

JHABUA POWER

JPL/ECC/Phase-I/FHY/2024-2025

November 04, 2024

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' 2024 to September' 2024)** in fulfilment of conditions stipulated in the Environment Clearance (letter issued by MoEF, New Delhi and referenced above) for 1x600 MW Coal based Thermal Power Plant at Villages- Barela & Gorakpur, Tehsil- Ghansore, Distt.- Seoni, Madhya Pradesh of M/s Jhabua Power Ltd. Soft copy is uploaded on MoEF & CC web site-Parivesh.

Kindly acknowledge.

Regards,

For Jhabua Power Ltd.

Authorized Signatory

Enc.: Six Monthly Compliance Report (April' 2024 to September' 2024)

Jhabua Power Limited (A Joint Venture of NTPC Limited)

CIN: U40105WB 1995PLC068616, **Corporate Office**: EOC Building, 3rd Floor, Plot No. A-8A, Sector 24, Block A, Noida Uttar Pradesh 201301, **Registered Office**: Infinity IT Lagoon, 10th Floor, Block: EP & GP Office No: 1001 & 1002, Sector-V, Salt Lake Kolkata WB 700091 , **Site Office**: Village Barela, Post Office-Attaria, Tehsil-Ghansore, District Seoni-480997, M.P.

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 2024 to SEPTEMBER 2024

FOR

Jhabua Power Limited

1 x 600 MW THERMAL POWER PLANT

AT

VILLAGE:- BARELA & GORAKHPUR

TEHSIL: - GHANSORE

DISTRICT: - SEONI

MADHYA PRADESH

INDEX

Sr. No	TITLE	ANNEXURES
1	Six Monthly Compliance status of Environment Clearance (EC) (April 2024 to September 2024).	
	List of Annexures	
1.1	Recent Hydrogeological Study report of the area.	Annexure- 1
1.2	Stack Monitoring Report	Annexure- 2
1.3	Audit report of fly ash utilization by CPCB authorized auditor for the year 2023-24.	Annexure- 3
1.4	Ash Pond effluent analysis report	Annexure- 4
1.5	Structural Adequacy report of Ash Dyke certified by NIT Warangal, Telangana.	Annexure- 5
1.6	Treated sewage analysis report	Annexure- 6
1.7	Ground water analysis report	Annexure- 7
1.8	Surface water analysis report	Annexure- 8
1.9	Green Belt development report	Annexure- 9
1.10	COD letter	Annexure- 10
1.11	Photographs of medical center & sanitation	Annexure- 11

1.12	Ambient Noise level monitoring report	Annexure- 12
1.13	Ambient air quality monitoring report	Annexure- 13
1.14	Expenditure details under CSR	Annexure- 14
1.15	Details of Environment Management cell	Annexure- 15
1.16	Last Submission Receipt of six monthly compliance report of Environmental Clearance	Annexure- 16
1.17	Submission Receipt of Environmental Statement	Annexure- 17
1.18	Expenditure details on Environment Management	Annexure- 18

Compliance to conditions stipulated in Environmental Clearance

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

<u>SI No.</u>	Conditions	<u>Compliance</u>
i	Environmental clearance is subject to submission from the Competent Authority in the state govt. that the project area does not fall within a notified tribal area.	As per corrigendum issued from MoEF dated 22nd December 2010, this point has been deleted.
ii	No tribal land shall be acquired for the power plant.	As per corrigendum issued from MoEF dated 22nd December 2010, this point has also been deleted.
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.	All CSR related works are being formulated accordingly along with time bound, implementation and its active inbuilt monitoring mechanism.
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.	
vii	HighEfficiencyElectrostaticPrecipitators (ESPs) shall be installed toensure that particulate emission doesnot exceed 50 mg/Nm³.	High Efficiency Electrostatic Precipitators (ESPs) has already been installed and outlet of ESP is integrated with 275 m stack height to restrict the particulate emission below 50 mg/Nm ³ .

Viii	Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas shall be provided.	Effective and adequate dust suppression system like water sprinkling system, Cyclone Separator & Bag Filters have been installed in the dusty areas such as in coal handling and ash handling points, transfer areas. Coal conveyer system is permanently covered to restrict the dust release whereas transportation of fly ash from the AHP to the ash pond is through high concentration slurry disposal system.
ix	Utilization of 100% fly ash generated shall be made from 2 nd year of operation of the plant. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Fly ash is being utilized as per notification for fly ash by Ministry of Environment & Forest and CPCB guideline for disposal/utilization of fly ash for reclamation of low lying area and in stowing of abandoned mines/quarries. 100% Fly ash utilization is in cement manufacturing, highway construction, bricks manufacturing and low lying area. More such avenues are being constantly explored. Fly ash transportation to cement industries also started through tarpaulin covered railway rake. Disposal of ash from operation ash pond to low-lying area after permission from MPPCB has also been started as per CPCB guideline "March 2019". 106 % fly ash utilization is achieved in the year 2023-24. Fly ash utilization audit report for year 2023-24 by CPCB authorized auditor is enclosed as Annexure -3.

