface Water 100 Mtr. From confluence point/Down Stream River Vardan EnviroLab Representative Refrigerated IS-10500-2012

Report No.:
Format No.:
Party Reference No.:
Reporting Date:
Period of Analysis:

Receipt Date: Sampling Date: Sampling Type: Sample Quantity: VEL/W/2109150012 7.8 F 01 NIL 20/09/2021

15-20/09/2021 15/09/2021 11/09/2021 Grab 2.0 Ltr.

S. No.	Parameter	Test-Method	Result	Unit
1.	pH (at 25 °C)	APHA 23 rd Edition, 4500-H+ B	7.26	
2.	Total Dissolved Solids	APHA 23 rd Edition, 2540 C	395.0	mg/l
3.	Total Suspended Solids	APHA 23 rd Edition, 2540 D	29.6	mg/l
4.	BOD(3 days at 27°C)	APHA 23rdEdition, 2017, 5210 C	13.5	mg/l
5,	COD	APHA 23rdEdition, 2017, 5220 B	50.84	mg/l
6.	Sulphate as SO4	APHA 23 rd Edition, 4500 E	7.81	mg/l
7.	Lead(as Pb)	APHA 23 rd Edition, 3030 D,3113 B.2017	BDL(DL 0.002)	mg/l
8.	Arsenic (as As)	APHA 23rdEdition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
9.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l
10.	Cadmium (as Cd)	APHA (23rd Edition)3030D,3113B	BDL(DL 0.002)	mg/l
11.	Mercury (as Hg)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.0005)	mg/l

TEST RESULTS

 12.
 Oil & Grease
 APHA 23rdEd.,2017, 5520 B

 Note:- *BDL-Below Detection Limit, *DL- Detection Limit.

(Checked By)

mg/l

(Authorized Signatory)

22

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[®] Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

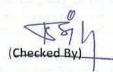
Test Report

Sample Number:	VEL /SW/05	Report No.:	VEL/W/2109150013
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
		Period of Analysis:	15-20/09/2021
Sample Description:	Surface Water	Receipt Date:	15/09/2021
Sampling Location:	Near Ash Pond(Up Stream)	Sampling Date:	11/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis	IS-10500-2012		
Protocol:			

TEST RESULTS

S. No.	Parameter	Test-Method	Result	Unit
1.	Lead(as Pb)	APHA 23rdEdition, 3030 D,3113 B.2017	BDL(DL 0.002)	mg/l
2.	Arsenic (as As)	APHA 23 rd Edition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
3.	Chromium as Cr	APHA 23rdEd.,2017, 3111 B	BDL(DL 0.002)	mg/l
4.	Mercury (as Hg)	APHA 23rdEdition, 3114 C.2017	BDL(DL 0.0005)	mg/l

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.



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Solution Solution

Sampling & Analysis

Protocol:

Vardan EnviroLab

Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

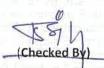
Sample Number:	VEL /SW/06	Report No.:	VEL/W/2109150014
Name & Address of Party:	M/s Jhabua Power Limited	Format No.:	7.8 F 01
	Village-Barela,Gorakhpur, District-	Party Reference No.:	NIL
	Seoni,MP	Reporting Date:	20/09/2021
Sample Description:	Surface Water	Period of Analysis:	15-20/09/2021 15/09/2021
	Surface water	Receipt Date:	15/09/2021
Sampling Location:	Near Ash Pond(Down Stream)	Sampling Date:	11/09/2021
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.

S. No. Parameter **Test-Method** Result Unit BDL(DL 0.002) 1. Lead(as Pb) APHA 23rdEdition, 3030 D,3113 B.2017 mg/l 2. Arsenic (as As) APHA 23rdEdition, 3030 D,3114 C.2017 BDL(DL 0.002) mg/l BDL(DL 0.002) 3. Chromium as Cr APHA 23rd Ed., 2017, 3111 B mg/lBDL(DL 0.0005) 4. APHA 23rdEdition, 3114 C.2017 Mercury (as Hg) mg/l

TEST RESULTS

Note:- *BDL-Below Detection Limit, *DL- Detection Limit.

IS-10500-2012



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Annexure -7

Greenbelt development Report

Green Belt Development

Plantation on 33% land of 406 acres	134 acres
Density of plantation	2500 plants/Hectare
Area required per plant	4.0 SQM
Total plantation required on 134 acres (542164 SQM) of land	135541 Nos
No of plantation completed	181082
Survival rate maintained	>70%











Annexure -8

COD Letter for Jhabua Power Ltd



भारत सरकार Government of India केन्द्रीय विद्युत प्राधिकरण Central Electricity Authority पश्चिम क्षेत्रीय विद्युत समिति Western Regional Power Committee



आई एस ओ : 9001 : 2008 ISO : 9001:2008

एफ -3, एमआयडीसी क्षेत्र, अंधेरी (पूर्व), मुंबई - 93 F-3, MIDC Area, Andheri (East), Mumbai -93 दूरमाष Phone: 022- 28221636; 28200195; 28200194 ; फैक्स Fax : 022 -28370193 Website : <u>www.wrpc.gov.in</u> E-mail : ms-wrpc@nic.in

NO.WRPC/OPN/MBPMPL-COD/2016/ 339 = 300 Date: 05.05.2016

To,

Chief Engineer (OM Division), Central Electricity Authority Sewa Bhavan, R.K.Puram, New Delhi – 110066.

