JPL/ECC/Phase-I/FHY/2022-2023/Oct/41 October 29, 2022

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' 2022 to September' 2022)** 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.

29/10/2022

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2022 to September' 2022)

Jhabua Power Limited
(A Joint Venture of NTPC Limited)
CIN : U40105WB1995PLC068616
Corporate Office: Unit No- 307, 3rd Floor, ABW Tower, M.G. Road, Near IFFCO Chowk, Gurugram- 122002, Haryana, India
Tel: 0124- 4392000/01 E- Mail : communications@jhabuapower.co.in Web : www.jhabuapower.co.in
Registered Office: Macmet House, 7th Floor, 10B, O C Ganguly Sarani, Kolkata- 700 020, West Bengal, India
Site Office: Village- Barela, Post Office- Attaria, Tehsil- Ghansore, District- Seoni- 480997, Madhya Pradesh, India

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 2022 to SEPTEMBER 2022

FOR

Jhabua Power Limited

1 x 600 MW THERMAL POWER PLANT

AT

VILLAGE:- BARELA & GORAKHPUR

TEHSIL: - GHANSORE

DISTRICT: - SEONI

MADHYA PRADESH

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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)

Sl No.	Conditions	Compliance
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.
iii	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 / proposed per acre and time schedule	R & R plan has been submitted. There will be no rehabilitation of any family/person due to proposed project activity.

	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. Stack monitoring report is enclosed as **Annexure -2.**
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 2nd 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. MoU's for 100% Fly ash utilization by various users like Ashtech India Pvt. Ltd., 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. Disposal of legacy ash to low lying area after permission from MPPCB has also been started as per CPCB guideline "March 2019".
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/17025:2017 by National Accreditation Board for Testing and calibration laboratories. The analysis report of ash pond effluent is enclosed as **Annexure -3.**
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 -4.**
xii	Closed cycle cooling system with	We have installed a closed cycle cooling

	natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	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 -5.**
xvi	Rainwater harvesting should be adopted. Central Groundwater Authority/ Board shall be consulted for finalization of appropriate rainwater harvesting technology within a period	A rain water harvesting & recharging system, designed in consultation with Central Groundwater Authority/ Board. Authentication letter of Central Groundwater Board is already submitted with previous compliance report, is being

	of three months from the date of clearance and details shall be furnished.	implemented and followed.
xvii	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	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. Apart from above many other safety measures has been taken as safety management system.
xviii	Storage facilities for auxiliary liquid fuel such as LDO and/ HFO/LSHS shall be made in the plant area in consultation	• Storage facilities for LDO has been made in the plant area in consultation with Department of Explosives,

	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.	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/17025:2017 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 -6.**
xx	Monitoring of surface water quantity and quality shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the	The surface water samples are collected from the river/nalla regularly and records maintained effectively. Analysis report of surface water are enclosed as **Annexure-7.**

	direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	
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 181000 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- 8.**
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 3rd 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 -9** and Photographs of medical center & sanitation is enclosed as **Annexure -10.**
xxiii	Noise levels emanating from turbines	• The noise level in the work zone area

	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.	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 11.**
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 SO_2, NO_x, RSPM ($PM_{2.5}$ & PM_{10}) and Hg is being carried out in the impact zone and records are being maintained. Ambient Air Quality monitoring report is enclosed as **Annexure- 12.** • The location of the monitoring stations has been decided in consultation with Regional Office of MPPCB, Jabalpur. Letter of Regional Office of MPPCB, Jabalpur regarding selection of monitoring stations has already been submitted with previous compliance report. • Permanente Online Ambient Air 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.
xxv	A good action plan for R&R (if applicable) with package for the project affected persons be submitted and implemented as per prevalent R&R policy within three months from the date of issue of this letter.	R & R plan has been already submitted.
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 implementation.	Expenditure details under CSR is enclosed **Annexure -13.**
xxvii	As part of CSR programme the company shall conduct need based assessment for the nearby villages to	1. Based on need assessment identified verticals for working on agro based livelihood including improved and

	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.	sustainable agricultural practices for higher yield and income generation. 2. 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. 3. 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 4. A part from above activities breed improvement in cattle through Artificial Insemination (AI) is done for enhancing milk yields and strengthening dairy development activities. 5. Under the income generation programme 84 fruit bearing orchards are developed on farmers land, additionally training and required input 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. 6. Vocational training provided to the youth of adjoining villages, a special batch of (batch of youth from land

		seller families) 37 students were trained from Govt. ITI. Successfully passed out students are absorbed in the company. 53 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, tent house business, goat rearing etc. are done by group members.
5xxviii	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	All necessary facility for workers is provided. After completion of the project activities and start of O&M phase, part of the temporary structure are being used for O&M personnel and remaining has been removed.
xxix	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the	Not relevant now. However, for records, we had published in three newspapers (Hindustan Times,

	vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in.	Dainik Bhaskar & Nai Duniya on 28.02.2010).
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 -14.**
xxxii	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of	Status of compliance of the stipulated EC conditions, including results of monitored data is hosted on company web site.

	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.	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-15.**
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 EC conditions and shall also be sent to the respective Regional Offices of the Ministry by	The environment Statement report for the year 2021 - 2022 was submitted to Madhya Pradesh State Pollution Control Board before 30th September 2022. Submission receipt is enclosed as **Annexure -16.**

	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 status in their website and up-date the same from time to time at least six monthly basis. Criteria pollutants levels	We comply and agreed to the same.

	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 2022 to September 2022 is enclosed as **Annexure -17.**
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 clearance shall lie with the National Environment Appellate Authority, if preferred, within 30 days as prescribed under Section 11 of the National Environment Appellate Act, 1997.	Agreed.

Annexure -1

Recent Hydrogeological Study Report

HYDROGEOLOGICAL REPORT

SUBMITTED TO

M/S JHABUA POWER LTD.

Situated at Barela-Gorakhpur, Post Office- Attaria, Tehsil-Ghansore
Dist- Seoni,
Madhya Pradesh

SUBMITTED BY

VIBRANT TECHNO LAB PVT. LTD.

Plot No SC-40, 3rd Floor, S Block, Narayan Vihar,

Jaipur, Rajasthan (302020)

Email-: vibranttecnolab@gmail.com

Contact No. 9929108691

HYDROGEOLOGICAL REPORT (SEPTEMBER 2022)

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CHAPTER-1

Brief about the proposed project giving location details, coordinates,google/toposheetmaps,etc.demarcatingtheprojectarea.

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 tied- up. 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.

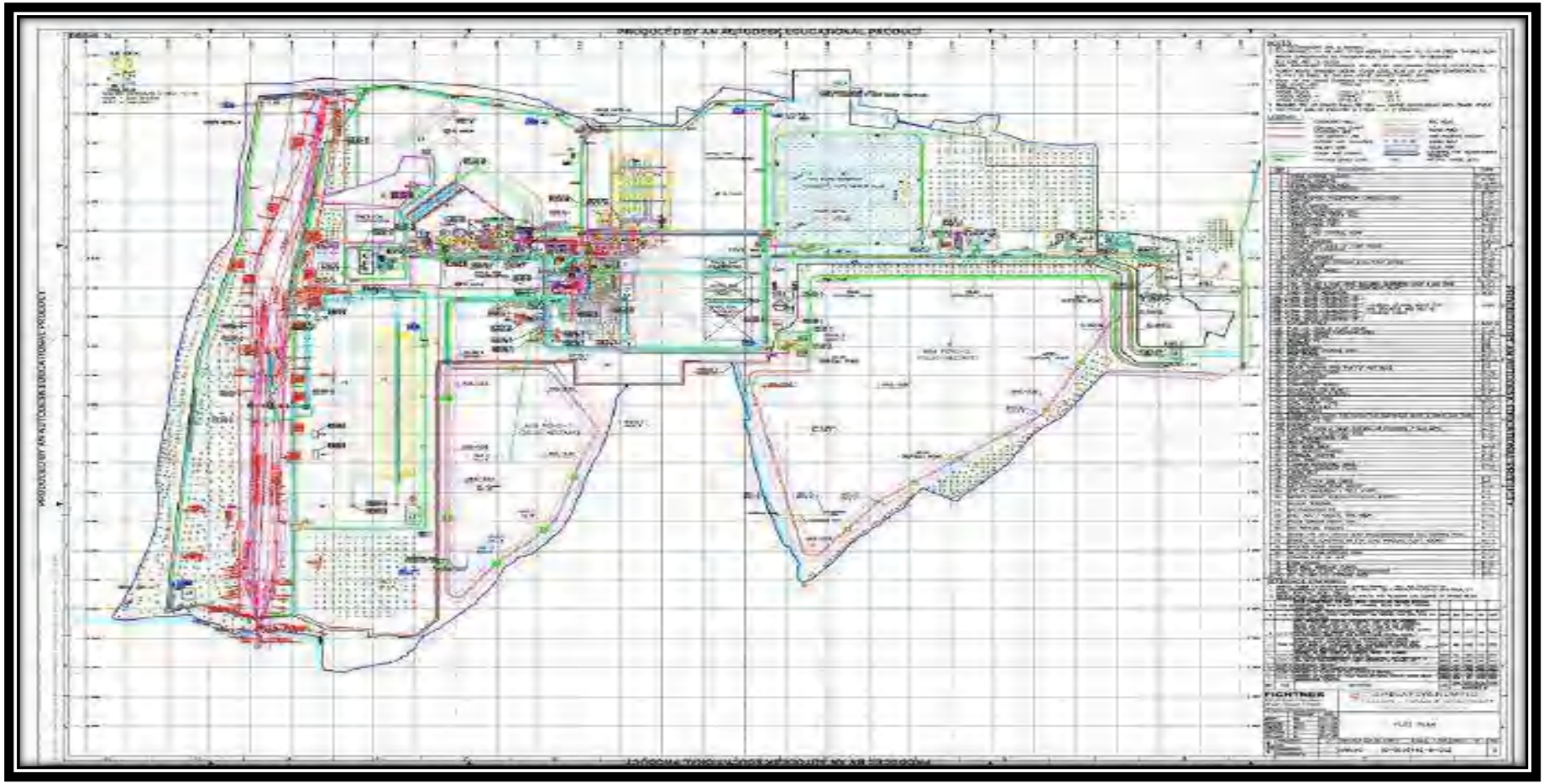

Figure1.1:Site Plan-M/s JhabuaPowerLtd.

1.2 PURPOSE OF THE PROJECT

M/s Jhabua Power Limited has retained M/s Vibrant Techno Lab Pvt. Ltd 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***

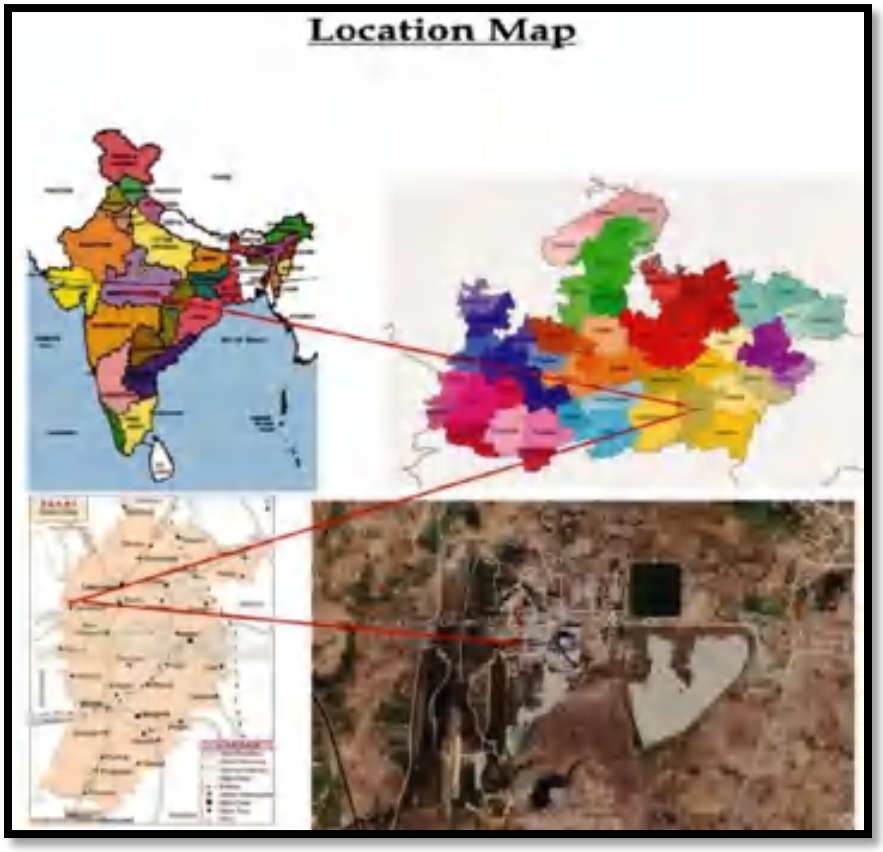

Figure1.2: Location Map of the Project Site

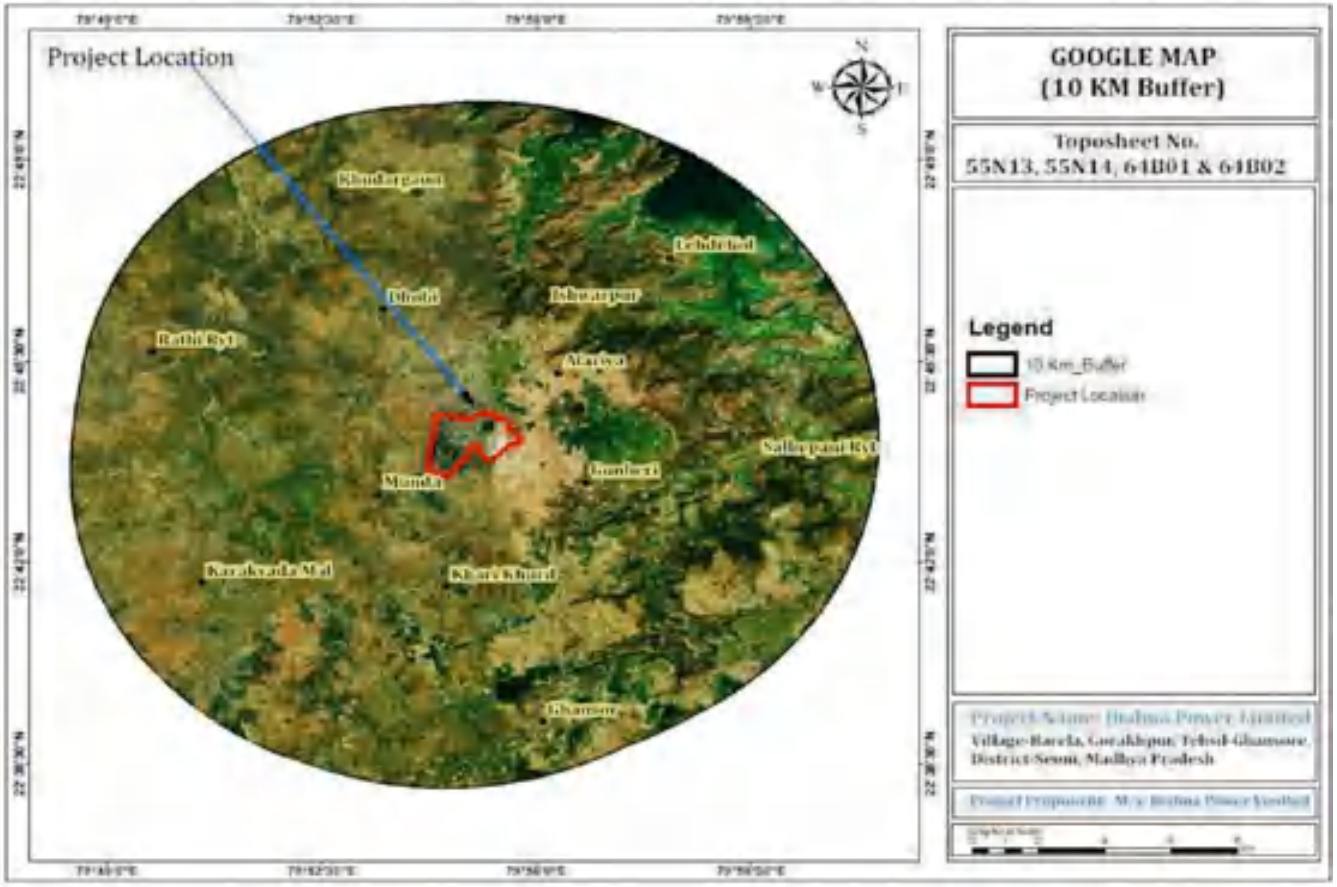

Fig1.3 :Google map of Jhabua district 10km Buffer

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.

CHAPTER-2

Meteorology-DrainageandGeomorphology

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 August 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 August. 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^{o} C and minimum during the month of December is 11.3^{o} C. The normal annual means maximum and minimum temperatures of study area are 31.3^{o} C & 18.9^{o} 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.

Table 2.1: Rainfall data in mm for last 10 years as per IMD are given below:

YEAR	RAINFALL	YEAR	RAINFALL
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
2011	1302.28	2021	1431.22

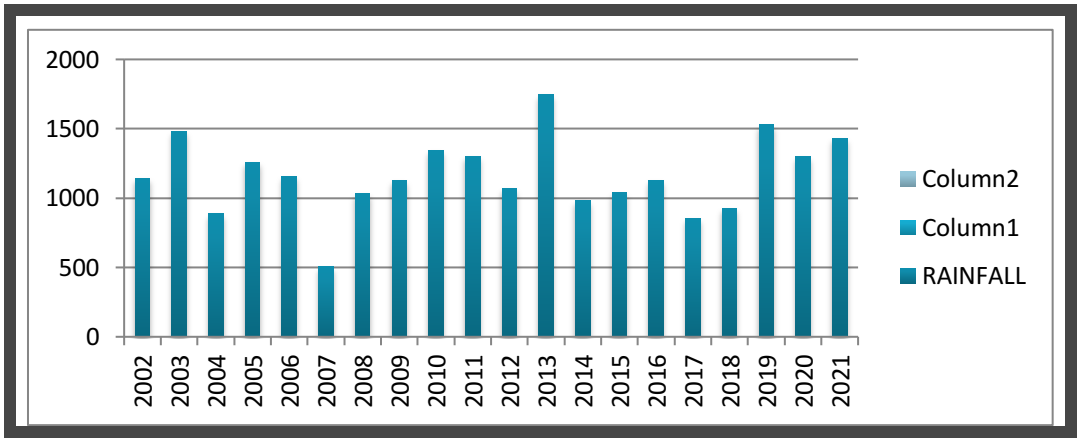

Figure 2.1: Rainfall Pattern of Seoni District (in mm)

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.***
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.

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.