х	Fly ash shall be collected in dry form	• Fly ash is being collected in the silo
	and storage facility (silos) shall be	and then given away to the users.
	provided. Unutilized fly ash shall be	Unutilized fly ash is disposed off
	disposed off in the ash pond in the	through high concentration slurry
	form of slurry. Mercury and other	disposal system.
	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.	 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 Vibrant Envirotech, Jaipur registered with Ministry of Environment & Forest and 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 -4.

		breach. The Structural Adequacy report of Ash Dyke of Jhabua Power Limited, certified by NIT, Department of Civil Engineering, Warangal is enclosed as Annexure -5 .
xii	Closed cycle cooling system with natural draft cooling towers shall be provided. The Effluents shall be treated as per the prescribed norms.	We have installed a closed cycle cooling system with Induced Draft Cooling Towers. Permission of installing the IDCT instead of NDCT has been approved by MoEF vide Corrigendum letter dated 17 January 2012.
xiii	COC 5.0 will be adopted.	Continuous optimization of cycle of concentration is carried out and achieved the COC of 5.
xiv	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. There shall be no discharge outside the plant boundary except during monsoon. Arrangements shall be made that effluents and storm water do not get mixed.	Compliance continuously ensured. Zero Discharge condition is being maintained effectively. Separate storm water system is provided to avoid the mixing with effluent.
xv	A sewage treatment plant shall be provided and the treated sewage shall be used for raising greenbelt/plantation.	Sewage treatment plant based on Fixed Film Aerobic Treatment System of adequate capacity has been installed for the treatment of raw sewage. Treated sewage water is being used for greenbelt

adopted. Ce Authority/ Board finalization of harvesting techn	vesting should be ntral Groundwater shall be consulted for appropriate rainwater ology within a period is from the date of	development/plantation. The treated sewage analysis report carried out by MoEF's recognized laboratory is enclosed as Annexure -6 . 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
clearance and furnished.	details shall be	implemented and followed.
provided in t check/minimize coal yard, espe season. Copy of full details alon layout shall be	spontaneous fires in cially during summer these measures with g with location plant e submitted to the as to the Regional	 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 stockyard. 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 roomFire 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 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.	 Storage facilities for LDO has been made in the plant area in consultation with Department of Explosives, Nagpur after getting the NOC for the same. NOC of Department of Explosives Nagpur, is already submitted with previous compliance report. Disaster management plan has been prepared and in place to handle the any eventuality in case of an accident taking place due to storage of oil.
xix	Regular monitoring of ground water (especially around ash pond and plant areas) shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data to ensure that the ground water quality is not	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.

	adversely affected due to the project.	Ground water report of core and buffer zone is enclosed as Annexure -7.
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 direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	The surface water samples are collected from the river/nalla regularly and records maintained effectively. Analysis report of surface water are enclosed as Annexure-8 .
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 186000 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- 9.
xxii	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	Power plant is commissioned and under commercial operation since 3 rd May 2016. Well-equipped Medical center with doctor and paramedical staff with two well equipped ambulance is in place to attend

		the person required First Aid & emergency 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 -10 and Photographs of medical center & sanitation is enclosed as Annexure -11 .
xxiii	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 75 dBA. For people working in the high noise area, requisite personal protective equipment like earplugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any hearing loss including shifting to non-noisy/less noisy areas.	 The noise level in the work zone area is maintained below 75 dBA. Acoustic hood has been provided for the turbine. Earplugs /ear muffs being provided as personal protective equipment to the workers. Noise level monitoring report is enclosed as Annexure 12.
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	 Regular monitoring of ground level concentration of SO₂, NO_x, RSPM (PM_{2.5} & PM₁₀) and Hg is being carried out in the impact zone and records are being maintained. Ambient Air Quality monitoring report is enclosed as Annexure- 13. The location of the monitoring stations has been decided in consultation with

	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.	 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. Permanent 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 Direction, 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	Expenditure details under CSR is enclosed Annexure -14.

	implementation.	
xxvii	As part of CSR programme, the company shall conduct need-based assessment for the nearby villages to study economic measures with action plan, which can help in upliftment of poor section of society. Income generating projects consistent with the traditional skills of the people besides development of fodder farm, fruit bearing orchards, vocational training etc. can form a part of such programme. Company shall provide separate budget for community development activities and income generating programmes. This will be in addition to vocational training for individuals imparted to take up self-employment and jobs.	 Based on need assessment identified verticals for working on agro-based livelihood including improved and sustainable agricultural practices for higher yield and income generation. The capacity building of the community is done from time to time. Demonstration plots of improved seed varieties, cultivation methods on farmer's field. A part from above activities breed improvement in cattle through Artificial Insemination (AI) is done on continual basis. 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. Convergence with govt. scheme (NRLM).
xxviii	Provision shall be made for the housing of construction labor within the site with all necessary infrastructure and facilities such as fuel for cooking,	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

	mobile toilets, mobile STP, safe	for O&M personnel and remaining has
	drinking water, medical health care,	been removed.
	crèche etc. The housing may be in the	
	form of temporary structures to be	
	removed after the completion of the	
	project.	
xxix	The project proponent shall advertise in	Not relevant now.
	at least two local newspapers widely	However, for records, we had published in
	circulated in the region around the	three newspapers (Hindustan Times,
	project, one of which shall be in the	Dainik Bhaskar & Nai Duniya on
	vernacular language of the locality	28.02.2010).
	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.	
xxx	A copy of the clearance letter shall be	Not relevant now.
	sent by the proponent to concerned	However, for records, copy of the
	Panchayat, Zila Parisad / Municipal	clearance letter had been sent to Gram
	Corporation, urban local Body and the	Panchayat, Zila Panchayat / Municipal
	Local NGO, if any, from whom	Corporation, urban local Body and the
	suggestions/representations, if any,	Local NGO. Regarding this details have
	received while processing the proposal.	been submitted with half yearly
	The clearance letter shall also be put	compliance report, June 2011.
	on the website of the Company by the	
	proponent.	

xxxi	A separate Environment Management Cell with qualified staff shall be set up	A separate Environment Management Cell is in place headed by DGM. Environment.
	for implementation of the stipulated environmental safeguards.	Details of Environment Management cell including personnel involved, their designation, qualification and hierarchy is enclosed as Annexure -15 .
xxxii	The proponent shall upload the status of compliance of the stipulated EC conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	Status of compliance of the stipulated EC conditions, including results of monitored data is hosted on company web site. The criteria pollutant levels namely; RSPM, SO ₂ , NO _x (ambient levels as well as stack emissions) is displayed at the main gate complex.
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-16 .
xxxiv	The environment statement for each financial year ending 31st March in	The environment Statement report for the year 2023 - 2024 was submitted to Madhya Pradesh State Pollution Control