Sub:- Confirmation of Commercial Date of Operation in respect of Unit No 1(600 MW) of 1260 MW Jhabua Power Limited in Distt Seoni of Madhya Pradesh.

Sir,

M/s. Jhabua Power Limited. vide letter No.JPL/BD/WRPC/!6/1, dated 03.05.2016 have intimated the date of Commercial Operation (COD) of Unit No.1 (600 MW) of 1260 MW Jhabua Power Limited in Distt Seoni of Madhya Pradesh with effect from 00:00 hrs of 03.05.2016. In support of this M/s. Jhabua Power Limited in Distt Seoni of Madhya Pradesh. have submitted certificate from Director in prescribed format (Appendix –VI.) as per Regulation – 4 of CERC (Terms & Conditions of Tariff Regulation 2014) also certificate for COD from Independent Engineer viz. Lahmeyer International(India) Pvt Ltd, Gurgoan,, certifying the demonstration of installed capacity through successful trial run of the said unit between 20:00 Hrs of 29th April, 2016 to 20:00 Hrs of 2nd May, 2016 at 95% and above of its rated capacity.

WRLDC Mumbai has furnished the verified data for continuous 72 hrs running of the unit No.1(600 MW) between 20:00 Hrs of 29^{th} April, 2016 to 20:00 Hrs of 2^{nd} May, 2016 at 95% and above of its rated capacity.

In view of the above supporting document, all the formalities requisite for declaration of COD have been fulfilled. Therefore it is to confirm that COD of Unit No.1 (600 MW) of 1260 MW Jhabua Power Limited in Distt Seoni of Madhya Pradesh may be taken from 00:00 hrs of 03/05/2016.

Thanking you,

Yours faithfully,

(S.D.TAK SANDE)

Member Secretary

Copy to:- 1.

- 1. Member (GO&D), CEA, New Delhi.
- 2. Chief Engineer (GM), CEA, New Delhi.
- 3. Secretary, CEA, New Delhi
- 4. Director, Jhabua Power Limited in Distt Seoni of Madhya Pradesh.
- 5. Shri Gattu Rambhav, COO, Avantha Power Ltd. Gurgaon.

Annexure -9

Amenities

Sanitization Activity

Annexure -9





Sanitization Activity



First Aid Center



First Aid Center



First Aid Center

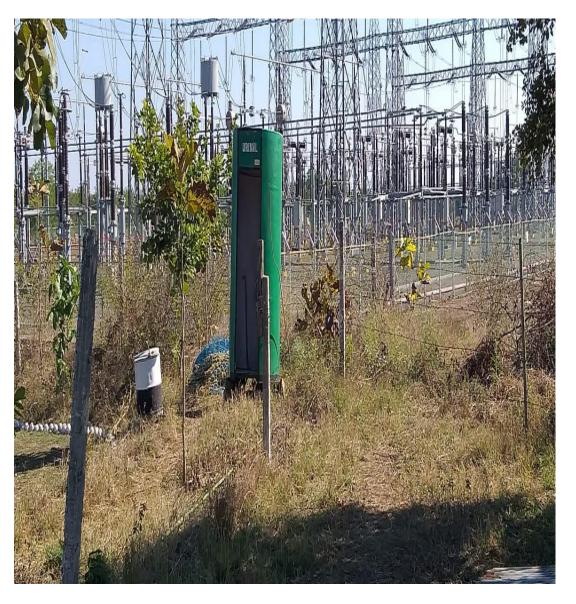


Urinals



Urinals





Toilet attached bath rooms



Annexure -10

Noise Level Monitoring Report



Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party: VEL/JHABUA/AN/01 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: Scope of Monitoring Protocol Used: Instrument Used Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150001
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date:	20/09/2021
Receipt Date:	15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:-	
Sampling Location	: Village: Panarjhir
Instrument Code	: VEL/JAI/SLM/2
Meteorological condition during monito	
Date of Monitoring	: 10/09/2021 to 11/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (°C)	: Min. 25°C, Max. 30°C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order

	in Varian anying ab Varian Soul	nishvinoista vandan srivindilari witah vaxiski Emiliini az Vanda	Test Re	sult dB(A)
Sr.No.	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	52.50 -	40.28

Category of Zones	Leq in dB (A)		
	Day	Night	
Industrial		notan Esuroa dis usis 70	
Commercial	65	as lorden Envirollan 55 milli i su 1.1-	
Residential	55	45	
Silence Zone	50	40	