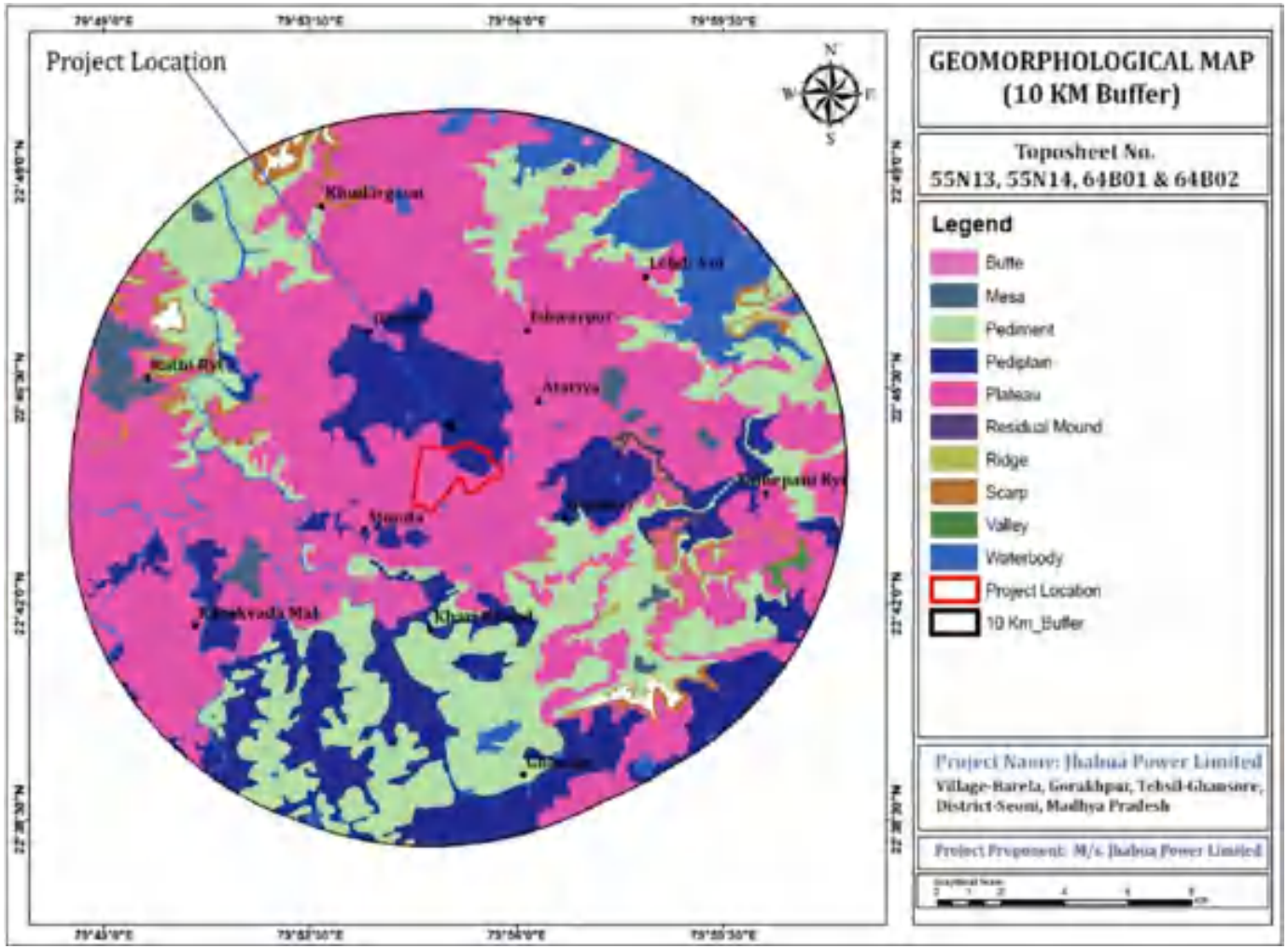

Figure 2.2: Geomorphology map of the Project Site 10km Buffer

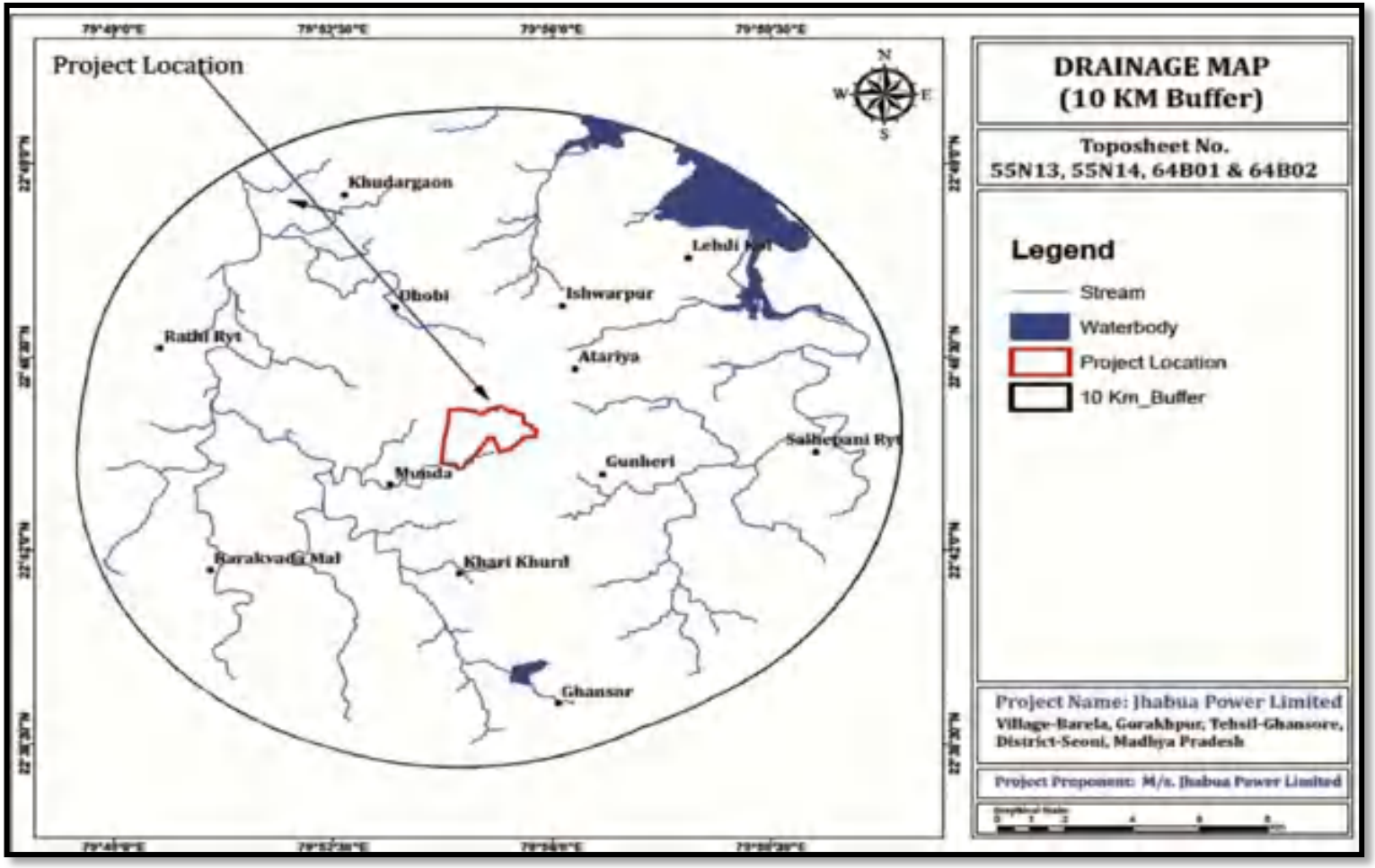

Figure 2.3: Drainage map of the Project Site 10km Buffer

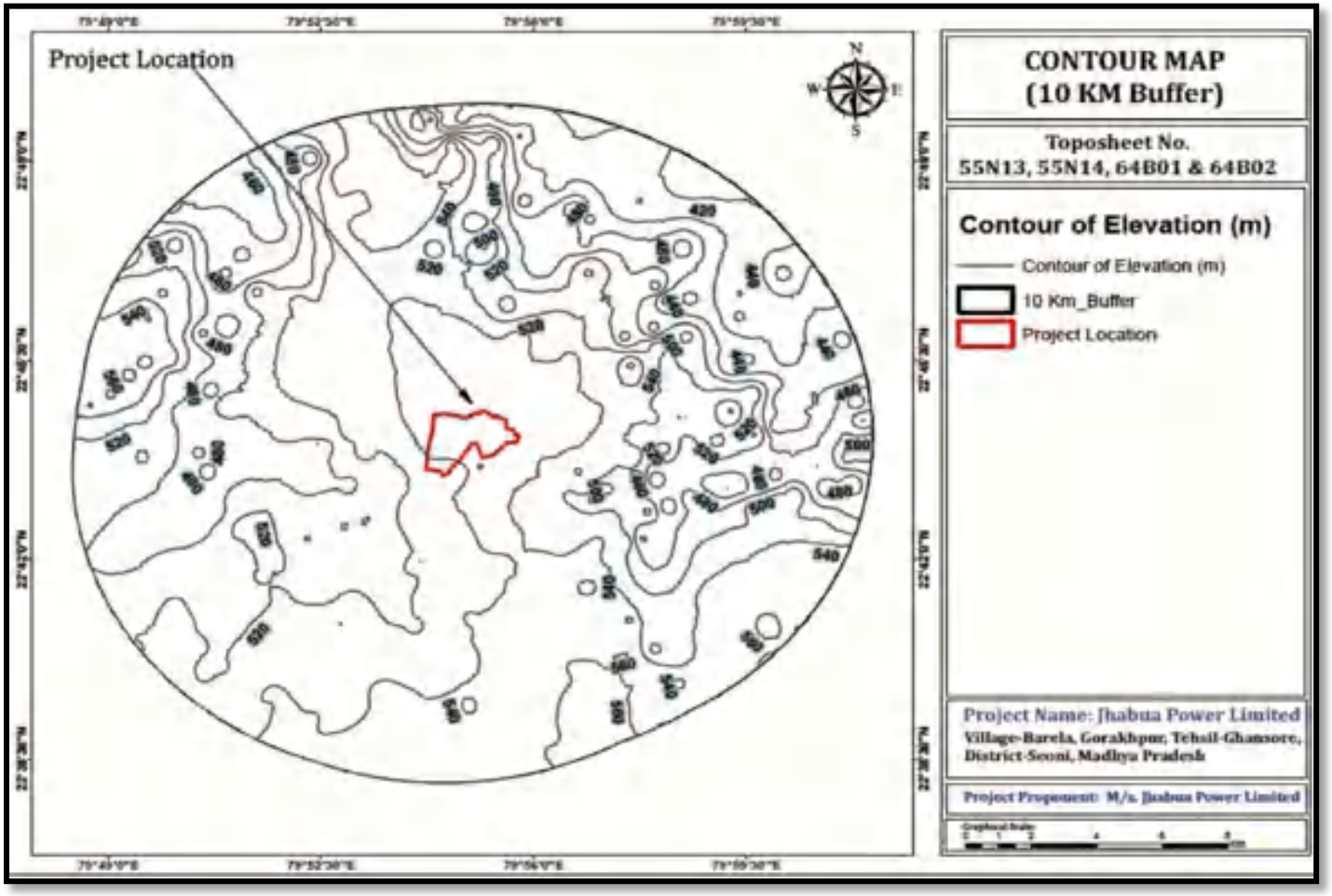

Figure 2.4: Contour Map of the the study area 10 km Buffer

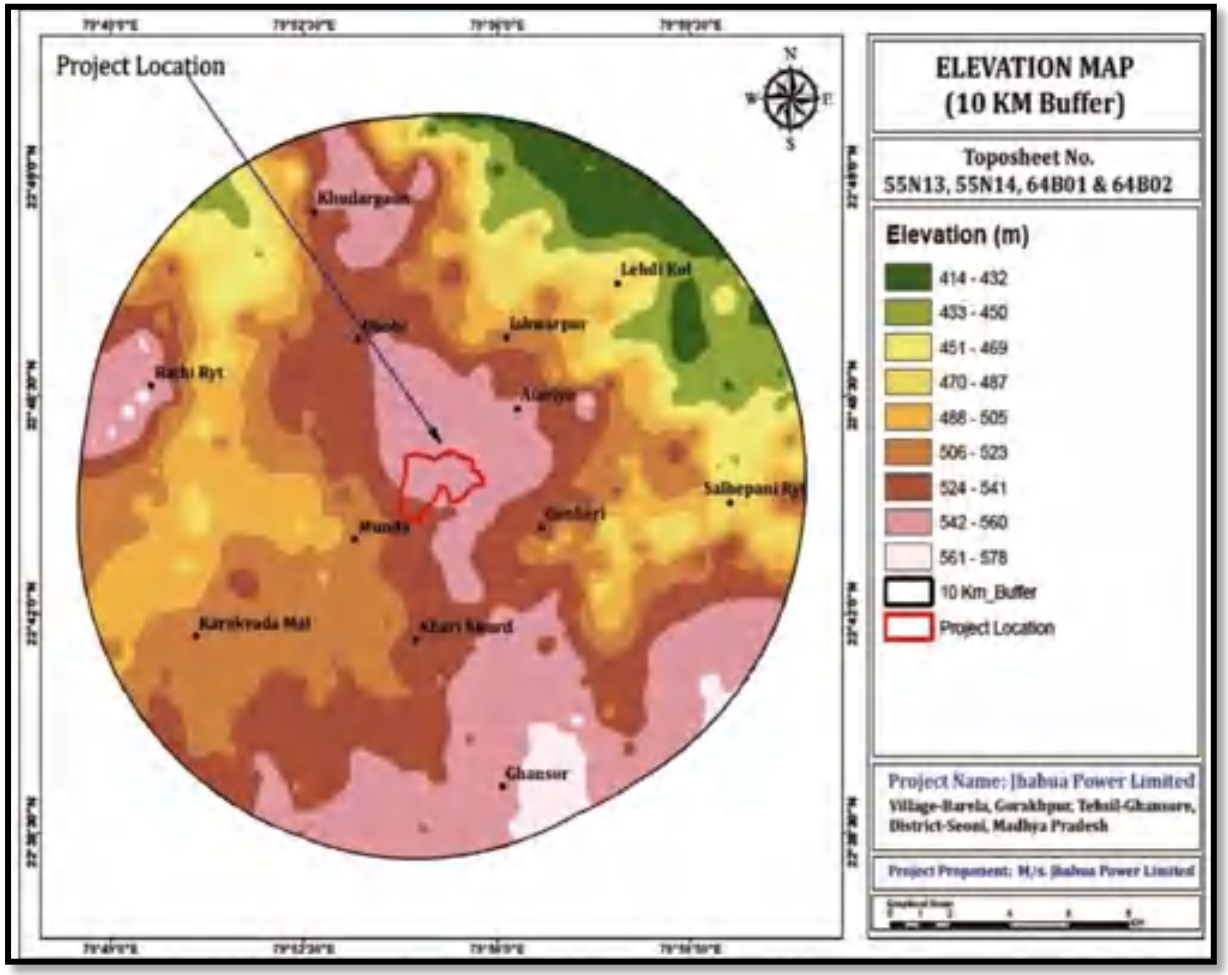

Fig 2.5: Elevation Map of the study area 10km Buffer

CHAPTER-3

GeologyandHydrogeologyofthe Studyarea

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 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.

Table 3.1:Stratigraphic Sequence of the Study Area

Lithology	Stratigraphic status	Group	Age	Nature and characteristics
Alluvium			Quaternary	Soft and unconsolidated sediments
Laterite				Medium to hard, brick red to yellowish brown, [illegible] rock
Basic Dykes			Cenozoic	Dark grey, fine to medium grained, hard, compact [illegible]
Four basaltic lava flows, simple and compound [illegible] flows with megacryst flow unit	[illegible] Fm			Dark grey, fine to medium, hard, compact, massive, non-porphyritic to moderately porphyritic
Five to seven simple and compound pahoehoe flows with megacryst flow at base	Amarwara Fm	[illegible] (Deccan trap)	Upper Cretaceous to Palaeogene	Dark grey, fine grained, hard, compact, massive, non-porphyritic to porphyritic
Two basaltic flows simple to compound pahoehoe type	[illegible] Fm			Dark grey, medium grained, hard, compact, massive, mega porphyritic in nature
Four basaltic flows simple to compound type	[illegible] Fm			Dark grey, fine to medium grained hard, compact, massive, moderately to highly porphyritic
Two simple basaltic flows	[illegible] Fm			Dark grey, fine grained hard, compact, massive, non porphyritic to sparsely porphyritic
Eight basaltic flows simple and compound pahoehoe flows with megacryst flow unit	Dhuma 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	Mandla Fm			Dark grey, fine to medium grained hard, compact, massive, and moderately to sparsely porphyritic
Simple and compound basaltic flows	Unclassified	[illegible] (Deccan trap)		Dark grey, fine grained hard, compact, massive and amygdaloidal
Chert, cherty limestone and shale	Intertrappean			
Chert, cherty nodular limestone, variegated clay and shale	Lameta group		Late Cretaceous (Maastrichtian)	Hard, laminated and friable rocks
Granite	Intrusive		Late Meso Proterozoic	Hard compact massive porphyritic rocks
Foliated granite	Intrusive			Hard, Compact, Foliated rock
Crystalline limestone-[illegible]	Bichua Fm			Hard and compact rocks
[illegible] schist and quartzite, [illegible]	Junewani Fm			Soft and flaky rocks, hard and compact rocks
Quartzite and [illegible] schist	Chorbaoli Fm			Hard and flaky rocks
[illegible] schist	Mansar Fm	Sausar group	Meso Proterozoic	Soft and flaky rocks
Calc silicate rocks	Lohangi Fm			Hard and flaky rocks
Grey [illegible] gneiss with enclaves of high grade metamorphites, pink gneiss with [illegible] Amphibolite	Tirodi biotite gneiss			Hard and compact, [illegible] hard and compact banded, foliated [illegible] rocks. Hard and compact, dark greenish grey, massive to moderately foliated rocks