	Form-V as is mandated to be submitted	Board before 30 th September 2023.
	by the project proponent to the	Submission receipt is enclosed as
	concerned State Pollution Control Board	Annexure -17.
	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	
	e-mail	
xxxv	The project propendent shall submit sig	We are regularly submitting the status of
	The project proponent shall submit six monthly reports on the status of the	the implementation of the stipulated
	implementation of the stipulated	environmental safeguards to the Ministry
	environmental safeguards to the	of Environment and Forests, its Regional
	Ministry of Environment and Forests, its	Office, Central Pollution Control Board and
	Regional Office, Central Pollution	State Pollution Control Board.
	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,	
	update the same periodically, and	
	simultaneously send the same by	
	e-mail to the Regional Office, Ministry	
	of Environment and Forests.	
xxxvi	Regional Office of the Ministry of	We comply and agreed to the same.
	Environment & Forests will monitor the	
	implementation of the stipulated	
	conditions. A complete set of	
	documents including Environmental	
	5	

	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	
	including NOx (from stack & ambient	
	air) shall be displayed at the main gate	
	of the power plant.	
xxxvii	Separate rando shan be anotated for	We comply and agreed to the same.
	implementation of environmental	The item-wise expenditure break-up from
	protection measures along with	April 2024 to September 2024 is enclosed
	item-wise break-up. These cost shall be	as Annexure -18.
	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.	
xxxviii	The project authorities shall inform the	No Longer relevant.
	Regional Office as well as the Ministry	However, the same has been complied
	regarding the date of financial closure	with.
	and final approval of the project by the	
	concerned authorities and the dates of	
	start of land development work and	
	commissioning of plant.	

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	Agreed.

	the condition(s) imposed and to add additional environmental protection measures required, if any.	
8	The above stipulations would be enforced among others under the Water (Prevention and Control of 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.	Noted & same shall be complied with.
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 FOR GROUNDWATER CONDITION IN AND AROUND JHABUA POWER LTD (JOINT VENTURE OF NTPC)

SUBMITTED TO

NTPC- JPL THERMAL POWER PLANT

PO: BARELA, BLOCK- GHANSOR, DISTRICT- SEONI, MADHYA PRADESH

REPORT PREPARED BY

MANISH KHATRI

C/O M K ASSOCIATES

ACCREDIATED GROUNDWATER CONSULTANT FROM NABET CERTIFICATE NO. NABET/GWCO/IA/GW023 ADDRESS: 1413/B-1, GUPTESHWAR ROAD, MADAN MAHAL, JABALPUR MP. PIN-482001.

Mobile: 9425325422, 9131356077, (O) 07613556348

Service Order No.: 4300005783 Dt 17.07.2023

Report No.: 07/MKA-OTH/2023-24, version: 1.1

Issued Date: 25Th OCTOBER-2023

Mr. Anoop Kumar Shrivastava Head-Environment, NTPC-JPL At & PO: Barela, Block Ghansor, District - Seoni, Madhya Pradesh.

Regarding Hydrological Study around NTPC-JPL, Barela.

Dear Sir,

We are pleased to present you with the final report for the Hydrological study around NTPC-JPL,

Barela, District Seoni.

The data & its interpretation from this hydrological assessment will support to assess groundwater assessment around NTPC-JPL project area.

We will be happy to assist you in the future with any questions or comments related to this work and to be of assistance in future stages of this project.

Best regards



Manish Khatri Project Coordinator, M.K. Associates. Regd. address: 1413/B-1 Gupteshwar Road, Madan Mahal. Jabalpur-482001. Office address: Plot No 175, JDA scheme-2B, Nehru Nagar, Bajnamath, Jabalpur, PIN; 482003. Mobile; 9425325422, (Off.) 07613556348.

S. No.	Chapter	Page No
1	Executive Summary	1
2	Objective of the study	1
3	Methodology for Study	2
4	Land Use Land Cover	3
5	Rainfall	7
6	DEM/Topography	8
7	Geomorphology and Drainage	9
8	Geology	10
9	Hydrogeology	14
10	Depth to water levels	16
11	Groundwater Resources	21
12	Long term water level data analysis	21
13	Ground water quality	23
14	Imapct on Water Quality	34
15	Conclusion	38

Table of Contents

List of Figures/Maps

Fig. No.	List of Figures/Maps	Page No
1	Location Map	4
2	Base Map/Vicinity Map	5
3	Land Use Map	6
4	Histogram showing Pattern of Annual Rainfall	7
5	Digital Elevation Map	8
5A	The Study Area Marked on SOI Toposheet Map	9
6	Geomorphology Map	12
7	Drainage Map	13
8	Geology Map	14
9	Location of Key Observation Well Map	18
10	Hydrogeology Map	20
11	Premonsoon Depth to water level Map	20
12	Postmonsoon Depth to water level Map	21
13	Fluctuation Map	21
14	Premonsoon Groundwater contour elevation Map	22
15	Postmonsoon Groundwater contour elevation Map	22
16	Hydrograph of water level at Gorkhpur Monitoring well	24
17	Groundwater Quality Map of Electrical Conductivity	28
18	Groundwater Quality Map of Chloride	29

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

19	Groundwater Quality Map of Nitrate	29
20	Groundwater Quality Map of Fluoride	30
21	Comparison of Groundwater Quality(2022 and 2023) at JPL	31
22	Comparison of Groundwater Quality (2022 and 2023) at Gorkhpur	31
23	Comparison of Groundwater Quality (2022 and 2023) at Durjanpur	32
24	Comparison of Groundwater Quality (2022 and 2023) at Panarjhir	32
25	Comparison of Groundwater Quality (2022 and 2023) at Barela	33
26	Comparison of Groundwater Quality (2022 and 2023) at Binaiki	33
27	Comparison of Groundwater Quality (2022 and 2023) at Guneri	34
28	Comparison of Groundwater Quality (2022 and 2023) at Dola.	34

Annexures

Ax. No.	Particulars	Page No
1	Groundwater Quality Reports	37-52
2	NABL certificate of Testing Agency	53

Executive Summary

Jhabua Power Limited (JPL), is a Joint Venture of National Thermal Power Company Ltd (NTPC) and Banks. It is located in district Seoni of Madhya Pradesh. The power plant (earlier Avantha Power) is acquired by NTPC in September 2022. The said site is at a distance of around 56 Km. from Jabalpur, the divisional Head Quarter.