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply



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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/JHABUA/AN/03	Report No.:	VEL /N/2109150003
Name & Address of the Party:	M/S Jhabua Power Limited Village- Barela, Gorakpur District-	Format No.:	7.8 F 01
the raity.	Seoni, MP	Party Reference No.: Reporting Date:	NIL 20/09/2021
Sample Description:	Ambient Noise Level Monitoring	Receipt Date:	15/09/2021
Scope of Monitoring	Regulatory Requirement	Sampling Duration	24 Hrs.
Protocol Used:	IS 9989: IS 9876	Sample Collected by	VEL Team
Instrument Used	SLM	Instrument Calibration Status	Calibrated
emorpLan Verslam Sm N 20 Varcala Environa			
General Informati	multiple and the state of the state of the state of the state	ny norship yerden sinongusti veru	annian E-ry i t
Sampling Location	the subscription Driving in Landar I	: Guneri	
Instrument Code	ward on Low of all Victory Product	: VEL/JAI/SLM/02	

Instrument Code	: VEL/JAI/SLM/02
Meteorological condition during monitoring	: Cloudy sky
Date of Monitoring	: 11/09/2021 to 12/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (⁰ C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order

ris and all	and the Early of the used on Ea	Medical Transition Environments Va	Test Resul	t dB(A)
Sr.No.	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	50.86	41.10

Category of Zones	Lec	in dB (A)
Espoyatula Wardon Lewrel, an Va	Day	Night
Industrial	75	70
Commercial	65	55
Residential		dan European de Verz45: Errup al e
Silence Zone	50	

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

 Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.
 Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party:

VEL/JHABUA/AN/04 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: Scope of Monitoring **Protocol Used:** Instrument Used

Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150004
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date: Receipt Date:	20/09/2021 15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:-

Sampling Location

Instrument Code Meteorological condition during monitoring Date of Monitoring **Time of Monitoring** Ambient Temperature (^oC) Surrounding Activity **Parameter Required**

: Village: Dola

: VEL/JAI/SLM/04 : Cloudy sky : 11/09/2021 to 12/09/2021 : 06:00 AM to 06:00AM : Min. 25°C, Max. 30 °C

: Human, Vehicular & Other Activities

: As per Work Order

Sr.No.	Lab Verdan Enviroueb Varda	Protocol	Test Result dB(A)	
	Test Parameter		Day Time	Night Tìme
1.	Leq	IS:9989,IS9876:1981	52.00	41.59

Category of Zones	twingLob Vancan Figures an AuroLeg	in dB (A)
Invention Vancan Dravide Life vord	Day	Night
Industrial and an end of the local	75	70
Commercial	65	55
Residential	55	45
Silence Zone	50	Environment and the second 40 million and the

Day Time is from 6.00 AM to 10.00 PM. 1.

Night Time is reckoned between 10.00 PM to 6.00 AM. 2.

Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake 3. and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL/JHABUA/AN/05	Report No.:	VEL /N/2109150005
Name & Address of the Party:	M/S Jhabua Power Limited Village- Barela, Gorakpur District-	Format No.:	7.8 F 01
ur Envirollen 75: dan 1 minutati Vandan Envir	Seoni, MP	Party Reference No.: Reporting Date:	NIL 20/09/2021
Sample Description:	Ambient Noise Level Monitoring	Receipt Date:	15/09/2021
Scope of Monitoring	Regulatory Requirement	Sampling Duration	24 Hrs.
Protocol Used:	IS 9989: IS 9876	Sample Collected by	VEL Team
Instrument Used		Instrument Calibration Status	Calibrated

General Information:-	
Sampling Location	: Village: Durjanpur
Instrument Code	: VEL/JAI/SLM/14
Meteorological condition during monitoring	: Cloudy sky
Date of Monitoring	: 11/09/2021 to 12/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order

Sr.No.	in Vardun Envirul ab Varnar		Test Res	ult_dB(A)
	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	52.36 /	41.26

Category of Zones	Leg	in dB (A)
EnvimLan Vijirilim am mula Vi	Day	Night
Industrial	75	70
Commercial	65	
Residential	all Cry colab is 55 in Antitral applan	TRO EDMOROLELO Y ET 45 ELTVICTION
Silence Zone	viroLab Varvian 50 multip varda si	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

 Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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(Authorized Signatory)

VEL/E/I/TR/PN1424

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party:

VEL/JHABUA/AN/06 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: **Scope of Monitoring Protocol Used:** Instrument Used

Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150006
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date:	20/09/2021
Receipt Date:	15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:- Description Environment	
Sampling Location	: Project Site
Instrument Code	: VEL/JAI/SLM/02
Meteorological condition during monitoring	Cloudy sky and a complete the second
Date of Monitoring	: 09/09/2021 to 11/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order

	ID Värdan Enviroligib Varden i nvibolisb Varden Soviet	entrivitedab Vernan brivitedab	Test Result dB(A)	
Sr.No.	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	55.53	48.82 -