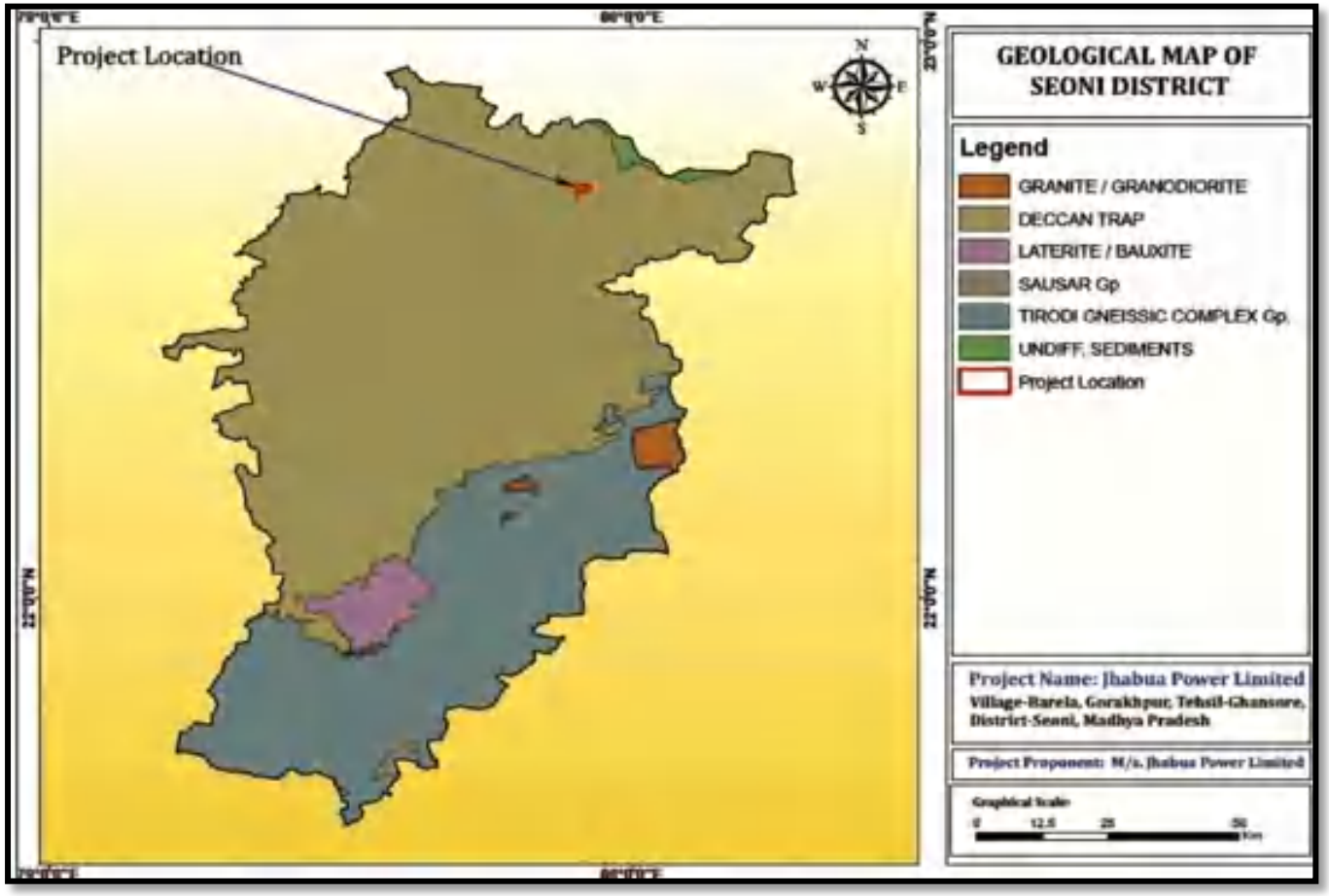

Fig 3.1: Geological map of Seoni district

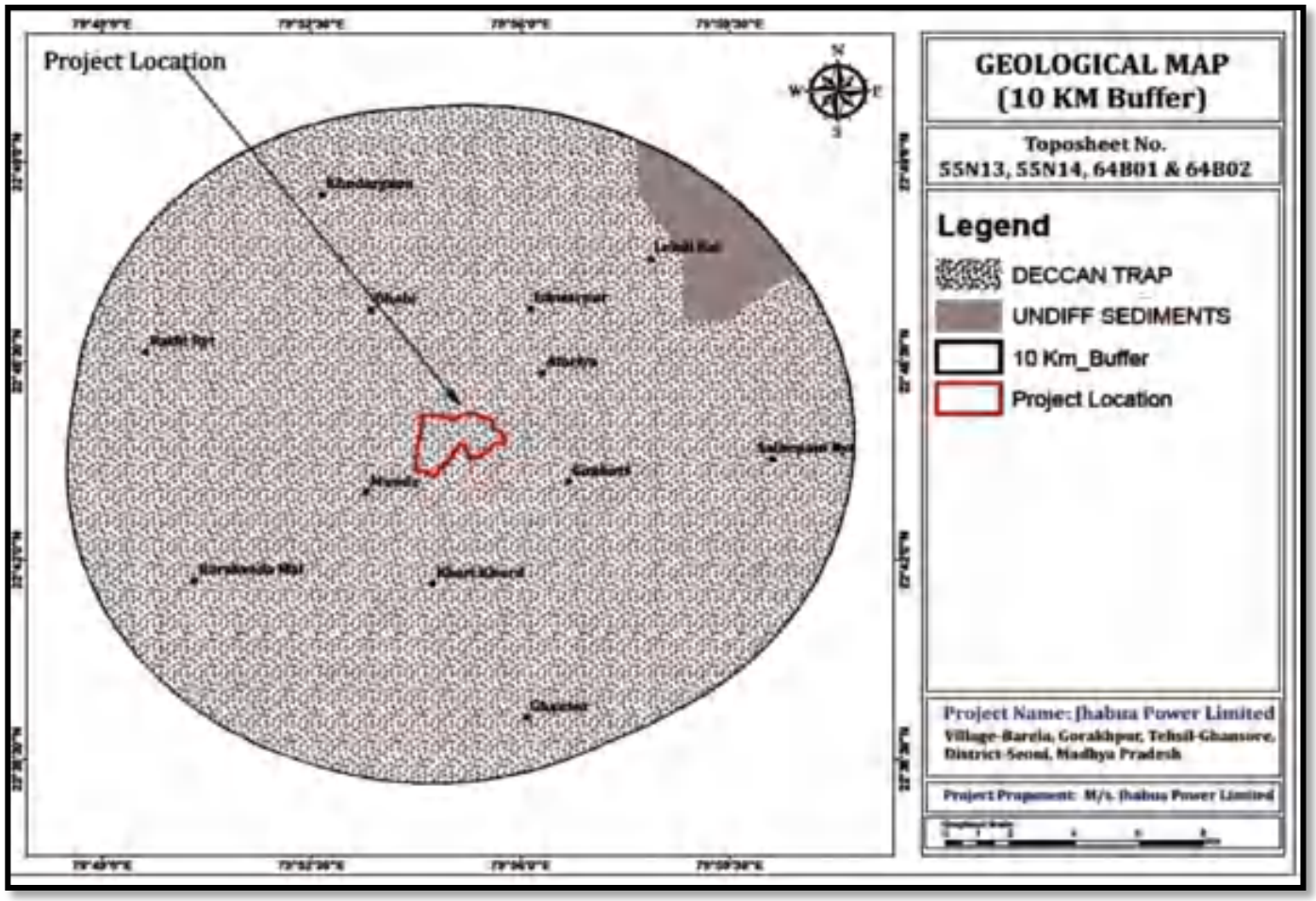

Figure 3.2: Geological Map of the Study Area

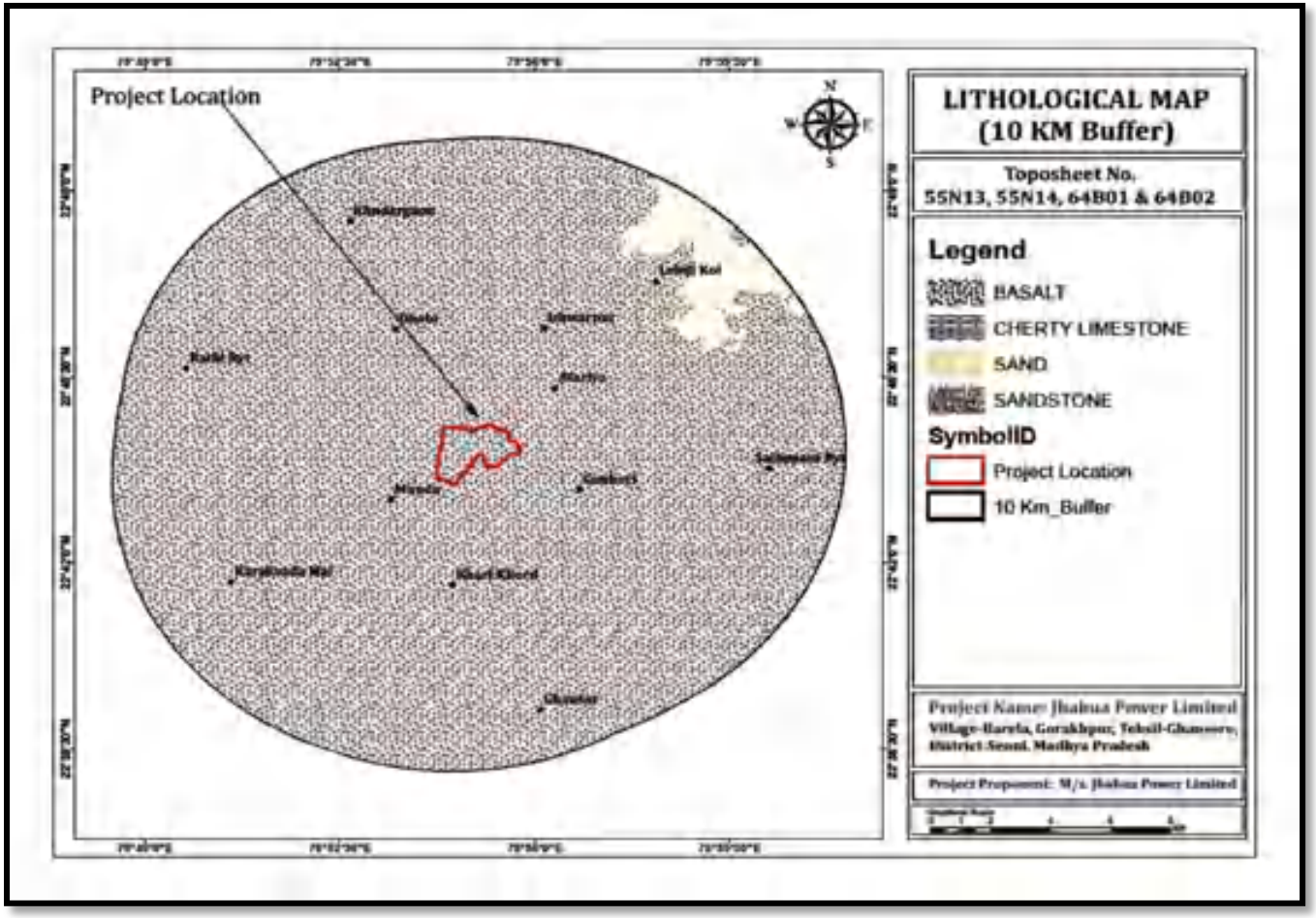

Figure 3.3: Lithological Map 5 Km Buffer 10km Buffer

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

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3.3 SITE SPECIFIC HYDROGEOLOGY

The Ground Water occurs in shallow aquifers under unconfined to semi-confined 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 m^3 /day to 182 m^3 /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.

Table3.2: Ground Water Resource and Development Potential of Seoni District, M.P.

AssessmentUnit/Block	Sub-unitCommand/Non-Command	NetGroundWaterAvailability (Ham)	ExistingGrossGroundWaterDraft	NetGroundWaterAvailabilityfor FutureIrrigationDevelopment	StageOf Ground Water Development (%)	CategoryofBlock
SEONI	**Command**	1636	324	1280	20	Safe
	Non-Command	12389	6023	6181	49	Safe
	Total-Block	14025	6348	7461	45	Safe

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

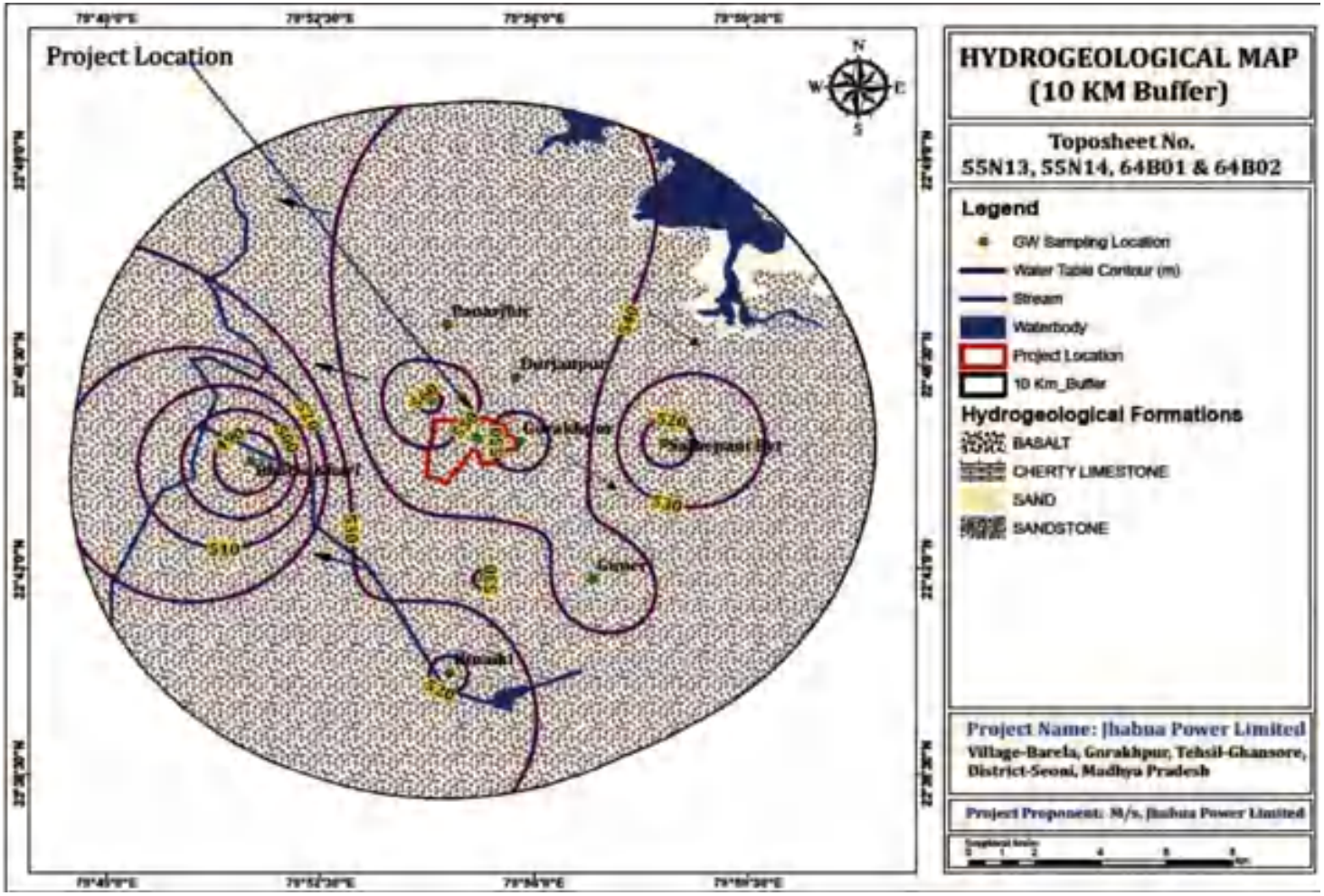


Figure 3.4: Hydrogeological Map of the Study Area

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 1.5 to 7.5 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 1.5 to 7.4 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***.

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

Location	LAT_DEG	LONG_DEG	Pre-Monsoonal Ground WaterLevel (mbgl)	Post-Monsoonal Ground WaterLevel (mbgl)	Fluctuation
Proiect Operatioxr Gate	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

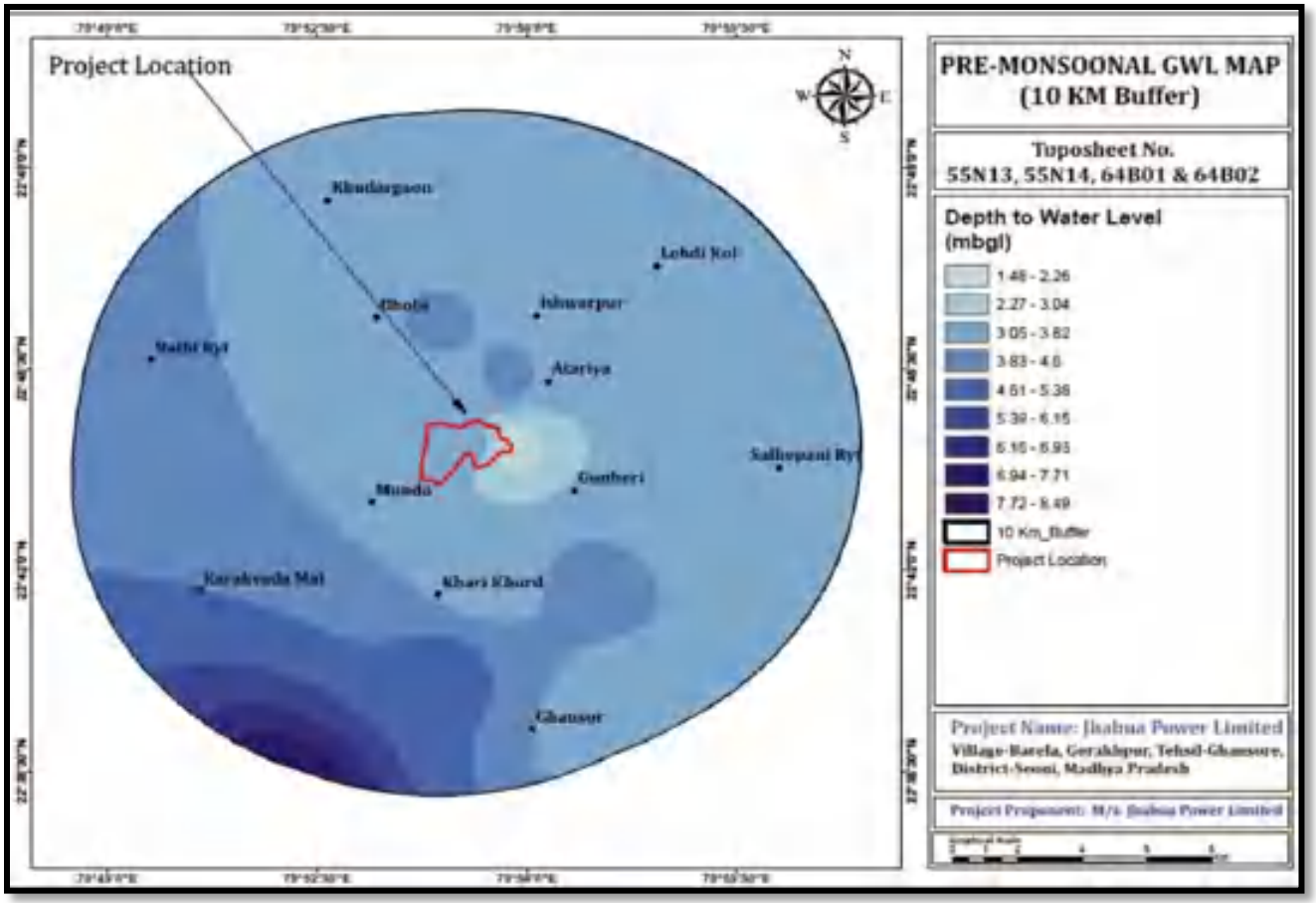


Figure 3.5: Depth to Pre- Monsoon Water Level Pattern of the study area (mbgl)

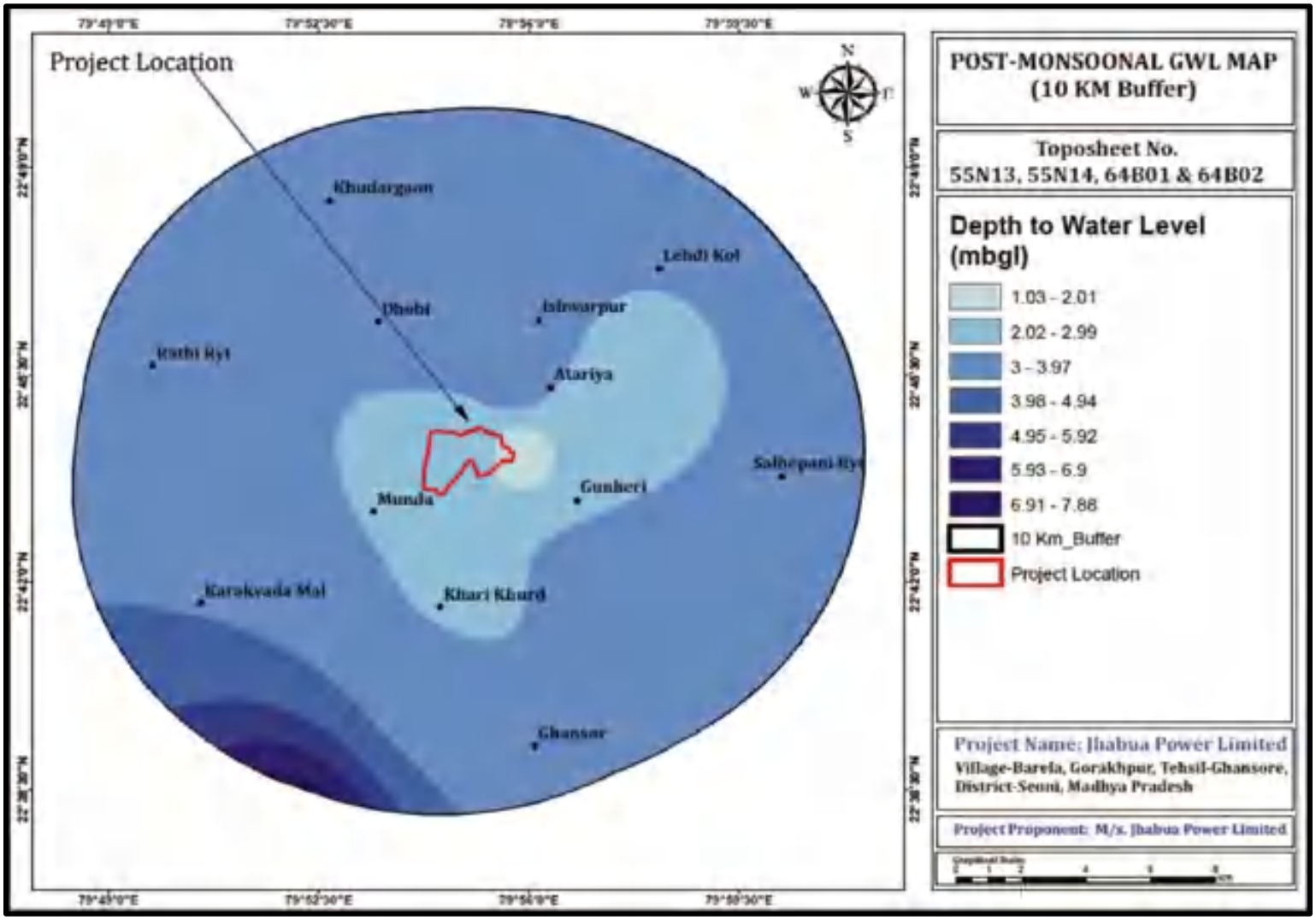


Figure 3.6: Depth to Post- Monsoon Water Level Pattern of the study area (mbgl)