The NTPC- JPL Thermal Power Plant (formerly known as Jhabua Power Limited) has been involved deeply since year 2010 aiming holistic and sustainable development of the communities surrounding the Power plant. To access and understand the drinking water need of the villages in the vicinity of the power plant. Accordingly, "Comprehensive hydrogeological study report" to assess the hydrogeological conditions *i*n the selected habitation around the plant site has been undertaken by Manish Khatri, Accredited Hydrogeologist C/o M.K. Associates (QCI-NABET Accredited Groundwater Consultant Organization) based at Jabalpur.

Objective of the study:

The present report is dealing with qualitative and quantitative assessment of ground water condition in the study area. In this regard, two times field study was conducted during Pre monsoon and Post Monsoon period-2023. For the detail hydrogeological investigation and evaluation of ground water resource an area of 78.5 sq km has been chosen as circular area of 5 km radius from the center point of the project site.

The following objectives were taken into account for hydro-geological investigation of the study area.

- 1. To assess the present hydrological scenario of the study area.
- 2. To find out aquifer geometry in the area.
- 3. To evaluate the status of ground water condition in the area.
- 4. To assess the ground water resources of the area.
- 5. To assess the feasibility of Rain water harvesting/Artificial recharge to augment the groundwater regime.

Methodology for Study

- The data collected from the reports available in Central and state Government departments for reference.
- ➤ Well monitoring in the selected habitation of the study area has been undertaken to measure the status of the water table in the study area.
- ➤ The ground water resources and its utilization have been worked out as per the norms prescribed by the ground water estimation committee, Govt. of India.

Data used and Methodology: Following materials were used for this purpose.

- Survey of Indian topographic sheets (Scale 1:50000) No 55N/13 and 55N/14.
- Secondary data collected from State as well as from central govt. agencies.

Following methodology was applied:

- a. Groundwater samples collected from the study area and analyzed in NABL accredited lab as per IS10500:2012.
- b. Various thematic maps have been prepared from processed data.
- c. Ground truth studies or field checks.
- d. GIS (QGIS), has been used for integrating various thematic maps to represent ground water scenario.

Generation of Thematic Maps: The above satellite image was used to generate following thematic maps.

- Base/Vicinity Map
- LULC Map
- Geomorpholgy Map
- Drainage Map
- Geological Map
- Hydrogeology Map
- Depth to Water Level Premonsoon-2023
- Depth to Water Level Post Monsoon-2023
- Fluctuation of Water Levels (Pre & Post Monsooon-2023)
- Groundwater Table Contour Map Premonsoon-2023
- Groundwater Table Contour Map Popstmonsoon-2023
- Groundwater Quality Map of Electrical Conductivity concentration (Contour Map)
- Groundwater Quality Map of Chlooride Concentration (Contour Map)
- Groundwater Quality Map of Nitrate concentration (Point value Map)
- Groundwater Quality Map of Fluoride concentration (Point value Map)

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

Location: For the detail hydrogeological investigation and to assess aquifer geometry, evaluation of ground water resource, and to explore the possibility of suitable ground water abstraction structures and suitable means of artificial recharge structures, an area of 78.5 sq km has been chosen as circular area of 5 km radius from the $22^{\circ}48$ 'N to $22^{\circ}40$ 'N latitudes and $79^{\circ}57$ ' E to $79^{\circ}54$ ' E longitudes, covering Binaki, Barela, Gorkhpur, Durjanpur and Gorkhpur villages in Ghansore block of Seoni district of Madhya Pradesh state. The study area falls under Survey of India Toposheet No. 55N/13 and 55N/14. This area is called buffer zone or present area of investigation or study area. It is bounded by Mohgaon and Khairikalan villages in the south and Bagdari village in north. In east it is bounded by Jowa and Binori villages, while by railway line in the west. The location map, and Base/Vicinity map of the study area shown in *Figure-1* and *Figure-2*, respectively.