Category of Zones	Lec	q in dB (A)
Law router transfer to the transfer	Day	Night
Industrial	75	70
Commercial	65 65	Vanduo Environnia 55 dan Enviro
Residential	55	nan Enviro Lan VIII 45 Enviro Lan
Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake 3. and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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(Authorized Signatory)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party: VEL/JHABUA/AN/07 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: Scope of Monitoring Protocol Used: Instrument Used Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150007
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date:	20/09/2021
Receipt Date:	15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:-
Sampling Location
Instrument Code
Meteorological condition during monitoring
Date of Monitoring
Time of Monitoring
Ambient Temperature (°C)
Surrounding Activity
Parameter Required

:	Village: Barela
:	VEL/JAI/SLM/04
	Cloudy sky
:	09/09/2021 to 10/09/2021
:	06:00 AM to 06:00AM
;	Min. 25°C, Max. 33 °C
:	Human, Vehicular & Other Activities

: As per Work Order

	Ham Environt on Verolan Fav	Protocol	Test Result dB(A)	
Sr.No.	o. Test Parameter		Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	51.99	41.56

Category of Zones	Leg in dB (A)		
and a low state of the	Day	Night	
Industrial	an Shuiruu an Use75 n Shulrot that proton B	num els vac 70 enviro	
Commercial	Carden Environ 65 den inviro en Verd	ten Envirotab 55 mm linn an	
Residential	an Envirouele va 55 er en moilen i ardin i	45 -	
Silence Zone	50	40	

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party:

VEL/JHABUA/AN/08 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: Scope of Monitoring **Protocol Used:** Instrument Used

Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150008
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date:	20/09/2021
Receipt Date:	15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:-	
Sampling Location	: Village: Gorakhpur
Instrument Code	: VEL/JAI/SLM/14
Meteorological condition during monitori	ng Cloudy sky a due Lawrence under
Date of Monitoring	: 09/09/2021 to 10/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order
	s terreturi é-wi-vil ste Terenes Rentest ub Vilvalui 1

	(a) Four-slan Varian Prok	 Setterfee Feuleel at Veria 	Test Resu	lt dB(A)
Sr.No.	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	51.60	39.83

Category of Zones	Leq	in dB (A)
	Day	Night
Industrial	75	70
Commercial	65 65	kurdun EnviroLeg 55 gar Louisu
Residential	The second s	an envirousia i ar 45
Silence Zone	50	40

Day Time is from 6.00 AM to 10.00 PM. 1.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party: VEL/JHABUA/AN/09 M/S Jhabua Power Limited Village- Barela, Gorakpur District-Seoni, MP

Sample Description: Scope of Monitoring Protocol Used: Instrument Used Ambient Noise Level Monitoring Regulatory Requirement IS 9989: IS 9876 SLM

Report No.:	VEL /N/2109150009
Format No.:	7.8 F 01
Party Reference No.:	NIL
Reporting Date:	20/09/2021
Receipt Date:	15/09/2021
Sampling Duration	24 Hrs.
Sample Collected by	VEL Team
Instrument Calibration Status	Calibrated

General Information:-	
Sampling Location	: Village: Binaki
Instrument Code	: VEL/JAI/SLM/14
Meteorological condition during monitoring	: Cloudy sky
Date of Monitoring	: 10/09/2021 to 11/09/2021
Time of Monitoring	: 06:00 AM to 06:00AM
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per Work Order

	Protect Envirol ab Vardam En	vrolub Vardan EnviroLah (cm)	Test Res	sult dB(A)
Sr.No.	Test Parameter	Protocol	Day Time	Night Time
1.	Leq	IS:9989,IS9876:1981	51.97	41.56

Category of Zones	Lec	q in dB (A)
an and the fighters a second site form	Day	Night
Industrial	75	70
Commercial	65	Wardzin Envirol.nv M55 m Emmi
Residential	55 <	45 -
Silence Zone	50	40

1. Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM.

3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeake and bursting of crackers is banned in these zones.

Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

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Ambient Air Quality Monitoring Report



Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

VEL/JPL/AA/01 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District-Seoni, MP

Report No.: Format No.: **Party Reference** No.: **Report Date:** Period of Analysis: **Receipt Date** 15/09/2021

VEL/A/2109150001 7.8 F 01 NIL 20/09/2021 15-20/09/2021

Sample Description :

General Information: **Sampling Location**

Sample collected by

Instrument Code

Date of Sampling

Time of Sampling

Surrounding Activity

Scope of Monitoring

Sampling Duration

Parameter Required

Latitude

Longitude

Sampling Equipment used

Ambient Temperature (°C)

Sampling & Analysis Protocol

Meteorological condition during monitoring

Ambient Air Quality Monitoring

Project Site (Jhabua Power Plant) **VEL Team RDS & FPS** VEL/RDS/FPS/07/07 22°44'14" 79°55'03" **Cloudy sky** 09/09/2021 to 10/09/2021 10:10 to 10:10 Hrs. Min. 25°C. Max. 30 °C

Human, & Plant Activities **Regulatory Requirement** IS-5182 & CPCB Guidelines

24 hrs.