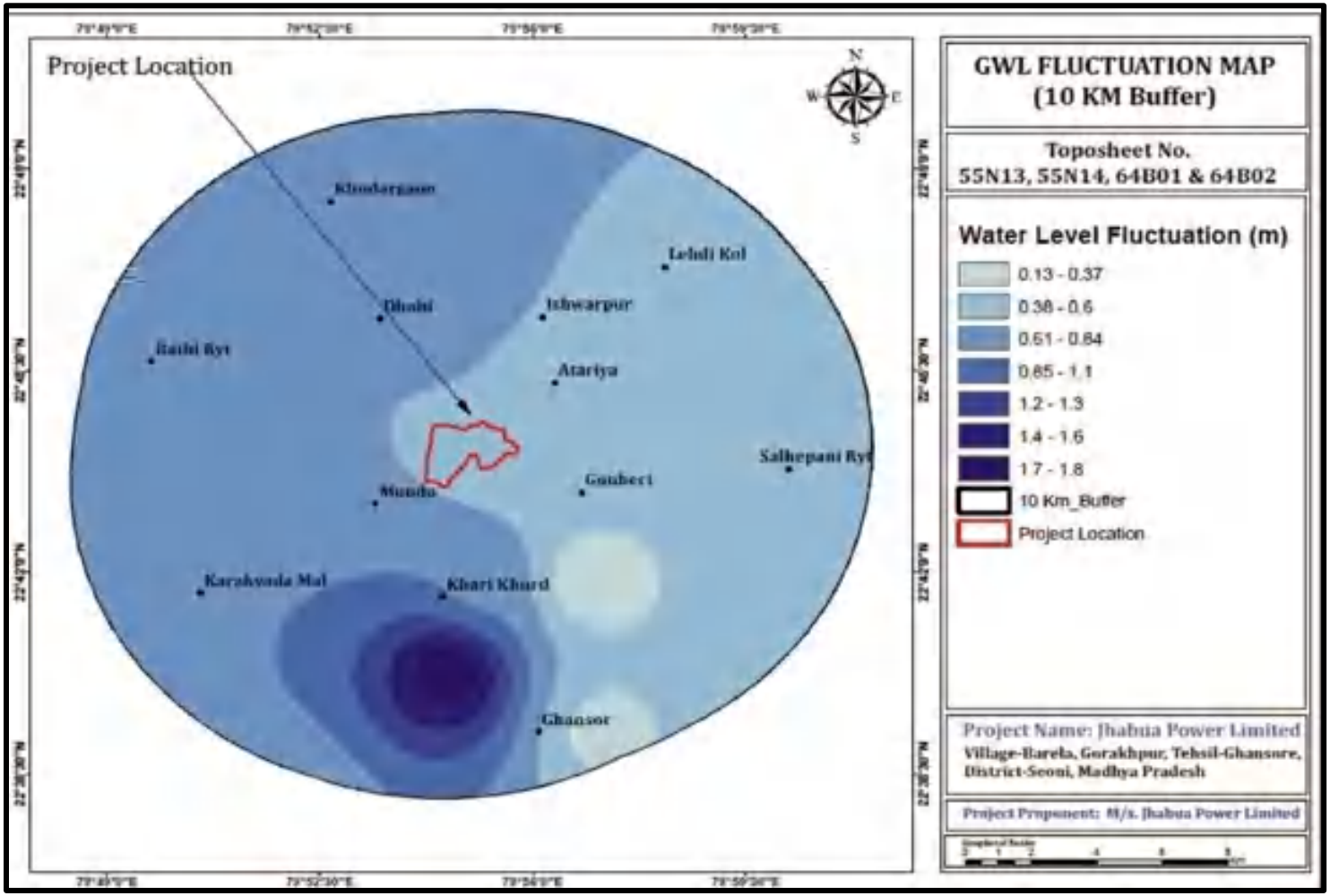


Figure 3.7: Ground Water Level Fluctuation Map

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:

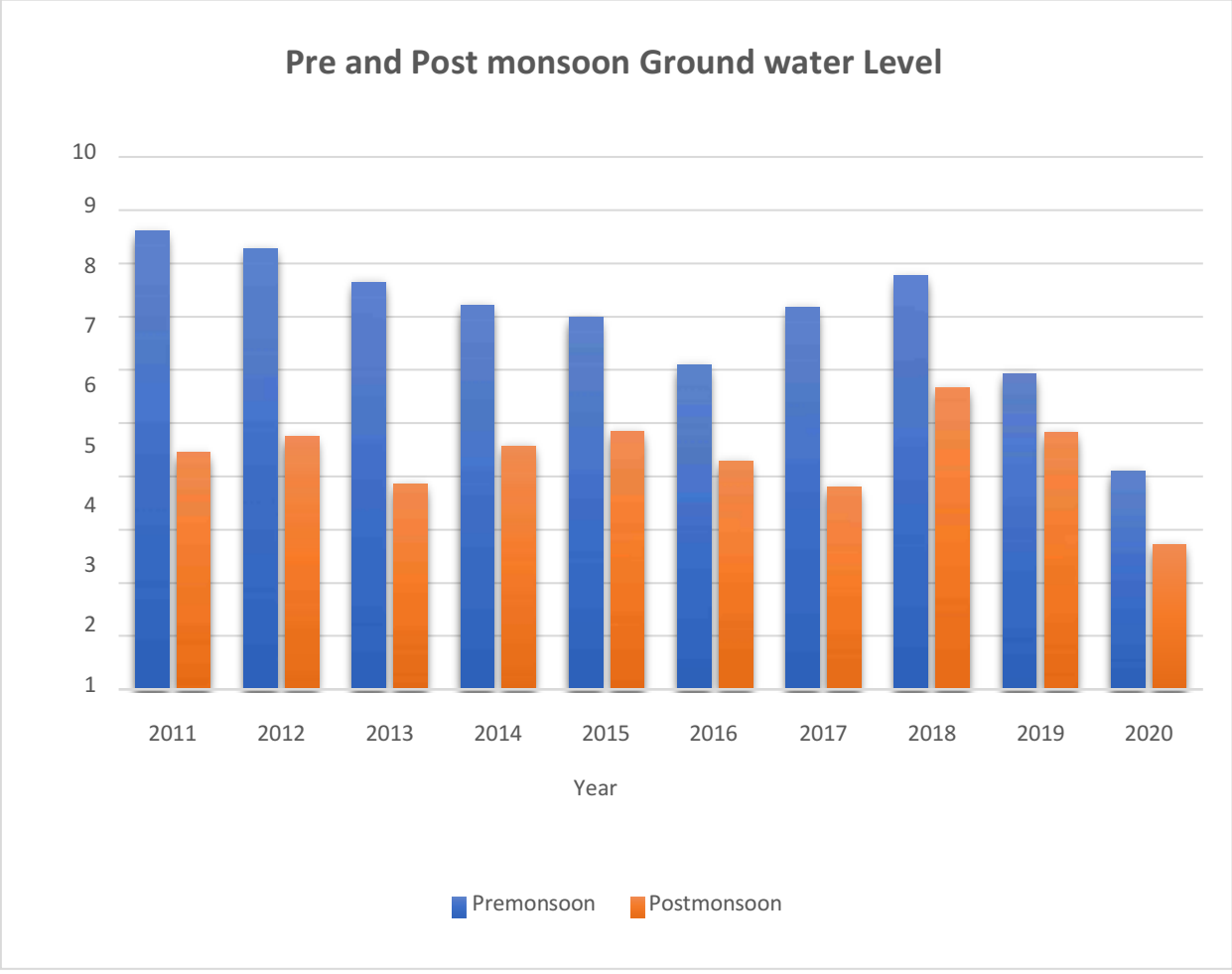


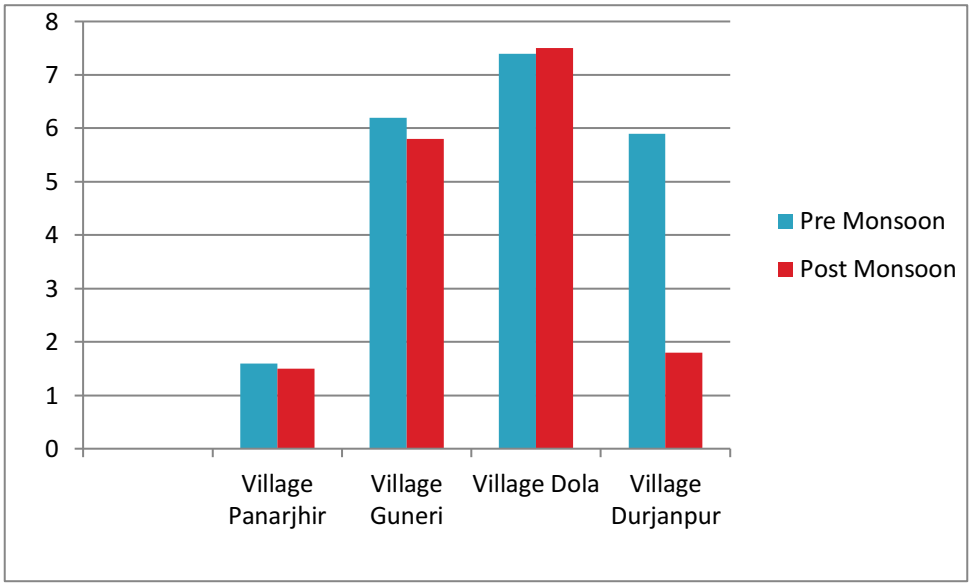
Figure3.8: Graph showing trend in water level in last 10 years in Pre and Post Monsoon

Depth to water level pre and post monsoon for study period from September 2021-August 2022

On the basis of the depth to water level of the study area, the pre monsoon depth towater level ranges between 1.6mbgl to 7.6 mbgl and post-monsoonal water levelranges between 1.5mbgl to 7.5mbgl. This is the ground water level of the nearby villages near the project site.

Pre and Post monsoon depth to water level graph is prepared and enclosed below:

Figure 3.9: Graph showing Ground water level in pre and post monsoon for study period from September 2021-August 2022



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

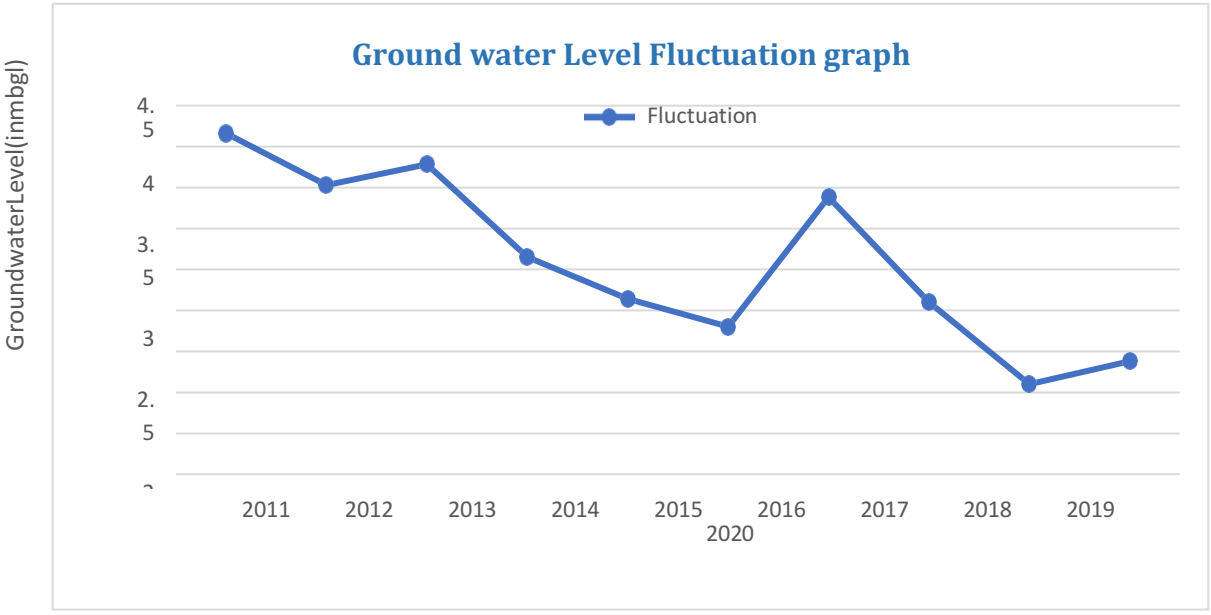


Figure:3.10: GroundWaterLevelFluctuationGraphinlast10year

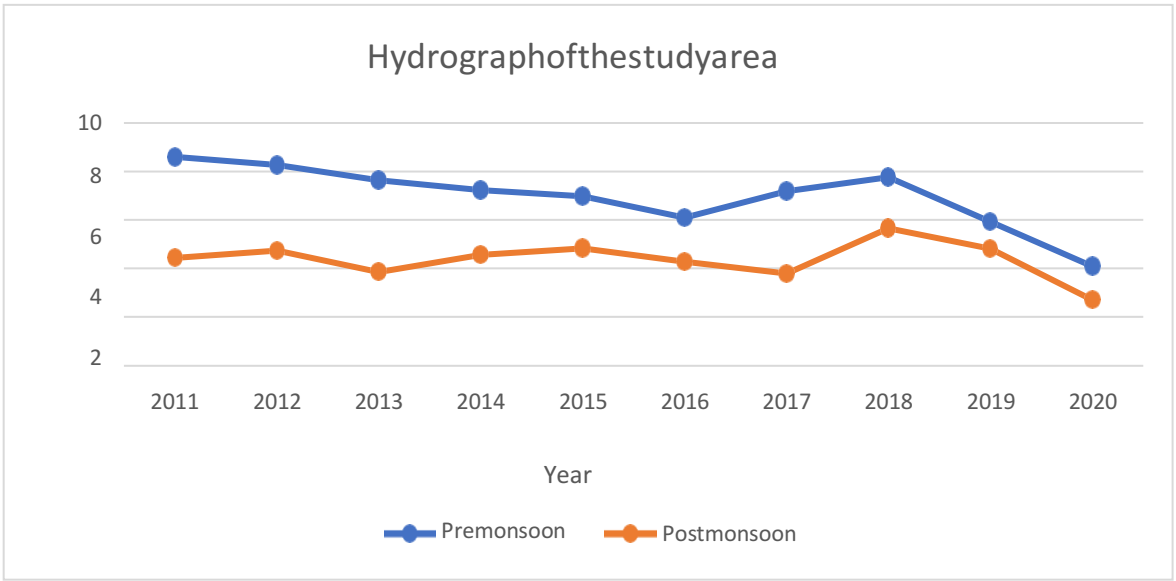


Figure3.11: Hydrograph water level for Pre & post monsoon

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 carried out in NABL certified approved lab**. M/s Vibrant Techno Lab Pvt. Ltd.**

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: -

Water sample was collected from the project site. The samples were analyzed for various parameters to compare with the standards for water as per IS: 10500- 2012. The chemical data report show that all the parameters are under the permissible limits and can be used as drinking purpose.

Ground water Results-

The Ground water quality of all location were observed to be slightly alkaline in nature with total alkalinity reaching upto 157.6 from 90.6 mg/L respectively in water samples against the prescribed limit of 200 mg/L (600 Permissible limit).Total Hardness in the water is reaching upto 182.36 mg/L from 108.64 mg/against prescribed limit of 200 mg/L but it is within the permissible limit of 600mg/L. However, remaining parameters are within the IS 10500: 2012 prescribed limits. TDS of the Ground water samples are reaching upto 337.0mg/L.

Surface water Results-

The Surface water quality of all location were observed to be slightly alkaline in nature with total alkalinity reaching upto 193.1 from 141.8 mg/L respectively in water samples against the prescribed limit of 200 mg/L (600 Permissible limit).Total Hardness in the water is reaching upto 209.52 mg/L from 116.4 mg/against prescribed limit of 200 mg/L but it is within the permissible limit of 600mg/L. However, remaining parameters are within the IS 10500: 2012 prescribed limits. TDS of the Ground water samples are reaching upto 395.0mg/L.

CHAPTER-4

SummaryandConclusion

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 Pariyat River near Biuai Village and Temor River near Pati village are the rivers flowing in the area having perennial flow.
- The black cotton soil, sandy loam, loams soil and moland soils are main soils in thearea.
- Water bearing formations are mainly Alluvium and Deccan Trap.
- Plant uses the surface water for the operation, process & domestic use from BargiDam(Rani Avanti bai dam)".
- 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 1.8 to 7.5 mbgl.
- Post monsoon depth to water level ranges between 1.5 to 7.4 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.

ANNEXURES

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/01	**Report No.:**	VEL/W/2202150001
Name & Address of Party:	M/s Jhabua Power Limited Village-Survia,Gorakhpur, District-Seoni,MP	**Format No.:**	7.8 F 01
		Party Reference No.:	4300005298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	**Receipt Date:**	15/02/2022
Sampling Location:	Project Operation Gate	**Sampling Date:**	12/02/2022
Sample Collected by	Vardan EnviroLab Representative	**Sampling Type:**	Grab
Preservation:	Refrigerated	**Sample Quantity:**	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.34	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	318.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	141.3	mg/l	200	600
4.	Total Hardness as $CaCO_3$	APHA 23rd Edition, 2340 C	178.46	mg/l	200	600
5.	Nitrate as NO_3	IS 3025 (P-34) 1988RA2019	7.47	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rd Edition, 4500-Cl- B	39.44	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	30.95	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	54.43	mg/l	75	200
9.	Magnesium as mg	APHA 23rd Edition, 3500Mg B:2017	10.31	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.58	mg/l	1.0	1.0
11.	Iron as Fe	APHA 23rd Ed,2017, 3500 Fe- B	0.21	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) B111 B	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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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 No.: VEL/GW/01				Report No.: VEL/W/2202150001		
S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.001)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.2
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.15)	mg/l	0.1	1
23.	Total. Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.15)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.15)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5540 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rd 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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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.:	VEL/W/2202150002
Name & Address of Party:	M/s Jhabua Power Limited Village-Bavela,Gorakhpur, District-Seoni,MP	Format No.:	7.8 F 01
		Party Reference No.:	4900085298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	Receipt Date:	15/02/2022
Sampling Location:	Village- Bavela	Sampling Date:	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.11	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	230.0	mg/l	500	2540
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	98.6	mg/l	200	600
4.	Total Hardness as $CaCO_3$	APHA 23rd Edition, 2340 C	142.64	mg/l	200	600
5.	Nitrate as NO_3	IS 3025 (P-34) 1988:RA2019	4.15	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rd Edition, 4500-Cl- B	46.44	mg/l	200	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	23.61	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	26.46	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	10.34	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F- B	0.52	mg/l	1.5	1.5
11.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.17	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	BDL(Dl. 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	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 23rd Ed. 2017,	BDL(Dl. 0.01)	mg/l	5	15

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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 No.: VEL/GW/02				Report No.: VEL/W/2202150002		
					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)3114B:2018	BDL(DL 0.002)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2540 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium to Al	APHA 23rd Edition, 3111 B	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.2
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E.Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable 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 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition, 2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0005)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rd 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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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/83	Report No.:	VEL/W/2202150003
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela/Gorakhpur, District-Seoni,MP	Format No.:	7.0 F 01
		Party Reference No.:	4500005290
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	Receipt Date:	15/02/2022
Sampling Location:	Village- Panarbir	Sampling Date:	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.16	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	272.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	118.2	mg/l	500	500
4.	Total Hardness as $CaCO_3$	APHA 23rd Edition. 2340 C	120.28	mg/l	200	600
5.	Nitrate as NO_3	IS 3025 (P-34) 1988:RA.2017	2.42	mg/l	45	No Relaxation
6.	Chloride as Cl	APHA 23rd Edition, 4500-Cl- B	65.02	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	37.71	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	34.21	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	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
12.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.21	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	BDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23rd Edition2017,3212B	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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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample No.: VEL/GW/03				Report No.: VEL/W/2202150003		
S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
18.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.1
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.15)	mg/l	0.1	1
23.	Total Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable 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 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.02)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Agreeable as Cr	APHA 23rd 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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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/84	Report No.:	VEL/W/2202150094
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakpur, District-Seoni,MP	Format No.:	7.0 F 01
		Party Reference No.:	4500085298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	Receipt Date:	15/02/2022
Sampling Location:	Village- Bhatki	Sampling Date:	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocols	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.58	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	294.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	149.7	mg/l	200	600
4.	Total Hardness as $CaCO_3$	APHA 23rd Edition, 2340 C	162.96	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 23rd Edition, 4500-Cl- B	53.73	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	28.28	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	40.21	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	10.31	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F-D	0.62	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23rd Ed.2017, 3500 Fe- F	0.22	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	HDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	HDL(DL 0.0005)	mg/l	0.001	No relaxation
14.	Lead as Pb	APHA 23rd Edition2017,3030D,3111B	HDL(DL 0.002)	mg/l	0.01	No relaxation
15.	Cadmium (as Cd)	APHA (23rd Edition) 3111 B	HDL(DL 0.002)	mg/l	0.003	No relaxation
16.	Copper as Cu	APHA 23rd Edition2017,3111B	HDL(DL 0.002)	mg/l	0.05	1.5
17.	Zinc as Zn	APHA 23rd Ed. 2017,	HDL(DL 0.01)	mg/l	5	15

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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 No.: VEL/GW/04 Report No.: VEL/W/2202150004

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.001)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.01)	mg/l	0.2	1
23.	Total. Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.01)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Manganese as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.01)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0001)	mg/l	0.001	0.001
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rd 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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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/05	Report No.:	VEL/W/22021500005
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP	Format No.:	7.8 F 01
		Party Reference No.:	4500005258
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	Receipt Date:	15/02/2022
Sampling Location:	Village- Durjanpur	Sampling Date:	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.48	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	337.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	137.9	mg/l	500	500
4.	Total Hardness as $CaCO_3$	APHA 23rd 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 23rd Edition, 4500-Cl- B	59.44	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	33.8	mg/l	250	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	54.43	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	11.25	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	6.64	mg/l	1.5	1.5
11.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.33	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B:2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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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 No.: VEL/GW/95					Report No.: VEL/W/2202150808	
					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)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rdEdition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rdEdition, 3111 D	BDL(DL 0.001)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rdEdition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.2
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total. Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable 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 23rdEdition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rdEdition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rdEdition, 5540 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 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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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/06
Name & Address of Party: M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP

Report No.: VEL/W/2202150006
Format No.: 7.8 F 01
Party Reference No.: 4300005298
Reporting Date: 21/02/2022
Period of Analysis: 15-21/02/2022
Receipt Date: 15/02/2022
Sampling Date: 11/02/2022
Sampling Type: Grab
Sample Quantity: 2.0 Ltr.