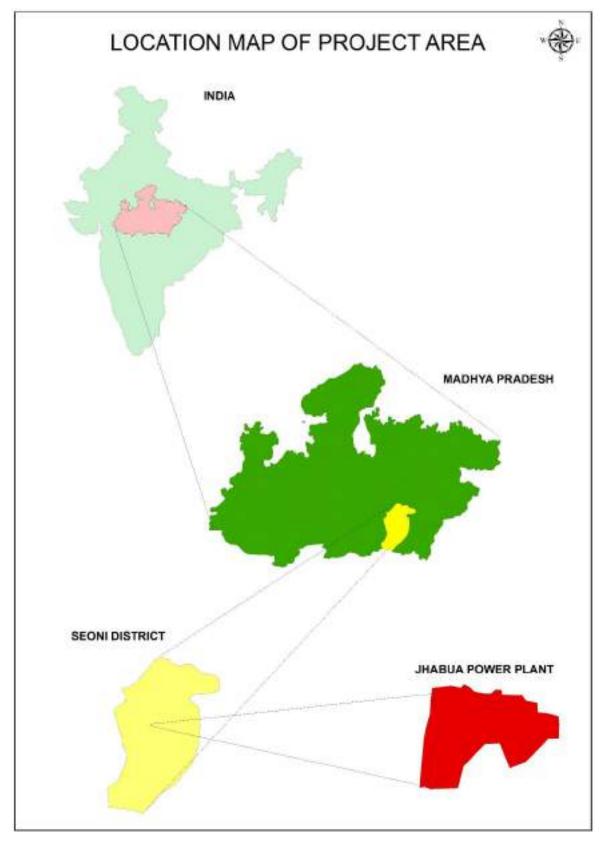


Figure-1: Location Map of Project area

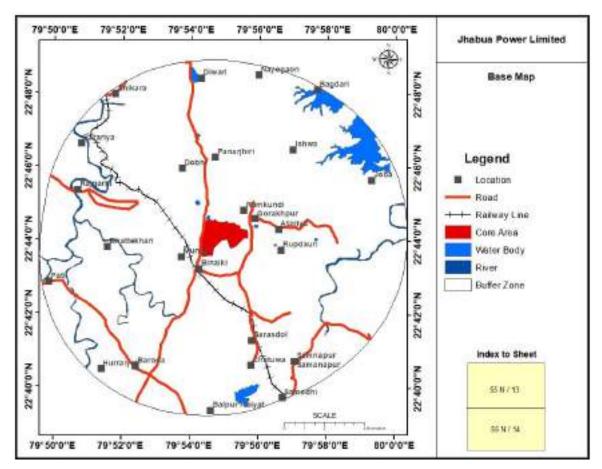


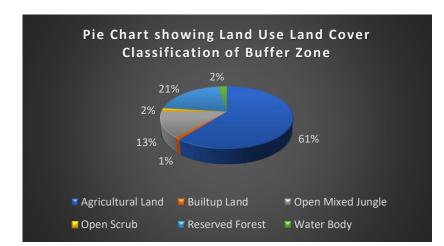
Figure-2: Base Map/Vicinity Map of the study area

Land Use Land Cover of the surrounding area: The land use in the village reflects the socioeconomic conditions of the people in addition to the natural environmental factors. The land use is also one of the prime parameters to be considered for the ground water estimation. Primarily, 8 Km radius from the plant site forms part of Agriculture land (about 60.60 %). The second major land use is Reserved Forest (20%). Land use and land cover classification in the buffer zone of 8 km radius is given below in **Table-1**. The Land use map is shown in *Figure-3*.

S. No	Class	Area in Sq. Km	%
1	Agricultural Land	47.5	60.6
2	Built-up Land	0.91	1.17
3	Open Mixed Jungle	10.43	13.29
4	Open Scrub	1.40	1.79
5	Reserved Forest	16.32	20.79
6	Water Body	1.82	2.32
		78.5	100

Table-1: Land Use/Land Cover Classification of Buffer Zone

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P



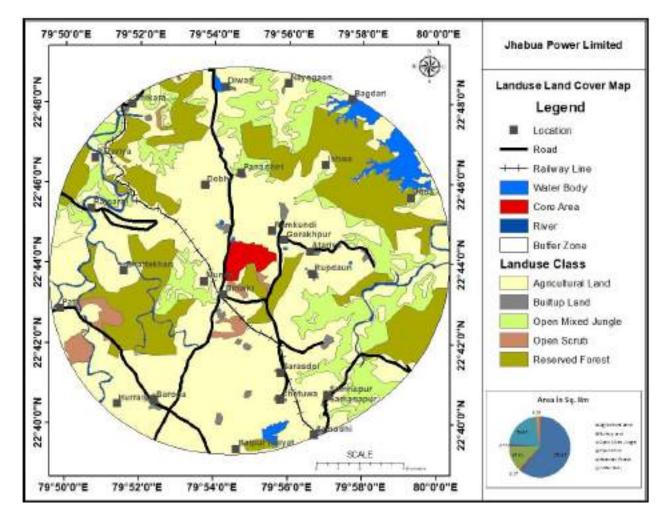


Figure-3: Land Use Map of the study area

Rainfall: The climate of Seoni district is characterized by a hot summer and general dryness throughout the year except during the south-west monsoon season, i.e., June to September. The year may divide into four seasons. The cold season, December to February is followed by the hot season from March to about the middle of June. The period from the middle of June to September is the southwest monsoon. October and November form the post monsoon or transition period. 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 rain fall data of Seoni district (IMD 2003-2022) has been taken into consideration. The average annual monsoon rainfall of the Seoni district is 1151.89 mm. The maximum rain fall was recorded in 2013 (1748.34 mm) and minimum in 2007 (504.55 mm). The actual annual rainfall in district is shown as below *Table-2*. Annual rainfall is graphically represented in *Figure-4*.

Year	Rainfall (mm)	Year	Rainfall (mm)
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	903.07
2012	1069.78	2022	1470.07

Table-2: Actual annual rainfall in Seoni district.

Data Source: IMD Gridded Rainfall, Indiawris Website.

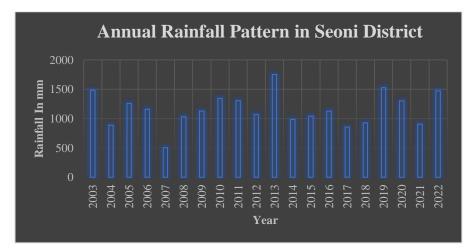


Figure-4: Histogram showing Pattern of Annual Rainfall Prepared by: Manish Khatri C/o M. K. Associates, Jabalpur

DEM/Topography of the study area:

Topography – The terrain elevation (Topography) is derived from the NRSC data. The DEM (Digital Elevation Model) map of the entire buffer zone has shown in *Figure-5*.

The study area falls under Survey of India Toposheet No. 55N/13 & 55N/14, are marked in toposheet map shown as *Figure-5A*.

The study area (5 km radius from the center of the JPL plant) elevation ranges from 555 m in the northeast (near Durjanpur village) to 529 m amsl in southeast part (at Dola village) of the study area. The north, west and northeast of the study area comprising the hilly terrain with several ridges and plateaus. The south, southwest, central & east part of the study area are level plains with gentle undulating terrain. The study area is sloping towards Northeast and southwest ward.