As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	34.07	µg/m3	60
2.	Particulate Matter (PM ₁₀)	IS: 5182 (P-23), 2006	68.53	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	18.64	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	9.13	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/ m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/02 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District-Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: Report Date: Period of Analysis: Receipt Date VEL/A/2109150002 7.8 F 01 NIL 20/09/2021 15-20/09/2021

15/09/2021

	15/05/20
General Information:-	
Sampling Location	Village- Barela
Sample collected by :	VEL Team
Sampling Equipment used :	RDS &FPS
Instrument Code	VEL/RDS/FPS/33/12
Latitude	22°44'53"
Longitude :	79°54'27"
Meteorological condition during monitoring :	Cloudy sky
Date of Sampling :	09/09/2021 to 10/09/2021
Time of Sampling :	10:50 to10:50 Hrs.
Ambient Temperature (°C)	Min. 25°C, Max. 30 °C
Surrounding Activity	Human, Vehicular & Other Activities
Scope of Monitoring :	Regulatory Requirement
Sampling & Analysis Protocol :	IS-5182 & CPCB Guidelines
Sampling Duration	24 hrs.
Parameter Required	As per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.77	µg/m3	60
2.	Particulate Matter (PM ₁₀)	IS: 5182 (P-23), 2006	65.92	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	15.99	μg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.62	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

VEL/JPL/AA/03 M/s Jhabua Power Limited Village- Barela, Gorakhpur ,District Seoni, MP

Report No.: Format No.: **Party Reference** No.: **Report Date:** Period of Analysis: **Receipt Date**

VEL/A/2109150003 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021

Sample Description :

Ambient Air Quality Monitoring

General Information:-	
Sampling Location	: Village – Gorakhpur
Sample collected by	: VEL Team
Sampling Equipment used	: RDS &FPS
Instrument Code	: VEL/RDS/FPS/10/18
Latitude	: 22°44'15"
Longitude	: 79°55'44"
Meteorological condition during monitoring	; Cloudy sky
Date of Sampling	: 09/09/2021 to 10/09/2021
Time of Sampling	: 11:20 to 11:20 Hrs.
Ambient Temperature (°C)	: Min 25°C Max. 30 °C
Surrounding Activity	Human, Vehicular & Other Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182 & CPCB Guidelines
Sampling Duration	: 24 hrs.
Parameter Required	: As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	26.85	µg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	65.79	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	15.22	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.76	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

(DL Detection Limit BDL*(Below Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/04 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: **Report Date:** Period of Analysis: **Receipt Date**

VEL/A/2109150004 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021

Sampling Location	: Village - Binaiki
Sample collected by	: VEL Team
Sampling Equipment used	: RDS &FPS
Instrument Code	: VEL/RDS/FPS/07/07
Latitude Color Colorado Mandan Enviro Lab V	: 22°43'16" and an environment
Longitude	: 79°54'14"
Meteorological condition during monitoring	: Cloudy sky
Date of Sampling	: 10/09/2021 to 11/09/2021
Time of Sampling	: 10:40 to 10:40 Hrs.
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activitie
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182 & CPCB Guidelines
Sampling Duration	: 24 hrs.
Parameter Required	: As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	25.41	µg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	61.51	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	14.88	μg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.99	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

Detection Limit

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Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/05 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District-Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: Report Date: Period of Analysis: Receipt Date

VEL/A/2109150005 7.8 F 01 NIL 20/09/2021 15-20/09/2021 15/09/2021

an EnviroLab Vardah EmviroLab Vardan EnviroL		ian Envirol ab Vardan Envirol ab Va
General Information:-		
Sampling Location	Enviro	Village- Panarjhir
Sample collected by	Varda	VEL Team
Sampling Equipment used	ardanis	RDS &FPS
Instrument Code	ab Vat	VEL/RDS/FPS/33/12
Latitude	andary	22°46'14"
Longitude	Enviro Enviro	79°55'03″
Meteorological condition during monitoring	in Enti	Cloudy sky
Date of Sampling	ardan,E	10/09/2021 to 11/09/2021
Time of Sampling		11:10 to 11:10 Hrs.
Ambient Temperature (°C)	Envido	Min. 25°C, Max. 30 °C
Surrounding Activity	Vardar	Human, Vehicular & Other Activities
Scope of Monitoring	in Envir	Regulatory Requirement
Sampling & Analysis Protocol	b Vaid	IS-5182 & CPCB Guidelines
Sampling Duration	andan E	24 hrs. Wardan Envirolative dan
Parameter Required	Vardar	As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.46	µg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	67.53	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	16.79	μg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.52	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/06 M/s Jhabua Power Limited Village- Barela, Gorakhpur ,District-Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: Report Date: Period of Analysis: Receipt Date

VEL/A/2109150006 7.8 F 01 NIL 20/09/2021 15-20/09/2021

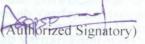
15/09/2021

	ah Vardan Envirol ah Vardan Kawen ah Ita
General Information:-	
Sampling Location	: Coal Road
Sample collected by	: VEL Team
Sampling Equipment used	: RDS &FPS
Instrument Code	: VEL/RDS/FPS/10/08
Latitude	: 22°43'30"
Longitude	: 79°54′20″
Meteorological condition during monitoring	: Cloudy sky
Date of Sampling	: 10/09/2021 to 11/09/2021
Time of Sampling	: 11:45 to 11:45 Hrs.
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	Human, Vehicular & Other Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182 & CPCB Guidelines
Sampling Duration	: 24 hrs.
Parameter Required	: As per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	26.37	µg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	65.07	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	15.92	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.16	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/07 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District-Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: Report Date: Period of Analysis: Receipt Date VEL/A/2109150007 7.8 F 01 NIL