Sample Description: Ground Water
Sampling Location: Village- Gonari
Sample Collected by Vardan EnviroLab Representative
Preservation: Refrigerated
Sampling & Analysis Protocol: IS-10500-2012

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.34	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	327.0	mg/l	500	2000
2.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	134.0	mg/l	200	600
4.	Total Hardness as $CaCO_3$	APHA 23rd 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 23rd Edition, 4500-Cl- B	66.07	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	38.61	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	55.90	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	5.59	mg/l	30	100
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F D	0.70	mg/l	1.0	1.5
11.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.25	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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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 No.: VEL/GW/06			Report No.: VEL/W/2202150006			
S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012	
					Desirable limit (Max.)	Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.2
22.	Residual Free Chlorine	APHA (23rd Edition 2017)4500-Cl B	BDL(DL 0.15)	mg/l	0.2	1
23.	Total Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l	0.05	No relaxation
25.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition, 2017, 5540 C	BDL(DL 0.15)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rd 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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Test Report

Sample Number:	VEL /GW/07	**Report No.:**	VEL/W/22022150007
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP	**Permit No:**	7.6 F 01
		Party Reference No.:	4500005298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Ground Water	**Receipt Date:**	15/02/2022
Sampling Location:	Village- Dala	**Sampling Date:**	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	**Sampling Type:**	Grab
Preservation:	Refrigerated	**Sample Quantity:**	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.33	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	318.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	157.6	mg/l	200	600
4.	Total Hardness as $CaCO_3$	APHA 23rd Edition. 2340 C	192.36	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 23rd Edition, 4500-Cl- B	58.15	mg/l	250	1000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	37.71	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	55.96	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	10.5	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 23rd Ed.,2017, 3500 Fe- B	0.22	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B:2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
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Test Report

Sample No.: VEL/GW/07 | Report No.: VEL/W/2202150007

S.No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012: Desirable limit (Max.)	Limits of IS:10500 -2012: Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2016	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
20.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.002)	mg/l	0.01	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
22.	Residual Free Chlorine	APHA (23rd 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 detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable in 100 ml Sample	NA
25.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.01)	mg/l	0.05	No relaxation
26.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.2	1
31.	Chromium as Cr	APHA 23rd 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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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number:	VEL /GW/86	Report No.:	VEL/W/2202150008
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Sonal,MP	Format No.:	7.8 F 01
		Party Reference No.:	4500665298
		Reporting Date:	21/02/2022
		Period of Analysis:	18-21/02/2022
Sample Description:	Ground Water	Receipt Date:	15/02/2022
Sampling Location:	Village- Gorakhpur	Sampling Date:	11/02/2022
Sample Collected by	Vardan Envirolab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

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 23rd Edition, 4500-H+ B	7.46	--	6.5 to 8.5	No Relaxation
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	311.0	mg/l	500	2000
3.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	145.8	mg/l	500	600
4.	Total Hardness as $CaCO_3$	APHA 23rd 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 23rd Edition, 4500-Cl- B	39.01	mg/l	250	2000
7.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	30.47	mg/l	200	400
8.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	52.57	mg/l	75	200
9.	Magnesium as Mg	APHA 23rd Edition, 3500Mg B:2017	8.42	mg/l	30	200
10.	Fluoride as F	APHA 23rd Edition,2017, 4500-F B	0.64	mg/l	1.0	1.0
11.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.22	mg/l	0.3	No relaxation
12.	Arsenic as As	APHA (23rd Edition)3030D,3114B,2017	BDL(DL 0.002)	mg/l	0.01	0.05
13.	Mercury as Hg	APHA (23rd Edition)3112B:2018	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 (23rd Edition) 3111 B	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l	5	15

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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 No.: VEL/GW/08 | Report No.: VEL/W/220215[illegible]

S. No.	Parameter	Test-Method	Result	Unit	Limits of IS:10500 -2012 Desirable limit (Max.)	Limits of IS:10500 -2012 Permissible limit in the Absence of Alternate Source (Max.)
18.	Selenium as Se	APHA (23rd Edition)3114B:2018	BDL(DL 0.001)	mg/l	0.01	No relaxation
19.	Turbidity	APHA 23rd Edition, 2130 B	BDL(DL 1.0)	NTU	1	5
18.	Aluminium as Al	APHA 23rd Edition, 3111 D	BDL(DL 0.001)	mg/l	0.03	0.2
21.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l	0.1	0.3
21.	Residual Free Chlorine	APHA (23rd Edition 2017)4500 Cl B	BDL(DL 0.18)	mg/l	0.2	1
22.	Total. Coliform	IS:1622:2009	Absent	MPN/ 100ml	Shall Not Be detectable in 100 ml Sample	NA
24.	E. Coli	IS:1622:2009	Absent	Per 100ml	Shall Not Be detectable in 100 ml Sample	NA
23.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.01)	mg/l	0.05	No relaxation
24.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen	5	15
27.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--	Agreeable	Agreeable
28.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--	Agreeable	Agreeable
29.	Anionic Detergents as MBAS	APHA 23rd Edition.2017, 5540 C	BDL(DL 0.01)	mg/l	0.2	1.0
30.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l	0.001	0.002
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l	0.5	1
32.	Chromium as Cr	APHA 23rd 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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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/2202150011
Name & Address of Party:	M/s Jhabua Power Limited Village-Bandu,Gorakhpur, District-Seoni,MP	**Format No.:**	7.8 F 01
		Party Reference No.:	4900085298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Surface Water	**Receipt Date:**	15/02/2022
Sampling Location:	Partyat River	**Sampling Date:**	12/02/2022
Sample Collected by	Vardan EnviroLab Representative	**Sampling Type:**	Grab
Preservation:	Refrigerated	**Sample Quantity:**	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

S. No.	Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	APHA 23rd Edition, 4500-H+ B	7.39	--
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	253.0	mg/l
3.	Total Suspended Solids	APHA 23rd Edition, 2540 D	6.8	mg/l
4.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	141.8	mg/l
5.	Total Hardness as $CaCO_3$	APHA 23rd Edition, 2340 C	182.86	mg/l
6.	Nitrate as NO_3	IS 3025 (P-34) 1988RA 2019	2.42	mg/l
7.	Chloride as Cl	APHA 23rd Edition, 4500-Cl- B	24.15	mg/l
8.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	6.67	mg/l
9.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	32.66	mg/l
10.	Magnesium as Mg	APHA 23rd Edition, 2340 B	24.47	mg/l
11.	Fluoride as F	APHA 23rd Edition,2017, 4500-F- D	0.56	mg/l
12.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.12	mg/l
12.	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 23rd Ed. 2017,	BDL(DL 0.01)	mg/l

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Test Report

Sample No.: VEL/SW/01			Report No.: VEL/W/2202150011	
S. No.	Parameter	Test-Method	Result	Unit
16.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l
17.	Arsenic (as As)	APHA 23rd Edition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
16.	Selenium (as Se)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.002)	mg/l
16.	Mercury (as Hg)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.0005)	mg/l
20.	Lead(as Pb)	APHA 23rd Edition, 3030 D,3113 B.2017	BDL(DL 0.002)	mg/l
21.	Turbidity	APHA 23rd Edition, 2130 B	5.0	NTU
22.	Residual Free Chlorine	APHA 23rd Edition, 4500 Cl B	BDL(DL 0.15)	mg/l
20.	Cyanide as CN	APHA 4500CN-D	BDL(DL 0.02)	mg/l
24.	Colour	APHA 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen
25.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--
26.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--
27.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.01)	mg/l
28.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l
29.	BOD(3 days at 27°C)	APHA 23rd Edition, 2017, 5210 C	5.23	mg/l
30.	COD	APHA 23rd Edition, 2017, 5220 B	22.55	mg/l
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l
32.	Chromium as Cr	APHA 23rd Ed.,2017, 3111 B	BDL(DL 0.002)	mg/l

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

(Checked By)

(Authorized Signatory)

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/02	Report No.:	VEL/W/2202150012
Name & Address of Party:	M/s Jhabua Power Limited Village-Bursla,Gorakhpur, District-Seoni,MP	Format No:	7.8.7.41
		Party Reference No.:	4500005298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Surface Water	Receipt Date:	15/02/2022
Sampling Location:	Tomar River Nr. Village - Pati	Sampling Date:	12/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

S.No.	Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	APHA 23rd Edition, 4500-H+ B	7.46	--
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	298.0	mg/l
3.	Total Suspended Solids	APHA 23rd Edition, 2540 D	4.0	mg/l
4.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	145.8	mg/l
5.	Total Hardness as $CaCO_3$	APHA 23rd 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 23rd Edition, 4500-Cl- B	27.96	mg/l
8.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	7.52	mg/l
9.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	26.46	mg/l
10.	Magnesium as Mg	APHA 23rd Edition, 3340 B	8.45	mg/l
11.	Fluoride as F	APHA 23rd Edition,2017, 4500-F- D	0.51	mg/l
11.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.11	mg/l
13.	Cadmium (as Cd)	APHA (23rd Edition)3500D,3111B	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

(Checked By)

(Authorized Signatory)

Ph: 0124-4343750/752/753, 9810855569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample No.: VEL/SW/02			Report No.: VEL/W/2202150012	
S. No.	Parameter	Test-Method	Result	Unit
16.	Manganese as Mn	APHA 23rd Edition, 3111 B	BDL(DL 0.01)	mg/l
17.	Arsenic (as As)	APHA 23rd Edition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
18.	Selenium (as Se)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.002)	mg/l
19.	Mercury (as Hg)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.0005)	mg/l
20.	Lead(as Pb)	APHA 23rd Edition, 3030 D,3113 B.2017	BDL(DL 0.002)	mg/l
21.	Turbidity	APHA 23rd Edition, 2130 B.	2.0	NTU
22.	Residual Free Chlorine	APHA 23rd 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 23rd Edition, 2120 B	BDL(DL 1.0)	Hazen
25.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--
26.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--
27.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l
28.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l
29.	BOD(3 days at 27°C)	APHA 23rd Edition, 2017, 5210 C	4.22	mg/l
30.	COD	APHA 23rd Edition, 2017, 5220 B	24.6	mg/l
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l
32.	Chromium as Cr	APHA 23rd Ed.,2017, 3111 B	BDL(DL 0.002)	mg/l

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

(Checked By)

(Authorised Signatory)

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/03	Report No.:	VEL/W/2202150013
Name & Address of Party:	M/s Jhabua Power Limited Village-Dumda,Gorakhpur, District-Seoni,MP	Format No:	7.8.7.01
		Party Reference No.:	4900005290
		Reporting Date	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Surface Water	Receipt Date:	15/02/2022
Sampling Location:	Nala Nr. Village - Bisalki	Sampling Date:	11/02/2022
Sample Collected by	Vardan EnviroLab Representative	Sampling Type:	Grab
Preservation:	Refrigerated	Sample Quantity:	2.0 Ltr.
Sampling & Analysis Protocol	IS-10500-2012		

TEST RESULTS

S.No.	Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	APHA 23rd Edition, 4500-H+ B	7.32	--
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	355.0	mg/l
3.	Total Suspended Solids	APHA 23rd Edition, 2540 D	20.5	mg/l
4.	Alkalinity as $CaCO_3$	APHA 23rd Edition, 2320 B	193.1	mg/l
5.	Total Hardness as $CaCO_3$	APHA 23rd Edition, 2340 C	209.52	mg/l
6.	Nitrate as NO_3	IS 3025 (P-34) 1988RA.2019	7.17	mg/l
7.	Chloride as Cl	APHA 23rd Edition, 4500-Cl- B	39.81	mg/l
8.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	8.28	mg/l
9.	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	42.2	mg/l
10.	Magnesium as Mg	APHA 23rd Edition, 2340 B	13.12	mg/l
11.	Fluoride as F	APHA 23rd Edition,2017, 4500-F- D	0.63	mg/l
12.	Iron as Fe	APHA 23rd Ed.,2017, 3500 Fe- B	0.13	mg/l
13.	Cadmium (as Cd)	APHA (23rd Edition)3030B,3113B	BDL(DL 0.002)	mg/l
14.	Copper as Cu	APHA 23rd Edition2017,3111B	BDL(DL 0.002)	mg/l
16.	Zinc as Zn	APHA 23rd Ed. 2017,	0.24	mg/l

(Checked By)

(Authorized Signatory)

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

Test Report

Sample No.: VEL/SW/03			Report No.: VEL/W/2202150013	
S. No.	**Parameter**	**Test-Method**	**Result**	**Unit**
16.	Manganese as Mn	APHA 23rd Edition, 3111 B	0.12	mg/l
17.	Arsenic (as As)	APHA 23rd Edition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
18.	Selenium (as As)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.002)	mg/l
19.	Mercury (as Hg)	APHA 23rd Edition, 3114 C.2017	BDL(DL 0.0005)	mg/l
20.	Lead(as Pb)	APHA 23rd Edition, 3030 D.3113 B.2017	BDL(DL 0.002)	mg/l
21.	Turbidity	APHA 23rd Edition, 2130 B	8.0	NTU
22.	Residual Free Chlorine	APHA 23rd 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 23rd Edition, 2120 B	5.0	Hazen
25.	Odour	APHA 23rd Edition, 2150 B	Agreeable	--
26.	Taste	APHA 23rd Edition, 2160 B	Agreeable	--
27.	Anionic Detergents as MBAS	APHA 23rd Edition,2017, 5540 C	BDL(DL 0.05)	mg/l
28.	Phenolic Compounds	APHA 23rd Edition, 5530 C	BDL(DL 0.0004)	mg/l
29.	BOD(3 days at 27°C)	APHA 23rd Edition, 2017, 5210 C	7.14	mg/l
30.	COD	APHA 23rd Edition, 2017, 5220 B	42.44	mg/l
31.	Boron	APHA 23rd Edition, 4500 C	BDL(DL 0.01)	mg/l
32.	Chromium as Cr	APHA 23rd Ed.,2017, 3111 B	BDL(DL 0.002)	mg/l

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

(Checked By)

(Authorised Signatory)

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/04	**Report No.:**	VEL/W/2202150014
Name & Address of Party:	M/s Jhabua Power Limited Village-Barela,Gorakhpur, District-Seoni,MP	**Format No:**	7.8 F 01
		Party Reference No.:	4300005298
		Reporting Date:	21/02/2022
		Period of Analysis:	15-21/02/2022
Sample Description:	Surface Water	**Receipt Date:**	15/02/2022
Sampling Location:	100 Mtr. From confluence point/Down Stream River	**Sampling Date**	12/02/2022
		Sampling Type:	Grab
Sample Collected by	Vardan EnviroLab Representative	**Sample Quantity:**	2.0 Ltr.
Preservation:	Refrigerated		
Sampling & Analysis Protocol:	IS-10500-2012		

TEST RESULTS

S.No.	Parameter	Test Method	Result	Unit
1.	pH (at 25 °C)	APHA 23rd Edition, 4500-H+ B	7.26	--
2.	Total Dissolved Solids	APHA 23rd Edition, 2540 C	398.0	mg/l
3.	Total Suspended Solids	APHA 23rd Edition, 2540 D	29.6	mg/l
4.	BOD(3 days at 27°C)	APHA 23rd Edition, 2017, 5210 C	13.5	mg/l
5.	COD	APHA 23rd Edition, 2017, 5220 B	50.84	mg/l
6.	Sulphate as SO_4	APHA 23rd Edition, 4500 E	7.81	mg/l
7.	Lead(as Pb)	APHA 23rd Edition, 3030 B,3113 B.2017	BDL(DL 0.002)	mg/l
8.	Arsenic (as As)	APHA 23rd Edition, 3030 D,3114 C.2017	BDL(DL 0.002)	mg/l
9.	Chromium as Cr	APHA 23rd Ed.,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 23rd Edition, 3114 C.2017	BDL(DL 0.0006)	mg/l
12.	Oil & Grease	APHA 23rd Ed.,2017, 5520 B	2.2	mg/l

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

(Checked By)

(Authorized Signatory)

Ph: 0124-4343750/752/753, 9810355566, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

NOIDA TESTING LABORATORIES

(A Government Approved Testing Laboratory)

(An ISO : 9001 : 2015, 14001 : 2015 & ISO 45001 : 2018 & NABL Accredited Laboratory)

MoEF & CC (Ministry of Environment, Forest & Climate Change), UPPCB & HSPCB Recognized Laboratory

+91-9313611642, 8510081921, 7503031145, 8527870572, 7503031146, 9999794369

Analyzing for an Assured Future

TEST CERTIFICATE

Sample Number:	NTL/LAB/010	**Report No.:**	W-110222-010
Name & Address of Party:	M/s Jhabua Power Ltd. Vill.-Barela, Gorakpur, Distt.-Seoni, Madhya Pradesh	**Party Reference No.:**	NIL
		Report Date:	21/02/2022
		Date of Mouitoring:	11/02/2022
		Receipt Date:	15/02/2022
Sample Doscription:	Ground Water Level Monitoring		
Sample Collected by	NTL Team		

TEST RESULTS

S. No.	Location	Latitude & Longitude	Deptb (In Meter)
1.	Project Operation Gate	22°44'39" N & 79°55'31"	1.8
2.	Village Barela	22°44'18" N & 79°55'08"	3.2
3.	Viliage Panarjbir	22°46'05" N & 79°55'22"	1.5
4.	Village Binaiki	22°43'26" N & 79°54'21"	2.9
5.	Village Durjanpur	22°45'06" N & 79°55'48"	5.7
6.	Village Guneri	22°42'16" N & 79°57'12"	5.8
7.	Village Dola	22°42'36" N & 79°54'48"	7.5
8.	Village Gorakhpur	22°44'39" N & 79°55'12"	4.6

(Checked By)

NOIDA TESTING LABORATORIES NTL

(Authorized Signatory)

NOIDA TESTING LABORATORIES

(A Government Approved Testing Laboratory)

(An ISO : 9001 : 2015, 14001 : 2015 & ISO 45001 : 2018 & NABL Accredited Laboratory)

MoEF & CC (Ministry of Environment, Forest & Climate Change), UPPCB & HSPCB Recognized Laboratory

Analyzing for an Assured Future

+91-9313611642, 8510081921, 7503031145, 8527870572, 7503031146, 9999794369

TEST CERTIFICATE

Sample Number:	NTL/LAB/022	Report No.:	W-100921-022
Name & Address of Party:	M/s Jhabua Power Ltd. Vill.-Barela, Gorakpur, Distt.-Seoni, Madhya Pradesh	Party Reference No.:	NIL
		Report Date:	23/09/2021
		Date of Monitoring:	10/09/2021
		Receipt Date:	15/09/2021
Sample Description:	Ground Water Level Monitoring		
Sample Collected by	NTL Team		

TEST RESDLTS

S. No.	Location	Latitude & Longitude	Depth (lo Meter)
1.	Project Operation Gate	22°44'39" N & 79°55'31"	1.6
2.	Village Barela	22°44'18" N & 79°55'08"	3.2
3.	Village Panarjbir	22°46'05" N & 79°55'22"	1.5
4.	Village Binaiki	22°43'26" N & 79°54'21"	2.9
5.	Village Durjanpur	22°45'06" N & 79°55'48"	5.9
6.	Village Guneri	22°42'16" N & 79°57'12"	5.8
7.	Village Doia	22°42'36" N & 79°54'48"	7.4
8.	Village Gorakhpur	22°44'39" N & 79°55'12"	4.4

(Checked By)

NOIDA TESTING LABORATORIES NTL

(Authorized Signatory)

Annexure -2

Recent Stack Monitoring Report

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

TC-6299

Test Report

Sample Number : VEL/S/01

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : Stack Emission Monitoring

Report No. : VEL/S/2209251001
Format No : 7.8 F-03
Party Reference No : 4300005293
Reporting Date : 30/09/2022
Period of Analysis : 26/10/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	TPP-600 MW
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Date of Sampling	:	17/09/2022
Sampling duration (Minutes)	:	31.0
Stack attached to	:	TTP
Make of stack	:	MS
Diameter of stack(m)	:	7.26 Mtr.
Height of stack(m)	:	275.0 Mtr.
Instrument calibration status	:	Calibrated
Meteorological Condition	:	Clear Sky
Ambient Temperature - Ta (°C)	:	28.0
Temperature of Stack Gases - Ts (°C)	:	120.0
Velocity of Stack Gases (m/sec.)	:	23.12
Flow rate of PM (LPM)	:	31.0
Flow rate of Gas (LPM)	:	2.0
Sampling condition	:	Isokinetic
Protocol used	:	IS 11255 & EPA