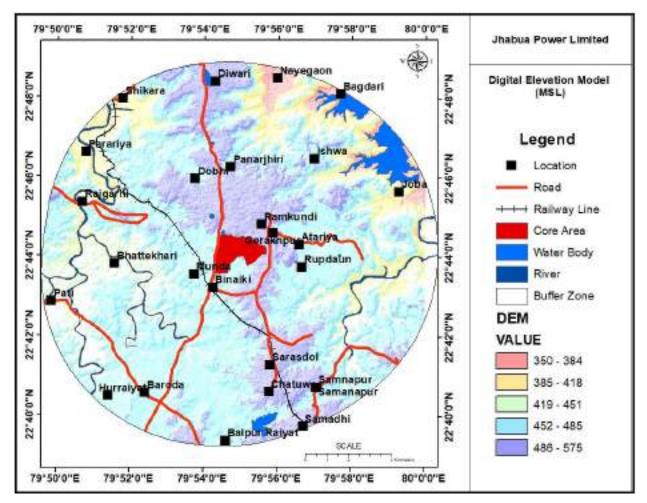


Figure-5: DEM Map of buffer zone

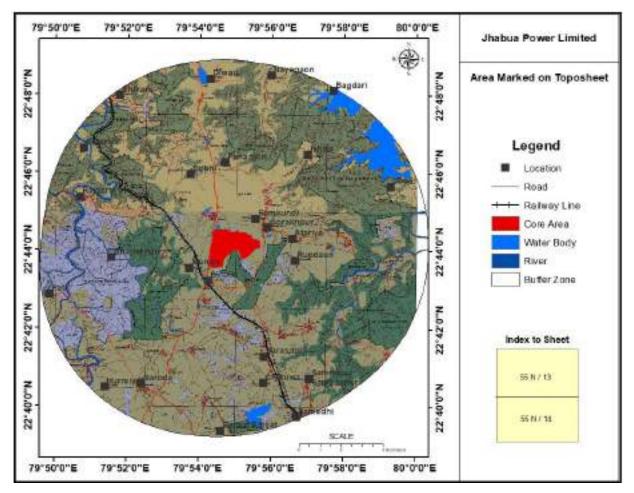


Figure-5A: Study area shown in Toposheet map

Geomorphology and Drainage:

Geomorphology: The land forms / geomorphic units and structures occurring in the study area are mapped. The geomorphology and structures of the area plays the vital role in identifying the ground water potential zones. The majority of the study area covering 8 Km radius from the JPL plant underlying by structural plain. Geomorphologically, the study area has been divided into following unit:

- 1. Flood plain
- 2. Structural Hill

The Main hydro geomorphic units are described as below.

1. Structural Hill: Structural hills are main dominating hydromorphic unit in entire buffer zone. This hydromorphic unit comprises of Basalt rocks of Deccan lava of Amarkantak Group. These are structurally controlled plains with numerous joints/fractures facilitating infiltration and mostly act as run-off zone and rate of infiltration is poor. Ground water potential is poor to moderate. The occurrence and movement of ground water is controlled by the secondary porosity.

2. Flood plain: These are occurred in sporadic distribution in northeaster part of buffer zone. It is represented by a small two hillocks. These have either no structural control or structures are obliterated by denudation and defined by lithology consisting of semi consolidated sediments of sand, silt and gravels etc. The relief is defined by gently sloping surface towards the northeast. The major land use activity is agriculture.

Alluvium occurring along in river and nala courses, these pediplains mostly present in gently undulating topography with a thickness of brownish soil, weathered and fractured basalt in deeply to moderately deposited. These weathered zones form moderate to good aquifer system. Geomorphology of the buffer zone shown in *Figure-6*.

Drainage: The present area under study falls under the Narmada River basin. The drainage of the study area is controlled by Temar River, which is the tributary of Narmada River. In general, the slope of the Narmada valley is towards North & that of Temar River is towards west. Paryat, Gadheri nadi and Gorriya nala are the tributary of Temar River. Various first and second order streams originates from the southern plateau of the buffer zone. Beside these rivers and nalas there are many small water tanks in the study area. There is another drainage is developing in the northern part of the buffer zone which forms the catchment area of Narmada River, taking a northeastern course and finally merge into the Narmada River. The drainage pattern in the study area is dendritic. Drainage map of entire buffer zone presented in *Figure-7*.

Geology: Regional Geology of the area is explained in terms of Geology of Seoni district and local geology is in term of Geology of Buffer zone. A geological map of entire buffer zone shown in *Figure-8*.

Regional Geology: Seoni is a part of ENE-WSW trending Central Indian Tectonic Zone (CITZ) limited by Sone-Narmada South Fault (SNSF) in the north and central India Suture (CIS) in South, while Tan shear zone (TSZ) is located midway between the two.

Geologically, the district comprises of Tirodi Biotite Gniess (TBG) and Supracrustal Sausar Group (SSG) in the southeastern part while major parts are covered with Deccan Trap with few outcrops of lameta, intertrappeans beds, laterite capping and alluvium ranging in age from Meso-proterozoic to recent. TBG form the basement of Sausar Supracrustal and comprises grey stromatic and /or

streaky gniesses with enclaves of high grade metamorphites, pink gneiss with migmatites and ambhibolites.

Lithologically, cratonic assemblage consists of metamorphosed quartzite, pilites and carbonate and intrusive syntectonic strongely foliated granite and post –tectonic massive granite.