20/09/2021 15-20/09/2021 15/09/2021

Activities

		Love of a start and the invito call
General Information:-		
Sampling Location	Envigo	Village- Guneri
Sample collected by	Varda	VEL Team
Sampling Equipment used	1	RDS &FPS
Instrument Code	5 Vat	VEL/RDS/FPS/07/07
Latitude	indary (22°42'11"
Longitude	Enviro	79°57'08"
Meteorological condition during monitoring	n En ti	Cloudy sky
Date of Sampling	rdan,E	11/09/2021 to 12/09/2021
Time of Sampling	:	11:05 to 11:05 Hrs.
Ambient Temperature (°C)	Envito	Min. 25°C, Max. 30 °C
Surrounding Activity	Varder	Human, Vehicular & Other Ac
Scope of Monitoring	n Enyl	Regulatory Requirement
Sampling & Analysis Protocol	Vat	IS-5182 & CPCB Guidelines
Sampling Duration	ndan _t E	24 hrs.
Parameter Required	Varder	As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.61	μg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	70.84	μg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	16.76	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	9.20	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

VEL/JPL/AA/08 M/s Jhabua Power Limited Village- Barela, Gorakhpur ,District-Seoni, MP

Report No.: Format No.: **Party Reference** No.: **Report Date:** Period of Analysis: **Receipt Date**

VEL/A/2109150008 7.8 F 01 NIL

20/09/2021

15/09/2021

15-20/09/2021

Sample Description :

Ambient Air Quality Monitoring

General Information:-	
Sampling Location	: Village- Dola
Sample collected by	: VEL Team
Sampling Equipment used	: RDS &FPS
Instrument Code	: VEL/RDS/FPS/33/12
Latitude	: 22°42'08"
Longitude	: 79°54'37"
Meteorological condition during monitoring	Cloudy sky
Date of Sampling	: 11/09/2021 to 12/09/2021
Time of Sampling	: 11:45 to 11:45 Hrs.
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	: Human, Vehicular & Other Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182 & CPCB Guidelines
Sampling Duration	24 hrs. 24 hrs.
Parameter Required	· As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.10	μg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	65.50	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	15.84	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.12	μg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

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Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana) ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number: Name & Address of the Party

Sample Description :

VEL/JPL/AA/09 M/s Jhabua Power Limited Village- Barela, Gorakhpur, District-Seoni, MP

Ambient Air Quality Monitoring

Report No.: Format No.: Party Reference No.: Report Date: Period of Analysis: Receipt Date VEL/A/2109150009 7.8 F 01 NIL

20/09/2021 15-20/09/2021 15/09/2021

General Information:- Sampling Location	
	: Village - Durjanpur
Sample collected by	: VEL Team
Sampling Equipment used	: RDS &FPS
Instrument Code	: VEL/RDS/FPS/10/08
Latitude	: 22°45'16"
Longitude	: 79°55'41"
Meteorological condition during monitoring	: Cloudy sky
Date of Sampling	: 11/09/2021 to 12/09/2021
Time of Sampling	: 12:20 to 12:20 Hrs.
Ambient Temperature (°C)	: Min. 25°C, Max. 30 °C
Surrounding Activity	Human, Vehicular & Other Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS-5182 & CPCB Guidelines
Sampling Duration	: 24 hrs.
Parameter Required	: As Per Work Order

S. No.	Parameter	Protocol	Result	Unit	NAAQS 2009
1.	Particulate Matter (PM _{2.5})	IS 5182 (P-24) -2019	27.66	µg/m3	60
2.	Particulate Matter (PM10)	IS: 5182 (P-23), 2006	66.92	µg/m3	100
3.	Nitrogen Dioxide (NO ₂)	IS: 5182 (P-6), Reaffirmed-2017	14.66	µg/m3	80
4.	Sulphur Dioxide (SO ₂)	IS: 5182 (P-2), Reaffirmed-2017	8.73	µg/m3	80
5.	Mercury (Hg)	Methods Of air sampling and analysis 3 rd ed,1988,method No.317	BDL(*DL1.0)	ng/m3	

BDL*(Below Detection Limit) ** (DL Detection Limit)

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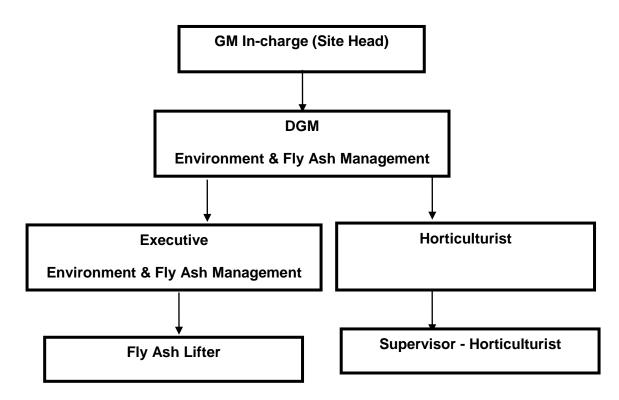
CSR Expenditure Details