S.No.	Test Parameters	Test Method	Results	Units	Limits as per CPCB
1	Particulate Matter (as PM)	IS:11255 (P-1), Gravimetric Method, RA:2003	41.84	mg/Nm3	50.0
2	Sulphur Dioxide (as SO2)	IS:11255 (P-2), Titrimetric Method RA:2003	688.17	mg/Nm3	200.0
3	Oxide of Nitrogen (as NOX)	IS:11255 (P-7), Colorimetric Method, RA:2012	195.02	mg/Nm3	450.0
4	Mercury (as Hg)	VEL/ENV/STP/144, Issue No.01, Issue Date - 01/11/2021	*BLQ(**LOQ-0.000)	mg/Nm3	0.03

*BLQ-Below Limit of Quantification,**LOQ-Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/S/02

Name & Address of the Party : M/s Jhajhua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : Stack Emission Monitoring

Report No. : VEL/S/2209261002
Format No : 7.8 F-03
Party Reference No : 4300005288
Reporting Date : 30/09/2022
Period of Analysis : 28/09/2022-30/09/2022
Receipt Date : 28/09/2022

General Information

Sampling Location	:	DG Set Area
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Date of Sampling	:	15/09/2022
Sampling duration (Minutes)	:	48.0
Stack attached to	:	DG Set No.1 (1500 KVA)
Make of stack	:	MS
Diameter of stack(m)	:	0.46 Mtr.
Height of stack(m)	:	30.0 Mtr.
Instrument calibration status	:	Calibrated
Meteorological Condition	:	Clear Sky
Ambient Temperature - Ta (°C)	:	26.0
Temperature of Stack Gases - Ts (°C)	:	160.0
Velocity of Stack Gases (m/sec.)	:	16.74
Flow rate of PM (LPM)	:	18.0
Flow rate of Gas (LPM)	:	2.0
Sampling condition	:	Isokinetic
Protocol used	:	IS 11255 & EPA

S.No.	Test Parameters	Test Method	Results	Units	Limits as per CPCB
1	PM (at 15 % O2 Correction)	IS:11255 (P-1), Gravimetric Method, RA:2003	51.41	mg/Nm3	75.0
2	NOX (at 15 % O2 Correction)	IS:11255 (P-7), Colorimetric Method RA:2012	196.89	ppmv	710.0

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIROLAB PVT. LTD. Authorised Signatory

Ph: 0124-4343750/752/753, 9810355369, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

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

TC-6299

Test Report

Sample Number : VEL/S403
Name & Address of the Party : M/s Jhabua Power Limited
P O- Attana, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : Stack Emission Monitoring

Report No. : VEL/S/220926r003
Format No : 7 8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/10/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	DG Set Area
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Date of Sampling	:	15/09/2022
Sampling duration (Minutes)	:	48.0
Stack attached to	:	DG Set No.2 (1500 KVA)
Make of stack	:	MS
Diameter of stack(m)	:	0.45 Mtr.
Height of stack(m)	:	30.0 Mtr.
Instrument calibration status	:	Calibrated
Meteorological Condition	:	Clear Sky
Ambient Temperature - Ta (°C)	:	28.0
Temperature of Stack Gases - Ts (°C)	:	172.0
Velocity of Stack Gases (m/sec.)	:	16.11
Flow rate of PM (LPM)	:	18.0
Flow rate of Gas (LPM)	:	2.0
Sampling condition	:	Isokinetic
Protocol used	:	IS 11255 & EPA

S.No.	Test Parameters	Test Method	Results	Units	Limits as per CPCB
1	PM (at 15 % O2 Correction)	IS:11255 (P-1), Gravimetric Method, RA:2003	46.98	mg/Nm3	73.0
2	NOX (at 15 % O2 Correction)	IS:11255 (P-7), Colorimetric Method, RA:2012	186.86	ppmv	710.0

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIRO LAB Dr. Prakash Singh Authorised Signatory
30/09/2022

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Annexure -3

Analysis Report of Ash pond effluent

Test Report

Sample Number : VEL/WW/04

Name & Address of the Party : M/s Jhabua Power Limited. P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/WW/2209281004
Format No : 7.8 F-03
Party Reference No : 4300005299
Reporting Date : 03/10/2022
Period of Analysis : 28/09/2022-03/10/2022
Receipt Date : 28/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2.0 Ltrs.
Sampling Type : Grab

Sample Description : Waste Water
Location : Ash Pond Effluent
Sample Collected By : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Test Parameters	Test Method	Result	Unit
1	pH	APHA 4500 H+B Electrometric Method:2017	7.38	--
2	Total Suspended Solids, max.	APHA 2540 D Gravimetric Method	32.00	mg/l
3	Oil & Grease, Max.	APHA 5520 B Partition Gravimetric Method:2017	0.40	mg/l
4	Lead (as Pb)	APHA 3111 B Direct Air Acetylene FLame Method:2017	*BLQ(**LOQ-0.002)	mg/l
5	Total Chromium (as Cr) max.	APHA 3111 B Direct Air Acetylene FLame Method:2017	*BLQ(**LOQ-0.002)	mg/l
6	Arsenic (as As)	APHA 3114 B:2017	*BLQ(**LOQ-0.005)	mg/l
7	Mercury (as Hg)	APHA 3112 B:2017	*BLQ(**LOQ-0.005)	mg/l

*BLQ-Below Limit of Quantification, **LOQ-Limit of Quantification.

End of Report

(Checked By)

(Approved By)

Annexure -4

Structural Adequacy report of Ash Dyke certified by IIT, Roorkee.

भारतीय प्रौद्योगिकी संस्थान रुड़की

(पूर्व रुड़की विश्वविद्यालय)
जलपद 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 : +91-1332-275560,285402, Tel : +91-1332-285462 O),275080,285026(R)
Email : gargpfca@itr.ernet.in

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

Professor

Date: 04.03.2020

Certification of Report

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

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

A team of M/s Spatial Geotech Pvt. Ltd. under my coordinatipo 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 ash dykes are stable, healthy and accordingly possibilities of any breach is negligible.

Ash Dyke Design Standards

A comparative statement of desigo 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		
Starter dyke have a capacity tb	Dyke have the copacity to store ash	Nil

Dr. P. K. Garg
Professor
Department of Civil Engineering
Indian Institute of Technology Roorkee

Store ash for 5 years	for the operation period of the plant	
Raising will be in stage of 3m	Initial beight is 5m, raising plan is on 3m stages	5m beight enabling more volume banding
Starter dyke is with earthen embankment extracted from ash pond	Starter dyke is made out of earthen embankment	Fly ash is not utilized for construction
Ultimate capacity is for 25 years	Capacity planned for entira life span of plant	Nil
Top surface of the dyke is with earth 0.3m	Top surface is with earth and small diameter rock which enable movement of yebicle	Fly ash is not utilized for construction
FRL is 1.5m below dyke top at all stages	1.5m free space is plannod at all stages of filling	Nil
Top width 6.0m	Widtb is 6m maintainea of which 4m pccupied by road	Nil
Dyke upstream slope		
11.5cm brick layer	Stone pitcbing	This will be stracturally more stablo
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	Slopa 2H : 1V	Nil
Bottom of the pond		
50cm sand	Sand cusbion is given	Nil
500 micro m HDPE	250 micron HDPE used	Supported with additional engineering soil layer
Downstream slope		

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

Thanking You,
Yours Sincerely

(Dr. P.K. Garg)

Annexure -5

Treated sewage analysis report

Test Report

Sample Number : VEL/WW/03

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Ataria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : Waste Water
Location : Treaged Sewage Water
Sample Collected By : VEL Representative (Mr. Rajeen)
Environmental Condition : OK
Parameter Required : As per work order
Analysis Protocol : APHA & IS

Report No. : VEL/WW/2209261003
Format No : 7.6 F-03
Party Reference No : 4300006208
Reporting Date : 03/10/2022
Period of Analysis : 26/09/2022-03/10/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2.0 Ltrs.
Sampling Type : Grab

S.No.	Test Parameters	Test Method	Result	Unit	Limits as Per EPA (Schs.-VI)		
					Inland Surface Water	Public Sewers	Land for Irrigation
1	pH	APHA 4500 H+B Electrometric Method:2017	7.14	--	5.5 - 9.0	5.5 - 9.0	5.5 - 9.0
2	Total Suspended Solids, max.	APHA 2540 D Gravimetric Method	12.00	mg/l	100.0	600.0	200.0
3	Ammonical Nitrogen (as N) max.	IS 3025 (Part -34) Titrimetric Method, RA:2017	4.79	mg/l	50.0	50.0	--
4	Total Kjeldahl Nitrogen (as NH3) max.	IS 3025 (Part -34) Kjeldhal Method, RA:2009	1.89	mg/l	100.0	--	--
5	BOD (5 days @ 20°C) max.	APHA 5210 C Ultimate BOD Test:2017	18.37	mg/l	30.0	350.0	100.0
6	COD, Max.	APHA 5220 D Open Reflux Method:2017	68.36	mg/l	250.0	--	--
7	Phosphate (as PO4) max.	APHA 4500 PC:2017	BLQ(LOQ-0.6)	mg/l	--	--	--

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VARDAN ENVIROLAB PVT. LTD. Authorised Signatory

Test Report

Sample Number : VEL/WW/03 **Report No.** : VEL/WW/2209261003

S.No.	Test Parameters	Test Method	Result	Unit	Limits as Per EPA (Schd.-VI)		
					Inland Surface Water	Public Sewers	Land for Irrigation
8	Faecal coliform	IS 1622:1981	50	MPN/100ml	--	--	--

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

(Checked By)
03/10/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)
13/10/22

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Annexure -6

Ground Water Analysis Report

Test Report

Sample Number : VEL/GW/01

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261010
Format No : 7.8 F 03
Party Reference No : 4300005295
Reporting Date : 28/09/2022
Period of Analysis : 26/09/2022-28/09/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 1 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Project Site
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 25 °C)	APHA 4500 H+B Electrometric Method:2017	7.40	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelematric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2130 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	187.26	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	67.69	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	143.37	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	63.12	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.10)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	10.33	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	326.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	31.93	mg/l	200	400

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Test Report

Sample Number : VELAGW/01 Report No. : VELAW/2209281018

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
16	Fluoride (as F)	APHA 4500 P D SPADNS Method:201T	0.58	mg/l	1.0	1.5
18	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	8.46	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.5
25	Manganese (as Mn)	APHA, 0111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.032)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	AFHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification

End of Report

(Checked By)

(Approved By)

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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/GW/01

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Saonli, Madhya Pradesh.

Sample Description : Ground Water
Location : Project Site
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA &IS

Report No. : VEL/W/2209261010/N
Format No : 7.6 F 03
Party Reference No : 4300005228
Reporting Date : 29/09/2022
Period of Analysis : 26/09/2022-29/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

End of Report

(Checked By)
29/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)
29.9.22

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Test Report

Sample Number : VEL/GW/02
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Atlaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261011
Format No : 7.8 F 03
Party Reference No : 4300005298
Reporting Date : 28/09/2022
Period of Analysis : 26/09/2022-28/09/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Barala
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 25 °C)	APHA 4500 H+B Electrometric Method:21ST	7.15	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:21ST	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nepsulometric Method:21ST	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2150 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	112.36	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	25.73	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	92.60	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:21ST	46.66	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	11.67	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	245.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	25.57	mg/l	200	400

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Test Report

Sample Number : VEL/GW/02 Report No. : VEL/AN/2209261011

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
15	Fluoride (as F)	APHA 4500 F C SPADNS Method:2017	0.53	mg/l	1.0	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	5.98	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Commounds (as C6H5OH)	APHA 6530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.06)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.0
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification

End of Report

(Checked By)

(Approved By)

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Test Report

Sample Number :	VEL/GW/02	Report No.	: VEL/W/2200281011/N
Name & Address of the Party	: M/s Jhabua Power Limited. P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.	Format No	: 7.8 F 03
		Party Reference No	: 4300005296
		Reporting Date	: 29/09/2022
		Period of Analysis	: 28/09/2022-29/09/2022
		Receipt Date	: 28/09/2022
Sample Description	: Ground Water	Sampling Date	: 15/09/2022
Location	: Village- Barela	Sampling Quantity	: 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sample Collected by	: VEL Representative (Mr. Rajesh)	Sampling Type	: Grab
Environmental Condition	: OK		
Sampling and Analysis Protocol	: APHA & IS		

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

(Checked By)

SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

Test Report

Sample Number : VEL/GW/05
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Atteria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2200261612
Format No : 7.6 F 03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr. +1 Ltr.+ 250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Panarjhir
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 25 °C)	APHA 4500 H+B Electrometric Method:2017	7.20	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	123.05	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	38.69	mg/l	75	250
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	120.25	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	87.99	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.16)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 4500 Mg B Calculation Method:2017	6.44	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	282.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	42.02	mg/l	200	400

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www.vardan.co.in

Test Report

Sample Number : VEL/GW/05 Report No. : VEL/W/2209261012

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
15	Fluoride (as F)	APHA 4500 F D SPADNS Method:2017	0.51	mg/l	1.0.	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	3.43	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 D	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method.2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.5
24	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Qauntification,LOQ-Limit of Quantification.

End of Report

(Checked By)

(Approved By)

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122051 (Haryana)
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Test Report

Sample Number : VEL/GW/05

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghehsore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209281012/N
Format No : 7.6 F 03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 30/09/2022-30/09/2022
Receipt Date : 30/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr. +1 Ltr.+ 250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Fanarjhir
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA &IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

End of Report

(Checked By)
30/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)
30.09.2022

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/GW/06

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : Ground Water
Location : Village- Binaiki
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

Report No. : VEL/W/2209261019
Format No : 7.6 F 03
Party Reference No : 4300005295
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2Ltr.+2 Ltr.+1 Ltr. +250 ml
Sampling Type : Grab

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 25 °C)	APHA 4500 H+B Electrometric Method:2017	7.45	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	171.20	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	53.60	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	152.62	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	58.27	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl S Iodometric Method:2017	BLQ(LOQ-0.16)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	9.03	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	302.03	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	31.93	mg/l	200	400

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Test Report

Sample Number : VEL/GW/06 Report No. : VEL/W/2209261013

S.No.	Parameter	Test Mathort	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
16	Fluoride (as F)	APHA 4500 F D SFADNS Method:2017	0.63	mg/l	1.0	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	7.82	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C5H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	.0.05	1.5
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

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(Checked By) 30/09/2022

VARDAN ENVIROLAB PRIVATE LIMITED GURGAON
(Approved By) 30/09/2022

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Test Report

Sample Number : VEL/GW/06

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261013/N
Format No : 7.8 F 03
Party Reference No : 4500005298
Reporting Date : 30/09/2022
Period of Analysis : 20/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2Ltr.+2 Ltr.+1 Ltr. +250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Binaiki
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

(Checked By)

SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

Test Report

Sample Number : VEL/GW/07
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghoreare, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261014
Format No : 7.8 F 03
Party Reference No. : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 30/09/2022-30/09/2022
Receipt Sam : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Durjanpur
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 26 °C)	APHA 4500 H+B Electrometric Method:2017	7.52	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric method:2017	187.25	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	55.75	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	143.37	mg/l	200	200
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	63.19	mg/l	250	1000
10	Residual Free Calorine (RFC)	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	11.63	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	345.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	34.56	mg/l	200	400

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Test Report

Sample Number : VEL/GW/07 Report No. : VEL/W/2209261014

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
15	Fluoride (as F)	APHA 4500 F D SPADNS Method:2017	0.65	mg/l	1.0	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	7.7641	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	DLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
22	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B.	BLQ (LOQ-0.002)	mg/l	0.05	1.5
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	DLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

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Test Report

Sample Number : VEL/GW/07

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261014/N
Format No : 7.8 F 03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Durjanpur
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
sampling and Analysis protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:16166: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

End of Report

(Checked By)
30/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)
30.09.2022

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Test Report

Sample Number : VEL/GW/03

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tensil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261016
Format No : 7.8 F 03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Gropod Water
Location : Village- Gunari
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 25 °C)	APHA 4500 H+B Electrometric Method:2017	7.40	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2150 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	166.88	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	50.03	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	136.76	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	67.99	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	3.83	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	336.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4501 E Turbidimetric Method:2017	38.56	mg/l	200	400

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Test Report

Sample Number : VEL/GW/03 Report No. : VEL/W/2209261015

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
15	Fluoride (as F)	APHA 4500 F D SPADNS Method:2017	0.79	mg/l	1.0	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	8.62	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.5
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.03	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification

End of Report

VARDAN ENVIROLAB GURGAON (Checked By) 28/09/2022

VARDAN ENVIROLAB Dr. Shiv Prakash Authorised (Approved By) 28/09/2022

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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/GW/03

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : Ground Water
Location : Village- Guneri
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

Report No. : VEL/W/2209261015/N
Format No : 7.6 F 03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+200 ml
Sampling Type : Grab

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification

End of Report

(Checked By)
30/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

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Test Report

Sample Number : VEL/GW/04
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Sconi, Madhya Pradesh.

Report No. : VEL/W/2209261010
Format No : 7.6 F 03
Party Reference No : 4500005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Dola
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 26 °C)	APHA 4500 H+B Electrometric Method:2017	7.42	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Odour	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	187.26	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	67.89	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	161.87	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	55.85	mg/l	250	1000
10	Residual Free Chlorine (RFC)	APHA 4500 Cl B Iodometric Method 2017	BLQ(LOQ-0.16)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	19.33	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method.2017	329.00	mg/l	500	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	40.64	mg/l	200	400

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Test Report

Sample Number : VEL/GW/04 Report No. : VEL/W/2209261016

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
15	Fluoride (as F)	APHA 4500 F D SPADNS Method:2017	0.67	mg/l	1.0	1.5
16	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	5.62	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
18	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.2
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.5
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

(Checked By)

(Approved By)

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Test Report

Sample Number : VEL/GW/04

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261016/N
Format No : 7.6 F 03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 28/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Dola
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirment as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification,

End of Report

(Checked By)
30/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/GW/08
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/W/2209261617
Format No : 7.8 F 03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr. +1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Ground Water
Location : Village- Gorakhpur
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
1	pH (at 26 °C)	APHA 4500 H+B Electrometric Method:2017	7.50	-	6.5-8.5	No relaxation
2	Colour	APHA 2120 B Visual Comparison Method:2017	BLQ(LOQ-1.0)	Hazen Unit	5	15
3	Turbidity	APHA 2130 B Nephelometric Method:2017	BLQ(LOQ-1.0)	NTU	1	5
4	Ododr	APHA 2150 B Threshold Odour Method:2017	Agreeable	-	Agreeable	Agreeable
5	Taste	APHA 2160 B Flavor Threshold Test Method:2017	Agreeable	-	Agreeable	Agreeable
6	Total Hardness (as CaCO3)	APHA 2340 C EDTA Titrimetric Method:2017	171.20	mg/l	200	600
7	Calcium (as Ca)	APHA 3500 Ca B EDTA Titrimetric Method:2017	68.75	mg/l	75	200
8	Total Alkalinity (as CaCO3)	APHA 2320 B Titration Method:2017	148.00	mg/l	200	600
9	Chloride (as Cl)	APHA 4500 Cl B Argentometric Method:2017	42.62	mg/l	250	1000
10	Residhul Free Chlorine (RFC)	APHA 3500 Cl B (odometric Method:2017	BLQ(LOQ-0.15)	mg/l	0.2	1
11	Cyanide (as CN)	APHA 4500 CN E	BLQ(LOQ-0.02)	mg/l	0.05	No relaxation
12	Magnesium (as Mg)	APHA 3500 Mg B Calculation Method:2017	7.73	mg/l	30	100
13	Total Dissolved Solids	APHA 2540 C Gravimetric Method:2017	320.00	mg/l	200	2000
14	Sulphate (as SO4)	APHA 4500 E Turbidimetric Method:2017	32.46	mg/l	200	400

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Test Report

Sample Number : VEL/GW/08 Report No. : VELAW/2208201017

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
18	Fluoride (as F)	APHA 4500 F D SPADNS Method:2017	0.88	mg/l	1.0	1.5
18	Nitrate (as NO3)	IS:3025 (P-34), Chromotropic Method	5.66	mg/l	45	No relaxation
17	Iron (as Fe)	APHA, 4500 H	BLQ (LOQ-0.01)	mg/l	1.0	No relaxation
16	Aluminium (as Al)	APHA, 3111 D	BLQ (LOQ-0.002)	mg/l	0.03	0.3
19	Boron (as B)	APHA, 4500 B	BLQ (LOQ-0.01)	mg/l	0.5	2.4
20	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l	0.001	0.002
21	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l	0.2	1.0
22	Zinc (as Zn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	5	15
23	Total Chromium (as Cr)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	No relaxation
24	Copper (as Cu)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.05	1.5
25	Manganese (as Mn)	APHA, 3111 B	BLQ (LOQ-0.01)	mg/l	0.1	0.3
26	Cadmium (as Cd)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.003	No relaxation
27	Lead (as Pb)	APHA, 3111 B	BLQ (LOQ-0.002)	mg/l	0.01	No relaxation
28	Selenium (as Se)	APHA, 3114 B	BLQ (LOQ-0.001)	mg/l	0.01	No relaxation
29	Total Arsenic (as As)	APHA, 3114 B	BLQ (LOQ-0.005)	mg/l	0.01	No relaxation
30	Mercury (as Hg)	APHA, 3112 B	BLQ (LOQ-0.0005)	mg/l	0.001	No relaxation

BLQ-Below Limit of Quantification, LOQ-Limit of Quantification.