Group/ Formation	Litho Units	Age
Quaternary Sediment	Alluvium /Laterite	Quaternary
Amarkantak Group/Deccan Trap	Basalt Rock	Upper Cretaceous to Paleogene
Lameta Group	Chert, Cherty limestone and variegated clay and shale	Late Cretaceous(Maastrichtian)
-	Unconfermity	
	Granite intrusive	Late Meso Proterozoic
Sausar Group	Limestone, Dolomite, Quartzite, Schist and Calc-silicate rocks	Meso Proterozoic
Tirodi Biotite Gneiss	Gniesses with high grade metamorphites , gniess with migmatite/Amphibolites	Meso Proterozoic

 Table -3: Generalised stratigraphic sequence at regional level

(Source; Geological Map, GSI, DRM Seoni).

Geology of Buffer zone: The entire area of buffer zone is underlain by rocks of Upper Cretaceous to Paleogene period comprises basalt rock belongs to Amarkantak group. Geological map shown in Figure No-8. The generalised stratigraphic sequence in buffer zone is as below.

Table-4: Stratigraphic succession	
-----------------------------------	--

Age	Group	Geological Formation
Quaternary	Recent	Recent alluvium deposits consisting of
		sand, clay, silt etc. laterite at places.
Upper Cretaceous	Amarkantak Group	Basalt Rock
to Paleogene	(Deccan Trap)	(Comprises two to fourteen flows)

(Source; Geological Map, GSI, DRM Seoni).

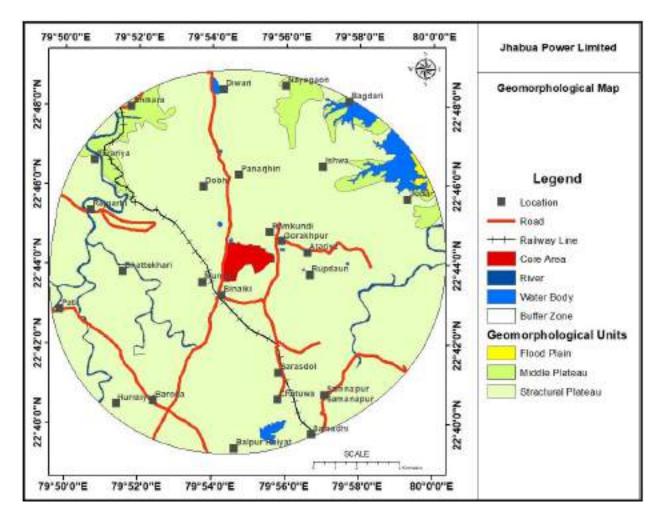


Figure-6: Geomorphology of the buffer area

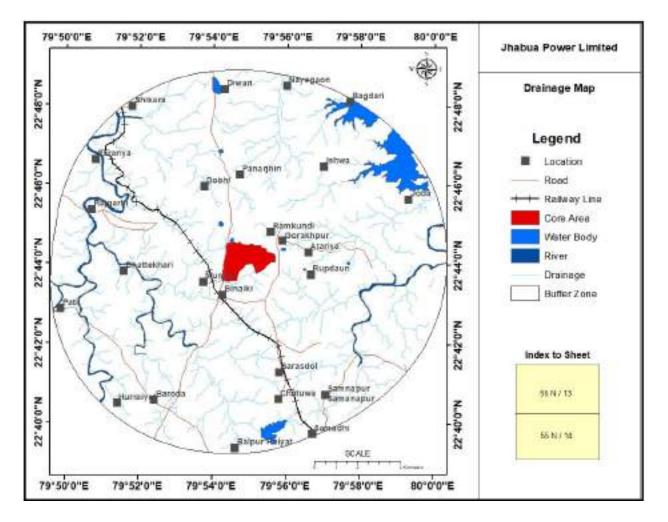


Figure-7: Drainage map of the buffer area

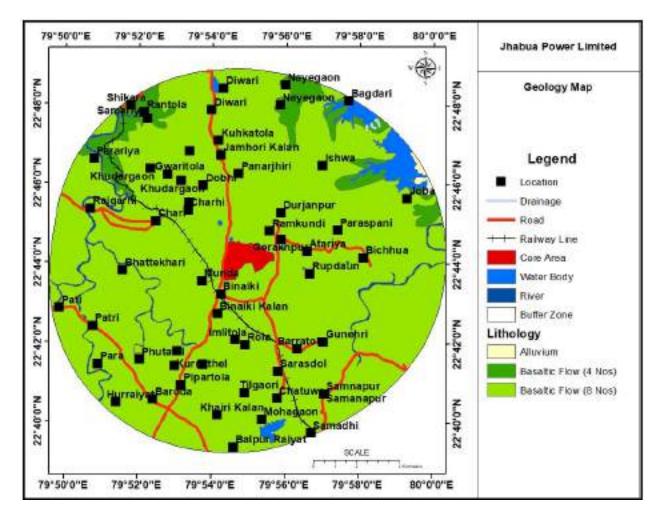


Figure-8: Geology of the buffer area

Hydrogeology:

The hydrogeological frame work of the area is entirely controlled by geological set up, intensity & distribution pattern of rain fall and water bearing and water yielding properties in the prevailing geological formations for storage and movement of ground water. Since the whole area is covered by the hard rock of basaltic composition. The water bearing properties of the formations also depend upon its nature and structures. The present area under investigation is occupied by rocks of basaltic flows of Deccan traps which comprises mainly three geological formations of Amarkantak group i.e. Dhuma formation, Pipardahi formation and Linga formation etc.

Development of lineaments is a witness of low degree tectonic deformations, which are more or less responsible for deep seated fracture systems.