		JHABUA POWER LTD	. DETAILS	OF EXPANS	SES DONE L	JNDER CSR	SINCE INC	EPTION TO	O SEPTEME	ER 2021 (In Crore)		
	Sr No	Activity	2010-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	April-2021to September 2021	Total in Cr
	RECU	RRING EXPENDITURE											
А	1	Skill development, Education and Women empowerment	2.30	0.72	0.45	0.36	0.09	0.09	0.26	0.29	0.32	0.72	5.60
	2	Agriculture and agro based livelihood	2.31	1.22	0.16	0.42	0.04	0.06	0.27	0.21	0.27	0.65	5.61
	3	Maternal and child health care project	1.31	0.56	0.13	0.34	0.10	0.13	0.13	0.00	0.00	0.00	2.71
	4	Rural Civil infrastruture development	1.44	2.94	0.28	0.00	0.02	0.04	5.08	9.79	0.01	0.01	19.61
		Total	7.36	5.44	1.02	1.12	0.25	0.32	5.74	10.29	0.60	1.38	33.52
	Recu	rring expanses as per EC of MoEF (2	2010-2021		Rs	. 2.5 crore	per annu	m x 10 ye	ar				27.50
One time capital expanses as per Environmental Clearance in Crore									12.00				
Expanses done under one time capital expanses in crore								22.00					
Total CSR expenditure as per E.C. till year 2021 in Cr. (A+ B)							39.50						
Total CSR Expenditure done by JPL till September 2021							55.52						

Environment Management Cell

ENVIRONMENT MANAGEMENT CELL

Annexure -13



Sr. No	NAME	QUALIFICATION	DESIGNATION
1	Mr. Ashok Singh Yadav	B.Tec. Mechanical	GM In-charge (Site Head)
2	Mr. Anoop Kumar Srivastava	M.Sc. Environment P.G. Diploma Industrial Safety	DGM (Environment & Ash Management)
3	Mr. Vivek Tiwari	M. Tech. (Communication System)	Executive (Environment & Ash Management)
4	Mr. Rabi Nayak	M.A.	Executive (Horticulture)
5	Mr. Prakash Tiwari	Higher Secondary	Supervisor (Horticulture)
6	Mr. Jaikishan Verma	BCA	Executive (Ash Management)

Receipt of Last compliance Report

From:	Anoop srivastava
Sent:	07 November 2020 11:15
То:	's.kerketta66@gov.in'; 'sudheer.ch@gov.in'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya Pradesh.
Attachments:	MoEF New Delhi Phase I.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Due to covid-19 pandemic, compliance report is being submitted through mail.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Encl.: Six Monthly Compliance Report (April' 2020 to September' 2020)

JHABUA POWER

JPL/ECC/Phase-I/FHY/2020-2021/November/96

November 05, 2020

To,

The Director,

Ministry of Environment, Forests & Climate Change 3rd Floor, Vayu Block, Indira Paryavaran Bhawan, Jor Bagh Road, Aliganj, New Delhi-110003

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)

Jhabua Power Limited

(CIN:U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com AVANTHA GROUP COMPANY

From:	Anoop srivastava
Sent:	07 November 2020 11:19
То:	'apccfbhopal@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya
	Pradesh.
Attachments:	MoEF Bhopal Phase I.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Due to Covid-19 pandemic, compliance report is being submitted through mail.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)

JHABUA OWFR

JPL/ECC/Phase-I/FHY/2020-2021/November/96

November 05, 2020

To,

The Director,

Regional Office, Ministry of Environment & Forests Kendriya Paryavaran Bhavan, Link Road No.3, Bhopal-462016

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)

Jhabua Power Limited

(CIN : U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com



From:	Anoop srivastava
Sent:	07 November 2020 11:33
То:	'cpcb.bhopal@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya Pradesh.
Attachments:	CPCB Bhopal Phase I.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Due to Covid-19 pandemic, compliance report is being submitted through mail.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Encl.: Six Monthly Compliance Report (April' 2020 to September' 2020)

JHABUA POWER

JPL/ECC/Phase-I/FHY/2020-2021/November/96

November 05, 2020

To,

The Director,

Zonal Office, Central pollution control board, 3rd Floor, Sahkar bhawan, North TT Nagar, Bhopal-462003

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2020 to September 2020)

Jhabua Power Limited

(CIN:U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India AVANTHA GROUP COMPANY

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com

From:	Anoop srivastava
Sent:	07 November 2020 11:12
То:	'mscb.cpcb@gov.in'; 'ccb.cpcb@nic.in'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya
	Pradesh.
Attachments:	CPCB New Delhi Phase I.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Due to Covid-19 pandemic, compliance report is submitted through mail.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Encl.: Six Monthly Compliance Report (April' 2020 to September' 2020)