End of Report

VARDAN ENVIROLAB GURGAON

(Checked By)

(Approved By)

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/08

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Gharsore, Distt-Sedhi, Madhya Pradesh.

Sample Description : Ground Water
Location : Village- Gorakhpur
Sample Collected by : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : APHA & IS

Report No. : VEL/W/22092610017/N
Format No : 7.8 F 09
Party Reference No : 4300006288
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022
Sampling Date : 15/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr. +1 Ltr.+250 ml
Sampling Type : Grab

S.No.	Parameter	Test Method	Result	Unit	Requirement as per IS:10500-2012	
					Acceptable Limit	Permissible Limits
Microbiological Analysis:						
1	E.coli	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-
2	Total Coliform	IS:15185: 2016	Absent	/100ml	Shall not be detectable in any 100 ml sample	-

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification

End of Report

(Checked By)
30/09/2022
SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Annexure -7

Surface water Analysis Report

Test Report

Sample Number : VEL/SW/01

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Altaria. Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/SW/2209261002
Format No : 7.8 F-03
Party Reference No : 4300005286
Reporting Date : 01/10/2022
Period of Analysis : 26/09/2022-01/10/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2 Ltr.+2 Ltr.+1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Surface Water
Location : Pariyat River
Sample Collected By : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : IS : 3025 & APHA

S.No.	Test Parameters	Test Method	Results	Units
1	pH (at 25°C)	APHA 4500 H+B Electrometric Method RA:2012	7.45	--
2	Colour	APHA 2120 (B) Visual Comparison Method RA:2012	BLQ(LOQ-1.0)	Hazen
3	Odour	APHA 2150 B, Threshold Odour Method	Unobjectionable	--
4	Total Hardness	APHA 2340 C,EDTA Titrimetric Method	192.60	mg/l
5	Chloride (as Cl)	APHA 4500 Cl-B Argentometric Method:2017	28.71	mg/l
6	Cyanide (as CN)	APHA 4500 CN-E:2017	BLQ(LOQ-0.02)	mg/l
7	Total Dissolved Solids	APHA 2540 C Gravimetric Method RA:2012	252.00	mg/l
8	Sulphate (as SO4)	APHA 4500 SO4 E Turbidimetric Method RA:2009	7.65	mg/l
9	Fluoride (as F)	APHA 4500 F D Spands Method :2017	0.60	mg/l
10	COD	APHA 5220 B Open Reflux Method	24.48	mg/l
11	BOD (3 Days at 27°C)	APHA 5210 C Ultimate BOD Test:2017	5.0	mg/l
12	Nitrate (as NO3)	IS 3025 (P-34) Reff. 2003 Chromotropid Method :2017	3.0	mg/l
13	Lead (as Pb)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
14	Selenium (Se)	APHA 3114 B:2017	BLQ(LOQ-0.001)	mg/l
15	Iron (as Fe)	APHA 3500 Fe B 1,10 Phenanthroline Method:2017	BLQ(LOQ-0.01)	mg/l
16	Arsenic (as As)	APHA 3114 B:2017	BLQ(LOQ-0.005)	mg/l
17	Total Chromium (Cr)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
18	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l
19	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l
20	Zinc (as Zn)	APHA 3111 B Direct Air Acetylene Flame	BLQ(LOQ-0.01)	mg/l

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Test Report

Sample Number : VEL/SW/01 Report No. : VEL/SW/2209261602

S.No.	Test Parameters	Test Method	Results	Units
20		Method:2017		
21	Copper (as Cu)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
22	Cadmium (as Cd)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
23	Turbidity	APHA 23rd Edition, 2130 B	BLQ(LOQ-1.0)	NTU
24	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	34.31	mg/l
25	Alkalinity as CaCO3	APHA 23rd Edition, 2320 B	27.80	mg/l
26	Magnesium as Mg	APHA 23rd Edition, 3500 Mg B	25.96	mg/l
27	Aluminium as Al	APHA 23rd Edition, 3111 B	BLQ(LOQ-0.002)	mg/l
28	Boron	APHA 23rd Edition, 4500 B C	BLQ(LOQ-0.01)	mg/l
29	Residual Free Chlorine	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l
30	Total Suspended Solids	APHA 2540 D Gravimetric Method	8.0	mg/l
31	Manganese as Mn	APHA 3111 B:2017	BLQ(LOQ-0.002)	mg/l
32	Mercury (as Hg)	APHA 3112 B Cold Vapor AAS Method : 2017	BLQ(LOQ-0.0005)	mg/l

VARDAN ENVIROLAB PVT. LTD. Authorised Signatory

VARDAN ENVIROLAB PVT. LTD. GURGAON

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Test Report

Sample Number : VEL/SW/01 Report No. : VEL/SW/2209261002

S.No.	Test Parameetts	Test Method	Results	Units
33	Total Coliform	IS 1622:1981	<2	MPN/100 ml
34	E.coli	IS 1622:1981	<2	MPN/100 ml

BLQ-Below Limit of Quantification, LOQ-Limit of Quantification

End of Report

(Checked By)

SATYA DEV
Dy. Technical Manager-Micro

VARDAN ENVIROLAB Mohammad Sufi Technical Manager Authorized Signatory

(Approved By)

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Vardan EnviroLab

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

TC-6299

Test Report

Sample Number : VEL/SW/03
Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/SW/2209261003
Format No : 7.8 F-03
Party Reference No : 4300005296
Reporting Date : 01/10/2022
Period of Analysis : 26/09/2022-01/10/2022
Receipt Date : 26/09/2022
Sampling Date : 18/09/2022
Sampling Quantity : 2 Ltr. + 2 Ltr. +1 Ltr.+250 ml
Sampling Type : Grab

Sample Description : Surface Water
Location : Tamor River Near village-Pati
Sample Collected By : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling abd Analysis Protocol : IS : 3025 & APHA

S.No.	Test Parameters	Test Method	Results	Units
1	pH (at 25°C)	APHA 4500 H+B Electrometric Method RA:2012	7.60	--
2	Colour	APHA 2120 (B) Visual Cathpedson Method RA:2012	BLQ(LOQ-1.0)	Hazen
3	Ododr	APHA 2150 B, Threshold Ododr Method	Unobjectionable	--
4	Total Hardness	APHa 2340 C,EDTA Titrimetric Method	123.06	mg/l
5	Chloride (as Cl)	APHA 4500 Cl-B Argentometric Method:2017	31.57	mg/l
6	Cyanide (as CN)	APHA 4500 CN-E:2017	BLQ(LOQ-0.02)	mg/l
7	Total Dissolved Solids	APHA 2540 C Gravimetric Method RA:2012	220.05	mg/l
8	Sulphate (as SO4)	APHA 4500 SO4 E Turbidimetric Method RA:2009	6.50	mg/l
9	Fluoride (as Fl	APHA 4500 F D Spands Method :2017	6.52	mg/l
10	COD	APHA 5220 B Open Reflux Method	28.80	mg/l
11	BOD (3 Days at 27°C)	APHA 5210 C Ultimate BOD Test:2017	5.0	mg/l
12	Nitrate (as NO3)	IS 3025 (P-34) Refl, 2003 Chromotropic Method :2017	7.16	mg/l
13	Lead (as Pb)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
14	Selenium (Se)	APHA 3114 B:2017	BLQ(LOQ-0.001)	mg/l
15	Iron (as Fe)	APHA 3500 Fe B 1,10 Phenaethroline Method :2017	BLQ(LOQ-0.01)	mg/l
16	Arsenic (as As)	APHA 3114 B:2017	BLQ(LOQ-0.005)	mg/l
17	Total Chromium (Cr)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
18	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l
19	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.05)	mg/l
20	Zinc (as Zn)	APHA 3111 B Direct Air Acetylene Flame	BLQ(LOQ-0.01)	mg/l

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Test Report

Sample Number : VEL/SW/03 Report No. : VEL/SW/2209261003

S.No.	Test Parameters	Test Method	Results	Units
20		Method:2017		
21	Copper (as Cu)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
22	Cadmium (as Cd)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
23	Turbidity	APHA 23rd Edidon, 2130 B	2.8	NTU
24	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	27.98	mg/l
25	Alkalinity as CaCC3	APHA 23rd Edition, 2320 B	146.0	mg/l
26	Magnesium as Mg	APHA 23rd Edition, 3500 Mg B	12.97	mg/l
27	Aluminium as Al	APHA 23rd Edition, 3111 B	BLQ(LOQ-0.002)	mg/l
28	Boron	APHA 23rd Edition, 4500 B C	BLQ(LCQ-0.01)	mg/l
29	Residual Free Chlorine	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l
30	Total Suspended Solids	APHA 2340 B Gravimetric Method	7.0	mg/l
31	Manganese as Mn	APHA 3111 B:2017	BLQ(LOQ-0.01)	mg/l
32	Marcury (as Hg)	APHA 3112 B Cold Vapor AAS Method : 2017	BLQ(LOQ-0.0005)	mg/l

VARDAN ENVIROLAB Dr Shiv Prakash Satsangi Authorised Signatory

VARDAN ENVIROLAB GURGAON

VEL/E-VEL/TR/PRE-409

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Test Report

Sample Number : VEL/SW/03 Report No. : VEL/SW/2208261003

S.No.	Test Parameters	Test Method	Results	Units
33	Total Coliform	IS 1622:1981	<2	MPN/100 ml
34	E.coli	IS 1622:1981	<2	MPN/100 ml

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Report

(Checked By)

SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

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Test Report

Sample Number : VEL/SW/04

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/SW/2209261004
Format No : 7.8 F-08
Party Reference No : 4300005296
Reporting Date : 01/10/2022
Period of Analysis : 26/09/2022-01/10/2022
Receipt Date : 26/09/2022
Sampling Date : 16/09/2022
Sampling Quantity : 2Ltr.+2 Ltr.+1Ltr.+250 ml
Sampling Type : Gmb

Sample Description : Surface Water
Location : Nala Near Village Binaild
Sample Collected By : VEL Representative (Mr. Rajesh)
Environmental Condition : OK
Sampling and Analysis Protocol : IS : 3025 & APHA

S.No.	Test Parameter	Test Method	Results	Units
1	pH (at 25°C)	APHA 4500 H+B Electrometric Method RA:2012	7.36	--
2	Colour	APHA 2120 (B) Visual Comparison Method RA:2012	BLQ(LOQ-1.0)	Hazen
3	Odour	APHA 2150 B, Threshold Odour Method	Unobjectionable	--
4	Total Hardness	APHA 2340 C,EDTA Titrimetric Method	208.65	mg/l
5	Chloride (as Cl)	APHA 4500 Cl-B Argentometric Method:2017	43.71	mg/l
6	Cyanide (as CN)	APHA 4500 CN-E:2017	BLQ(LOQ-0.02)	mg/l
7	Total Dissolved Solids	APHA 2540 C Gravimetric Method RA:2012	360.00	mg/l
8	Sulphate (as SO4)	APHA 4500 SO4 E Turbidimetric Method HA:2009	10.66	mg/l
9	Fluoride (as F)	APHA 4500 F D Spands Method.:2017	0.66	mg/l
10	COD	APHA 5220 B Open Reflux Method	44.88	mg/l
11	BOD (3 Days at 27°C)	APHA 5210 C Ultimate BOD Test:2017	8.0	mg/l
12	Nitrate (as NO2)	IS 3025 (P-34) Reff. 2003 Chromotropic Method :2017	0.01	mg/l
13	Lead (as Pb)	APHA 3111 D Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
14	Selenium (Se)	APHA 3114 D:2017	BLQ(LOQ-0.001)	mg/l
15	Iron (as Fe)	APHA 3500 Fe D 1,10 Phenanthroline Method:2017	BLQ(LOQ-0.01)	mg/l
16	Arsenic (as As)	APHA 3114 B:2017	BLQ(LOQ-0.005)	mg/l
17	Total Chromium (Cr)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
18	Phenolic Compounds (as C6H5OH)	APHA 5530 C Chloroform Extraction Method:2017	BLQ(LOQ-0.0004)	mg/l
19	Anionic Detergents (as MBAS)	APHA 5540 C MBAS Method	BLQ(LOQ-0.06)	mg/l
20	Zinc (as Zn)	APHA 3111 D Direct Air Acetylend Flame	BLQ(LOQ-0.01)	mg/l

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Test Report

Sample Number : VEL/SW/04 Report No. : VEL/SW/2209261004

S.No.	Test Parameters	Test Method	Results	Units
20		Method:2017		
21	Copper (as Cu)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
22	Cadmium (as Cd)	APHA 3111 B Direct Air Acetylene Flame Method:2017	BLQ(LOQ-0.002)	mg/l
23	Turbidity	APHA 23rd Edition, 2130 B	10.2	NTU
24	Calcium as Ca	APHA 23rd Edition, 3500 Ca B	68-62	mg/l
25	Alkalinity as CaCO3	APHA 23rd Edition, 2320 B	198.90	mg/l
26	Magnesium as Mg	APHA 23rd Edition, 3500 Mg B	9.02	mg/l
27	Aluminium as Al	APHA 23rd Edition, 3111 B	BLQ(LOQ-0.002)	mg/l
28	Boron	APHA 23rd Edition, 4500 B C	BLQ(LOQ-0.01)	mg/l
29	Residual Free Chlorine	APHA 4500 Cl B Iodometric Method:2017	BLQ(LOQ-0.15)	mg/l
30	Total Suspended Solids	APHA 2540 D Gravimetric Method	22.0	mg/l
31	Manganese as Mn	APHA 3111 B:2017	BLQ(LOQ-0.01)	mg/l
32	Mercury (as Hg)	APHA 3112 B Cold Vapor AAS Method : 2017	BLQ(LOQ-0.0005)	mg/l

VARDAN ENVIRO LAB Bibhuti Nayak Dy. Tech. Manager GURGAON 01/10/2022

VARDAN ENVIRO LAB Dr. Shalini Prakash Singh Authorised Signatory 01/10/2022

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Test Report

Sample Number : VEL/SW/04 Report No. : VEL/SW/2209261004

S.No.	Test Parameters	Test Method	Results	Units
33	Total Coliform	IS 1622:1991	<2	MPN/100 ml
34	E.coli	IS 1622:1991	<2	MPN/100 ml

BLQ-Below Limit of Quantification,LOQ-Limit of Quantification.

End of Reppri

(Checked By)

SATYA DEV
Dy. Technical Manager-Micro

(Approved By)

Ph: 0124-4343750/752/755, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Annexure -8

Green belt development report

Annexure 8

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	177102 Nos
No of plantation completed	181000 Nos
Survival rate maintained	>70%

PLANTATION PHOTOGRAPH

Annexure –9

COD Letter

भारत सरकार
Government of India
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पश्चिम क्षेत्रीय विद्युत समिति
Western Regional Power Committee
एफ -3, एमआयडीसी क्षेत्र, अंधेरी (पूर्व), मुंबई - 93
F-3, MIDC Area, Andheri (East), Mumbai -93
दूरभाष Phone: 022- 28221636; 28200195; 28200194 ; फैक्स Fax : 022 -28370193
Website : www.wrpc.gov.in E-mail : ms-wrpc@nic.in

ISO : 9001:2008

NO.WRPC/OPN/MBPMPL-COD/2016/ 839 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/16/1, 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 29th April, 2016 to 20:00 Hrs of 2nd 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.TAKSANDE)
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 Rambbav, COO, Avantha Power Ltd. Gurgaon.

Annexure -10

Photographs of medical center & sanitation

First Aid Center

First Aid Center

First Aid Center

Urinals

Urinals

Toilet attached bath rooms

Annexure -11

Noise Level monitoring report

Test Report

Sample Number : VEL/N/01

Name & Address of the Party : M/s Jhabua Power Limited.
P.O- Attaria, Tehsil- Ghansore, Distt-Seohi, Madhya Pradesh

Report No. : VEL/N/2209261001
Format No : 7 8 F-03
Party Reference No : 4300085298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Project Site (Jhabua Power Plant)
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/01
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	10/09/2022 To 16/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°D)	:	Min.23°C, Max.26°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	62.11	53.78	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note:-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/N/02
Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tahsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/N/2209261002
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : **AMBIENT NOISE**

General Information

Sampling Location	:	Village-Bareia
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/02
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 16/09/2022
Time of Monitoding	:	06:00 AM to 06:00 AM
Ampient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activitiea
Scope of Monitoding	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Regnired	:	As ber work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	51.26	42.84	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
Dr. Pravesh Sharma
30/09/2022

Test Report

Sample Number : VEL/N/03
Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Report No. : VEL/N/2209261003
Format No : 7.8 F-03
Party Reference No. : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Village-Gorakhpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/03
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	15/09/2022 To 16/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.25°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	54.16	43.82	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Test Report

Sample Number : VEL/N/04

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/N/2200261004
Format No : 7.6 F-03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : **AMBIENT NOISE**

General Information

Sampling Location	:	Village-Binaiki
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/01
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirment
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	50.65	41.22	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

VEL/E-0371/18JPN3661

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

TC-6299

Test Report

Sample Number : VEL/N/05

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Gharisore, Distt-Seoni, Madhya Pradesh

Report No. : VEL/N/2200261005
Format No : 7 8 F-03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Village-Panarjhir
Sample Collected By	:	VEL Rapresentative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/02
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.20°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24 0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (0:00 am to 10:00 pm)	Nigat Time (10:00 pm to 6:00 am)	
1	Leq	I S-9989	52.74	41.28	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dD (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is mentured

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

VEL/E-03/1/1R/PN0682

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/N/06

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT NOISE

Report No. : VEL/N/2209281006
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Coal Road
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/03
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max 23°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	I S-9989	60.32	54.16	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	55	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Test Report

Sample Number : VEL/N/07

Name & Address of the Party : M/s Jnabua Power Limited
P O- Attaria, Tehsil- Dhansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/N/2209261007
Format No : 7.8 F-03
Party Reference No : 4500005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Village- Gurlari
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/01
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.20°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCE
Sampling Duration	:	24.0 Hours
Parameter Reqpired	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	52.46	41.76	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

""End of Report""

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/N/08
Name & Address of the Party : M/s Jhabua Power Limited
P O- Altaria, Tehsil- Ghansore, Distt-Seohi, Madhya Pradesh

Report No. : VEL/N/2209261008
Format No : 7.8 F-03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Village- Dola
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/02
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.29°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	IS-9989	51.62	40.89	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

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

TC-6299

Test Report

Sample Number : VEL/N/09
Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Report No. : VEL/N/2209261009
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 25/09/2022-30/09/2022
Receipt Date : 25/09/2022

Sample Description : AMBIENT NOISE

General Information

Sampling Location	:	Village-Durjanpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Sound Level Meter
Instrument Code	:	VEL/SLM/03
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	06:00 AM to 06:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.29°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	CPCB
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S. No.	Parameters	Test Method	Test Results		Units
			Day Time (6:00 am to 10:00 pm)	Night Time (10:00 pm to 6:00 am)	
1	Leq	I S-9989	50.38	39.48	dB (A)
2	CPCB Limits in dB(A*) Leq (Industrial Area)	--	75	70	dB (A)
3	CPCB Limits in dB(A*) Leq (Residential Area)	--	55	45	dB (A)
4	CPCB Limits in dB(A*) Leq (Commercial Area)	--	65	55	dB (A)
5	CPCB Limits in dB(A*) Leq (Silent Zone)	--	50	40	dB (A)

Note-*A "decibel" is a unit in which noise is measured.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
Dr. Shilpa Singh
Authorised Signatory

Annexure -12

Ambient Air Quality monitoring report

Test Report

Sample Number : VEL/A/01

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261001
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Project Site (Jhabua Power Plant)
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during mohitoring	:	Clear Sky
Date of Monitoring	:	15/09/2022 To 16/09/2022
Time of Monitoring	:	10:00 AM to 10:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.26°C
Surrounding Activity	:	Humari & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:6182 (P-23), Gravimetric Method, RA:2006	64.56	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:6182 (P-24) : 2019	36.34	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2009	18.23	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	7.61	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIROLAB
Shiv Prakash Sharma
Authorised Signatory

Ph: 0124-4343750/752/753, 9810355569, 9953147269 E-mail: lab@vardan.co.in, bd@vardan.co.in

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

Test Report

Sample Number : VEL/A/01
Name & Address of the Party : M/s Jhabua Power Limited
P.O- Atheria, Tehsil- Gharlacore, Distt-Seoni, Madhya Pradesh

Report No. : VEL/A/2209261001/N
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT AIR