JPL/ECC/Phase-I/FHY/2020-2021/November/96

November 05, 2020

To,

The Chairman,

Central Pollution Control Board Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)

Jhabua Power Limited

(CIN : U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com



From:	Anoop srivastava
Sent:	07 November 2020 12:07
То:	'hsharma1091@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya Pradesh.
Attachments:	MPPCB Bhopal Phase I.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Due to Covid-19 pandemic, compliance report is being submitted through mail.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)



JPL/ECC/Phase-I/FHY/2020-2021/November/96

November 05, 2020

To,

The Member Secretary,

Madhya Pradesh Pollution Control Board, E-5, Arera Colony, Paryawaran Parisar, Bhopal -16, Madhya Pradesh

- Sub.: Submission of Six Monthly Compliance Report 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil-Ghansore, Distt.-Seoni, Madhya Pradesh.
- Ref.: EC Letter No.: J-13012/105/2008-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (April' 2020 to September' 2020)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2020 to September' 2020)

Jhabua Power Limited

(CIN : U40105WB1995PLC068616) Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com



Receipt of Last Environmental Statement

From:	Anoop srivastava
Sent:	14 July 2021 14:57
То:	ms-mppcb@mp.gov.in
Cc: 'RO Jabalpur Jabalpur'; 'romppcbjbp@rediffmail.com'	
Subject:	Submission of Environmental Statement Report for the year 2020-21 for 1 x 600 MW and 1 x 660 MW Thermal Power Plant at Village-Barela & Gorakhpur, Tehsil-
	Ghansore, Distt Seoni, Madhya Pradesh by M/s Jhabua Power Plant.
Attachments:	ESR 1X600 MW.pdf; ESR 1X660 MW.pdf

Dear Sir,

Please find attached the **Environmental Statement** for the year 2020 - 2021 in fulfilment of conditions stipulated in the Environment Clearance for 1x600 MW and 1 x 660 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd.

We submit to you that Environmental Protection always remains in our top most agenda and all the efforts are being put for the effective compliance all the time. Thanking You,

1

Yours Sincerely,

Anoop Kr. Srivastavams



Ref. No.: JPL/ENV/21-22/July/20

July 14, 2021

To,

The Member Secretory, Madhya Pradesh Pollution Control Board, E-5, Arera Colony,

Paryawaran Parisar, Bhopal-16, Madhya Pradesh.

Subject: Submission of Environmental Statement Report for the year 2020-21 for 1 x 600 MW Thermal Power Plant at Village-Barela & Gorakhpur, Tehsil- Ghansore, Distt. - Seoni, Madhya Pradesh by M/s Jhabua Power Plant.

Ref.: MoEF Environmental Clearance No.: J-13012/105/2008-IA-II (T) dated 17th February 2010 & Corrigendum dated 22nd December 2010.

Dear Sir,

Please find attached the **Environmental Statement** for the year 2020 - 2021 in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd.

We submit to you that Environmental Protection always remains in our top most agenda and all the efforts are being put for the effective compliance all the time. Thanking You,

Yours Sincerely,

For Jhabua Power Ltd

Authorized Signatory

Encl.: Environment Statement Report for the year 2020-21.

CC: Regional Office, MPPCB, Vijaynagar, Jabalpur, MP.

(CIN: U40105WB1995PLC068616)

Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India

Registered Office : Macmet House, 7th Floor, 10B, OC Ganguly Sarani, Kolkata-700 020, West Bengal, India Corporate Office : Unit No.-307, 3rd Floor, ABW Tower, (Near IFFCO Chowk) M.G. Road, Gurugram - Pin-122002 (Haryana) Tel.: +91-124-4392000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com



Expenses on Environment

EXPENDITURE DETAILS ON ENVIRONMENT FROM APRIL 20	ANNEXURE - 16 021 TO SEPTEMBER 2021
DESCRIPTION	EXPENDITURE
A- ENVIRONMENT	
World Environment Day Celebration	25000
Third Party Environmental Quality monitoring	246000
Hydrogeological study of the area	118000
Fly Ash disposal through Railway rake	1642560
Payment to Railway for load adjustment while fly ash disposal	200970
Drone Shooting of low lying area for NOC	10000
Hiring of Hyvas ce of CTO additional condition no 32	4264000
AMC for online monitoring system-AAQMS	135000
AMC EQMS	27500
AMC CEMS	32450
AMC PTZ camera connectivity	17700
Renewal Fee of dispensing unit CTO	21793
Participation Fee for Golden Peacock Environmental Management	51330
Awards	51550
Publication of Notice in news paper to increase fly ash lifting	45360
Environmental Display board installation	13452
Spares of AAQMS station & Mobile Van	173148
Total "A"	7024263
B- GREEN BELT DEVELOPMENT	
Watering of plantation	45640
Horticulture	25000
Purchase of 6000 nos plants for plantation	180000
Man power in green belt	405446
Total "B"	656086
Total "A + B" in Rs.	7680349