General Information

Sampling Location	:	Project Site (Jhabua Power Plant)
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	15/09/2022 To 16/09/2022
Time of Monitoring	:	10:00 AM to 10:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.26°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(LOQ-1.0)	mg/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIROLAB Dr. Shiv Prakash Singh Authorised Signatory

www.vardan.co.in
Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Test Report

Sample Number : VEL/A/02

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261002
Format No : 7.8.F-03
Party Reference No : 4300005286
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Barela
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/02 & FPS/04
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 16/09/2022
Time of Monitoring	:	10:20 AM to 10:20 AM
Ambient Temperature (°C)	:	Min.23°C, Max.26°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	50.51	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	32.43	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2009	20.33	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	9.64	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

VARDAN ENVIROLAB Dr. Shiv Prakash Singh Authorised Signatory
(Approved By)

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Test Report

Sample Number :	VEL/A/02	Report No.	: VEL/A/2209261002/N
Name & Address of the Party	: M/s Jhabua Power Limited P.O- Altaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.	Format No	: 7.8 F-03
		Party Reference No	: 4300005290
		Reporting Date	: 30/09/2022
		Period of Analysis	: 26/09/2022-30/09/2022
Sample Description	: AMBIENT AIR	Receipt Date	: 26/09/2022

General Information

Sampling Location	: Village-Barela
Sample Collected By	: VEL Representative (Mr. Rajesh)
Sampling Equipment used	: RDS/FPS
Instrument Code	: VEL/RDS/02 & FPS/04
Instrument Calibration Status	: Calibrated
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 15/09/2022 To 16/09/2022
Time of Monitoring	: 10:20 AM to 10:20 AM
Ambient Temperature (°C)	: Min.23°C, Max.28°C
Surrounding Activity	: Human & Vehicular Activities
Scope of Monitoring	: Regulatory Requirement
Sampling & Analysis Protocol	: IS : 5182
Sampling Duration	: 24.0 Hours
Parameter Required	: As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIRO LAB Dr. Shiv Prakash Singh Authorised Signatory
30/09/2022

VEL/F-03/171P/PR0000

Vardan EnviroLab
Laboratory: Plot No. 82A, Sector - 5, IMT Manesar, Gurugram - 122 051 (Haryana)
ISO 9001 | ISO 14001 | ISO 45001

TC-6299

Test Report

Sample Number : VEL/A/03

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attada, Tehsil- Ghanaora, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261003
Format No : 7.8 F-08
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 30/09/2022

General Information

Sampling Location	:	Village-Gorakhpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Combo Sampler
Instrument Code	:	VEL/Combo/42
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 16/09/2022
Time of Monitoring	:	10:45 AM to 10:45 AM
Ambient Temperature (°C)	:	Min 23°C, Max 28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	55.49	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	34.72	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	16.82	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Geake, RA:2012	6.09	µg/m³	80

*BLQ-Below Limit of Quantification,**LOQ-Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIROLAB Dr. Satish Prakash Singh Authorised Signatory

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Test Report

Sample Number : VEL/A/03

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attana, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261003/N
Format No : 7.8 F-08
Party Reference No : 4300006298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Gorakhpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Combo Sampler
Instrument Code	:	VEL/Combo/42
Instrument Calibration Status	:	Caliorated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitering	:	15/09/2022 To 16/09/2022
Time of Monitoring	:	10:45 AM to 10:45 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°D
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Uplis	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*DLQ-Below Limit of Quantification,**LOQ-Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
D.Y. TECHNICAL MANAGER

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

TC-6299

Test Report

Sample Number : VEL/A/04

Name & Address of the Party : M/s Jhabua Power Limited,
P O- Attana, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209281004
Format No : 7 8 F-83
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/10/2022-30/09/2022
Receipt Date : 28/09/2022

General Information

Sampling Location	:	Village-Binaiki
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	10:30 AM to 10:30 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	62.01	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	38.25	µg/m³	30
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	21.73	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	16.65	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

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Vardan EnviroLab
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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number : VEL/A/04
Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Report No. : VEL/A/220928/1004/N
Format No : 7.8 F-03
Party Reference No : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 28/10/2022-30/09/2022
Receipt Date : 26/09/2022

Sample Description : AMBIENT AIR

General Information

Sampling Location	:	Village-Binaiki
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	10:30 AM to 10:30 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
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Authorised Signatory

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Test Report

Sample Number : VEL/A/05

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : **AMBIENT AIR**

Report No. : VEL/A/2209281005
Format No : 7.8 F-03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Panarjhir
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/02 & FPS/04
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	11:00 AM to 11:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method RA:2006	66.33	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	39.50	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	22.43	µg/m³	80
4	Sulphur Dioxide-(as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	10.13	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

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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/A/05

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attane, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209281005/N
Format No : 7.8.F-03
Party Reference No : 4300005296
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Panarjhir
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/02 & FPS/04
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	16/09/2022 To 17/09/2022
Time of Monitoring	:	11:00 AM to 11:00 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/128,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	-

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
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Test Report

Sample Number : VEL/A/06
Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : **AMBIENT AIR**

Report No. : VEL/A/2209281666
Format No : 7.8 F-03
Party Reference No : 4300006298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Coal Road
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/02 & FPS/04
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	11:40 AM to 11:40 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	53.66	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	32.01	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	17.53	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Monified West and Gaeke, RA:2012	8.69	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

VARDAN ENVIROLAB Private Limited (Approved By) Prakash Singh Authorised Signatory

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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/A/06

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attana, Tehsil- Gharsore, Distt-Seohi, Madhya Pradesh

Sample Description : AMBIENT AIR

Repon No. : VEL/A/2200261006/N
Format No : 7.8 F-03
Party Reference No : 4900005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Coal Road
Sampin Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/02 & FPS/04
Instrument Calibration Status	:	Calibrated
Meteorological condition dudog monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoding	:	11:40 AM to 11:40 AM
Ampleht Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Samplog & Analysis Protocof	:	IS : 5182
Samplog Duration	:	24.0 Hours
Paramatar Regulred	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/128,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
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Vardan EnviroLab
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ISO 9001 | ISO 14001 | ISO 45001

TC-6299

Test Report

Sample Number : VEL/A/07

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261007
Format No : 7.8 F-83
Party Reference No : 4300006298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Guneri
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	11:15 AM to 11:15 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	60.41	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	33.26	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	10.23	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	9.13	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
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ISO 9001 | ISO 14001 | ISO 45001

Test Report

Sample Number : VEL/A/07

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261007/N
Format No : 7.8 F-03
Party Reference No : 4500006288
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Gurleri
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipmepl used	:	RDS/FPS
Instrument Code	:	VEL/RDS/01 & FPS/07
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	11:15 AM to 11:15 AM
Ambient Temperature (°C)	:	Min.23°C, Max 26°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Upils	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
Dr. Saw... Singh
Authorised Signatory

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Test Report

Sample Number : VEL/A/08

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Nample Descriptiod : AMBIENT AIR

Report No. : VEL/A/2209261008
Format No : 7.8 F-03
Party Referenice No : 4300005298
Reporting Data : 30/09/2022
Perlod of Analysis : 26/09/2022-30/09/2022
Receipt Data : 26/09/2022

General Information

Sampling Location	:	Village-Dola
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Combo Sampler
Instrument Code	:	VEL/Combo/42
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitodog	:	17/09/2022 To 18/09/2022
Time pt Monitoring	:	11:50 AM to 11:50 AM
Ampient Temperature (°C)	:	Min.23°C, Max.26°C
Surrounding Activity	:	Human & Vehicular Activities
Scope nt Monitodog	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	64.55	µg/m³	100
2	Particulate Matter (as PM - 2.5)	IS:5182 (P-24) : 2019	35.76	µg/m³	60
3	Nitrogen Dioddes (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2005	23.14	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	11.18	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

VARDAN ENVIROLAB
Dr. Shiv
Authorised Signatory

(Approved By)

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

Test Report

Sample Number : VEL/A/08

Name & Address of the Party : M/s Jhabua Power Limited
P.O- Attaria, Tehsil- Ghansore, Dist-Sedni, Madhya Pradesh

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261098/N
Format No : 7 8 F-03
Party Reference No : 4500005293
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Dola
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	Combo Sampler
Instrument Code	:	VEL/Combo/42
Instrumerit Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	11:50 AM to 11:59 AM
Ambient Temperature (°C)	:	Min.23°C, Max.28°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

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

TC-6299

Test Report

Sample Number : VEL/A/09

Name & Address of the Party : M/s Jhabua Power Limited
P O- Attaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh.

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261009
Format No : 7.8 F-03
Party Reference No. : 4300005298
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Durjanpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FFS
Instrument Code	:	VEL/RDS/FPS/02
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	12:00 PM to 12:00 PM
Ambient Temperature (°C)	:	Min.23°C, Max.29°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Particulate Matter (as PM -10)	IS:5182 (P-23), Gravimetric Method, RA:2006	92.37	µg/m³	100
2	Particulate Matter (as PM – 2.5)	IS:5182 (P-24) : 2015	36.59	µg/m³	60
3	Nitrogen Dioxides (as NO2)	IS:5182 (P-6), Jacob & Hochheiser, RA:2006	21.73	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2), Modified West and Gaeke, RA:2012	8.12	µg/m³	80

*BLQ-Below Limit of Quantification, **LOQ - Limit of Quantification

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
Authorised Signatory

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

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

Test Report

Sample Number : VEL/A/09
Name & Address of the Party : M/s Jhabua Power Limited.
P O- Atlaria, Tehsil- Ghansore, Distt-Seoni, Madhya Pradesh

Sample Description : AMBIENT AIR

Report No. : VEL/A/2209261009/N
Format No : 7.8 F-03
Party Reference No : 4300005236
Reporting Date : 30/09/2022
Period of Analysis : 26/09/2022-30/09/2022
Receipt Date : 26/09/2022

General Information

Sampling Location	:	Village-Durjanpur
Sample Collected By	:	VEL Representative (Mr. Rajesh)
Sampling Equipment used	:	RDS/FPS
Instrument Code	:	VEL/RDS/FPS/02
Instrument Calibration Status	:	Calibrated
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	17/09/2022 To 18/09/2022
Time of Monitoring	:	12:00 PM to 12:00 PM
Ambient Temperature (°C)	:	Min.23°C, Max.29°C
Surrounding Activity	:	Human & Vehicular Activities
Scope of Monitoring	:	Regulatory Requirement
Sampling & Analysis Protocol	:	IS : 5182
Sampling Duration	:	24.0 Hours
Parameter Required	:	As per work order

S.No.	Parameters	Test Method	Results	Units	Limit as per CPCB
1	Mercury (Hg)	VEL/ENV/STP/129,Issue No.-01,Issue Date-01/11/2021:2021	*BLQ(**LOQ-1.0)	ng/m³	--

*BLQ-Below Limit of Quantification, **LGQ - Limit of Quantification.

End of Report

(Checked By)
SUBODH SHEKHAWAT
DY. TECHNICAL MANAGER

(Approved By)
VARDAN ENVIROLAB
Dr. Shikha Singh
Authorised Signatory

Ph: 0124-4343750/752/753, 9810355569, 9953147268 E-mail: lab@vardan.co.in, bd@vardan.co.in

Annexure -13

Expenditure details under CSR

ANNEXURE-13

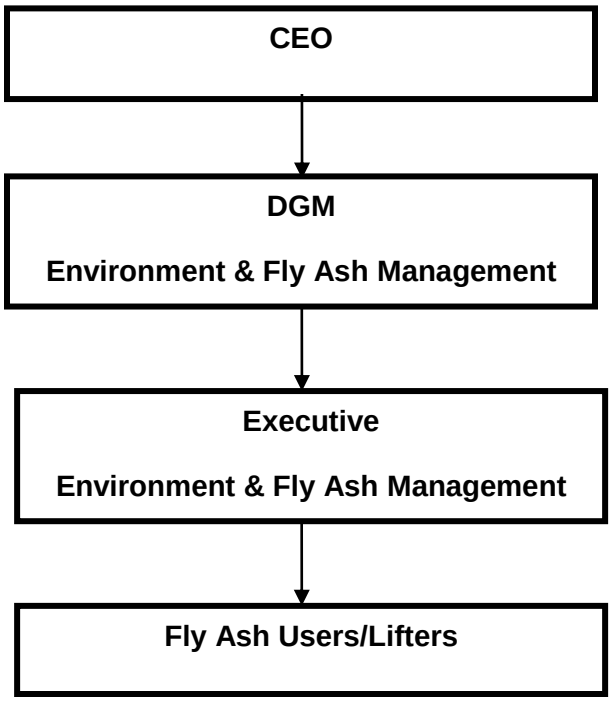
JHABUA POWER LTD. DETAILS OF EXPANSES DONE UNDER CSR SINCE INCEPTION TO SEPTEMBER 2022 (In Crore)													
	Sr No	**Activity**	**2010-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**	**2022-23**	**Total in Cr**
	RECURRING EXPENDITURE													
A	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	0.25	0.18	5.31
	2	Agriculture and agro based livelihood	2.31	1.22	0.16	0.42	0.04	0.06	0.27	0.21	0.27	0.25	0.06	5.27
	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	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	0.00	19.61
	Total		**7.36**	**5.44**	**1.02**	**1.12**	**0.25**	**0.32**	**5.74**	**10.29**	**0.60**	**0.51**	**0.24**	**32.89**
	Recurring expanses as per EC of MoEF (2010-2022)				**Rs. 2.5 crore per annum x 12 year**									**30.00**
B	**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 2022 in Cr. (A+ B)														**42.00**
Total CSR Expenditure done by JPL till September 2022														**54.89**

Annexure -14

Details of Environment Management cell

Annexure -14

ENVIRONMENT MANAGEMENT CELL



Sr. No	NAME	QUALIFICATION	DESIGNATION
1	Mr. Anil Kumar Sharma		Chief Executive Officer
2	Mr. Anoop Kumar Srivastava	M.Sc. Environment P.G. Diploma Industrial Safety	DGM (Environment & Ash Management)

Annexure -15

Receipts of last compliance report submission

Anoop srivastava

From:	Anoop srivastava
Sent:	28 May 2022 09:46
To:	'yogendra78@nic.in'
Cc:	'sudheor.ch@gov.in'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh.
Attachments:	MoEF New Delhi.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (Octoher' 2021 to March' 2022)** In fulfilment df conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) fer 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Sofi copy is uploaded on MoEF & CC weo site-Parivesb.

Kindly acknowledge.

Regards,

For Jnabua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

JPL/ECC/Phase-I/SHY/2022-2023/May/34 May 27, 2022

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, Tobsil-Ghansore, Distt.-Seoni, Madhya Pradesh.

Ref.: EC Letter No.: J-13012/105/2000-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referonced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barala & 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 Jbehue Power Ltd,

23/05/2022

Authorized Signatory

Enc.: Six Monthly Coropliance Report (Octobor' 2021 to March' 2022)

Jhabua Power Limited
(CIN : U40105WB1995PLC068616)
Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India
Registered Office : Mazmet House, 7th Floor, 16B, DC 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
AVANTHA GROUP COMPANY

Anoop srivastava

From:	Anoop srivastava
Sent:	28 May 2022 09:55
To:	'apccfbhopal@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh.
Attachments:	MoEF Bhopal.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** 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.- Saoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly aeknowledga.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (Octobor' 2021 to March' 2022)

JPL/ECC/Phase-I/SHY/2022-2023/May/34 May 27, 2022

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-Ghensore, 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 (October' 2021 to March' 2022)** 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- Ghansora, 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.

27/05/2022

Authorized Signatory

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

Anoop srivastava

From:	Anoop srivastava
Sent:	28 May 2022 09:50
To:	'mscb.cpcb@gov.in'; 'mscb.cpcb@nic.in'; 'ccb.cpcb@nic.in'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh.
Attachments:	CPCB New Delhi.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** 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 Pradeah of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly ecknowledge.

Regards,

For Jhabua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

JPL/ECC/Phase-I/SHY/2022-2023/May/34

May 27, 2022

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-Ghanpore, Distt.-Seoni, Madhya Pradesh.

Ref.: EC Letter No.: J-13012/105/2000-IA-II (T) dated 17th February, 2010 & Corrigendum dated 22nd December, 2010.

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** 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.

27/05/2022

Authorised Signatory

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

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

Anoop srivastava

From:	Anoop srivastava
Sent:	28 May 2022 09:54
To:	'cpcb.bhopal@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh.
Attachments:	CPCB Bhopal.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** In fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referonced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansoro, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhahua Power Ltd.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

JPL/ECC/Phase-I/SHY/2022-2023/May/34 May 27, 2022

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 (October' 2021 to March' 2022)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delbi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villeges- Barela & Gorakpur, Tebsil- Ghansore, Distt.-Seoni, Madhya Pradesh of M/s Jnabua Power Ltd. Soft coby is uploaded on MoEE & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

24/05/2022

Authorized Sighatory

Enc.: Six Monthly Compliance Report (October' 2021 to March' 2022)

Jhabua Power Limited
(CIN : U40105WB1985PLC068616)
Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India
Registered Office : Macmet House, 7th Floor, 10B, DC 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.: +91-124-4382000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthapower.com
AVANTHA GROUP COMPANY

Anoop srivastava

From:	Anoop srivastava
Sent:	28 May 2022 09:52
To:	ms-mppcb@mp.gov.in
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh.
Attachments:	MPPCB Bhopal.pdf

Dear Sir,

Please find attached the **Six Monthly Compliance Report (October' 2021 to March' 2022)** 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.

Anoop Kr. Srivastava

Enc.: Six Monthly Compliance Raport (October' 2021 to March' 2022)

JPL/ECC/Phase-I/SHY/2022-2023/May/34 May 27, 2022

To,

The Member Secretary,
Madhya Pradesh Pollution Control Board,
E-5, Arera Eolony, Paryawaran Parisar,
Bhopal -16, Madhya Pradesh

Sub.: Submission of Six Monthly Compliance Report - 1x600 MW Coal Besed 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 (Dctoher' 2021 to March' 2022)** In fulfilmont of conditions stipulated In the Envlronment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal hased Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.-Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft cepy Is uploaded on MoEF & CC web site-Parlvesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

23/05/2022

Authorized Signatory

Enc.: Six Monthly Compliance Report (Octobor' 2021 to March' 2022)

Jhabua Power Limited
(CIN : U40105WB1995PLC068515)
Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India
Registered Office : Macmet House, 7th Floor, 10B, DC 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.: +91-124-4382000/01 Fax: +91-124-4376496 E-mail : communications@avanthapower.com www.avanthpower.com
AVANTHA GROUP COMPANY

Annexure -16

Submission receipt of Environment Statement

Ref. No.: JPL/ENV/21-22/August/36

August 29, 2022

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 2021-22 for 1 x 600 MW Thermal Power Plant at Village-Barela & Gorakhpor, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh by M/s Jhahua Power Plant.

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

Desr Sir,

Please find attached the **Environmental Statement** for the year 2021 - 2022 in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, Naw Deihl and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barala & Gorakhpur, 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

29/08/2022

Authorized Signatory

Encl.: Environment Statemont Report for the year 2021-22.

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

Jhabua Power Limited
(CIN : U40105WB1995PLC068616)
Village Barela, PO Attaria, Tehsil Ghansore, District Seoni-480997, Madhya Pradesh, India
Registered Office : Mackat House, 7th Floor, 10B, DC 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.: +91-124-4382000/01 Fax: +91-124-4378499 E-mail : communications@avanthapower.com www.avanthpower.com

AVANTHA GROUP COMPANY

Annexure -17

Expenditure break-up
April 2022 to September 2022

ANNEXURE - 17

EXPENDITURE DETAILS ON ENVIRONMENT FROM APRIL 2022 TO SEPTEMBER 2022

DESCRIPTION	EXPENDITURE
A- ENVIRONMENT	
World Environment Day Celebration	26100
Participation in Golden Peacock for ash management	58410
Third Party Environmental Quality monitoring	202111
Hydrogeological study of the area	97940
Disposal of conditioned fly ash through railway rake	67300000
Tarpaulin covering of conditioned Fly Ash wagon.	5629190
Printing of ashdisposal slip	52640
Legacy Ash disposal in low lying area	11327400
Machineries hiring charge for fly ash loading to railway wagon	9487200
Spare of AAQMS	215780
AMC for online monitoring system-AAQMS	356000
Connectivity of EQMS with CPCB & MPPCB	64900
AMC CEMS	67850
AMC PTZ camera connectivity	11800
Repairing of EQMS Transmeter	47200
Optical Sensor for TSS electrod & Cable Adopter for EQMS	311992
CTO Fee for legacy ash disposal in low lyingarea	250000
Publication of Notice in news paper to increase fly ash lifting	1931369
Standard gas cylinder for calibration	26786
Total "A"	**97464668**
B- GREEN BELT DEVELOPMENT	
Watering of plantation	192000
Man power in green belt	1064000
Total "B"	**1256000**
Total "A + B" in lacs	**98720668**
Total "A + B" in Cr.	**9.87**