Occurrence of ground water - It has been brought out during hydrogeological study of the area that how the lithology controls the occurrence and distribution of ground water reservoirs and their water bearing and water yielding properties. Precipitation is the major source of ground water in the project area. Ground water occurs in these formations under unconfined and semi confined to confined conditions. As the entire area is dominated by underlying basaltic flows of Deccan traps constitutes consolidated formations. Ground water is stored mainly in the secondary porosity resulting from weathering and fracturing of the basalt rock. The weathered residuum forms the main repository of ground water, which occurs under water table conditions and circulates through deeper fractures and vesicles. Ground Water occurs under unconfined condition in phreatic aquifers and in semi confined to confined conditions in the deeper fractures zones. The water yielding capacity of these fractured basaltic rocks largely depends on the extent of fracturing, openness and size of fractures and extent of their interconnection into the near surface weathered zone. These interconnected joints, fractures in the underlying rocks facilitate circulation of ground water and in turn form deeper aquifers. The massive basalts have poor primary porosity. The secondary porosity is imparted in massive basalts is due to weathering, fracturing and jointing. The main source of recharge for shallow aquifers in the area is local rain fall (average annual monsoon rainfall of the Seoni district is 1151.89 mm {IMD gridded data from 2003 to 2022}). The groundwater circulation occurs in the weathered portion and through the vesicular upper sections and also through the fractured massive portions. The area is also characterized by the presence of some alluvial and laterite which occur as capping over basaltic formations. The Water bearing properties of each formation can be summarized as below -

a. Vesicular Basalts - The water bearing properties of rock formations depend on the open space available for storage of water, which in turn depends on the shape, size, arrangement, interconnection and extensiveness of voids. The individual vesicular units in the different lava flows ranges in thickness from few meters to tens meter and possess primary porosity. The nature and density of these vesicles, their distribution, interconnections, weathering and topography of the area are the factors that govern the occurrence and movement of ground water in the vesicular basalt. Zeolites in the vesicular basalts are highly susceptible to weathering. The porosity is more when the vesicles are not filled up with secondary minerals like zeolite and calcite. The permeability in vesicular basalts depends on the interconnectivity of the vesicles. The weathered vesicular basalts and fractured vesicular basalts give rise moderate to highly potential aquifers.

b. Massive Basalts - The massive basalts in the area are hard and compact and are devoid of primary porosity and permeability. Generally, the massive basalts are not very productive but sometimes give rise to good aquifers when fractured and jointed. The occurrence of groundwater in massive compact basalts totally depends on the presence of fractures and joints, their nature and distribution and also on their vertical and lateral extension.

Weathered and fractured parts of basalts constitute the main aquifer system in buffer zone. Though there are many formations of Deccan lava in the area but from ground water point of view all basaltic formation can be considered as a singly hydrogeological unit. On the basis of ground water exploration carried out by Public Health Engineering Department, Division-Seoni, in such type of formations in the area, it was inferred that thickness of weathered zone which is down to a depth of 1.5 to 8 m and fracture zones were encountered in depth range of 22 to 35 m, 55 to 75 m and 90 to 150 m bgl. However potential zones are generally associated with lineaments. Ground water at places occurs in fractured zones at depth in semi-confined to confined conditions.

Depth to Water Levels; In order to decipher the behavior of the ground water regime, depth to water levels and fluctuation, the water level monitoring was carried out in the study area by collecting primary and secondary data of observations well (mainly fitted with hand pump) at targeted villages within buffer zone during Pre and Post Monsoon-2023). The secondary data of water level are collected from public enquiry and MP PHE Department. The water level data utilized for study is recorded/collected as well as reported. In buffer zone total 08 numbers of borewells were established as key observation wells in the buffer zone for monitoring purposes. The location of key observation well map shown in *Figure-9*. The details of these wells are given in **Table-5**. The bore wells depth varies from 90 to 182 m bgl, whereas, bore wells depth range from 15 to 21 m bgl. Yield varies from 1.5 to 8 m³/hour. On the basis of water level data maps are prepared to represent the pre-monsoon season in *Figure-10*, depth to water level post-monsoon depicted in *Figure-11* and seasonal fluctuation map shown in *Figure-12*.

Depicting water tables in the study area, contours at intervals of 3 m were drawn and shown in the Hydrogeological map (Pre-monsoon groundwater table contour map) as shown in *Figure-13*. On the basis of water level data collected depth of water table contour map is prepared. There is water divide in north-central part of the study area. Water table contour shows the groundwater flow direction is towards southwest and southeast. Pre and Post-monsoon ground water table map is presented in *Figure-14 & 15*, respectively. The same flow pattern is observed in both seasons.

The average groundwater table during pre and post monsoon season are 532 m amsl and 537 m amsl, respectively. The groundwater level fluctuation and the groundwater table show that there is surface (rainfall) and groundwater interaction. The main source of recharge in the study area is from rainfall. Some second and third order streams and nallahs flowing within the buffer zone are intermittent and flow is only observed during monsoon season and no or negligibly small interaction with surface water bodies might be occurring.

	Depth to Wa	ater level (m bgl)	
Parameters	Premonsoon- 2023	Post-monsoon Nov2022	Fluctuation (In m) Pre and post -2023
Minimum	3.25	1.65	0.08
Maximum	23.25	13.8	9.45

Summarized ground water levels in Bore well in buffer zone is tabulated as below:

Depth to Water level in Premonsoon-2023:

The Depth to water level of premonsoon -2023 depict that relatively deepest of ground water level zone of 10 to 23 m falls in the east and southern part of the study near Gorkhpur and Guneri villages.

The shallowest ground water level zone of 3 to 7 m bgl occupies in the west central, northern part of the study area near Binaki, Barela villages and northern part at Panarjhir village.

Post-monsoon Water level (Oct.-2023): The post-monsoon depth to ground water level depict that relatively deepest of ground water level zone of 7 to 14 m falls in the in the east and southern part of the study near Gorkhpur and Guneri villages. The shallowest ground water level zone of 1.6 to 5 m occupies in the west central, northern part of the study area near Binaki, Barela villages and northern part at Panarjhir village.

During the post monsoon period there is considerable rise in the ground water level. It is observed that there is increase of ground water level in the throughout the study area where the ground water level is deep during the pre-monsoon period.

Fluctuation in water level:

Pre and post monsoon -2023 water levels were considered for evaluation of seasonal fluctuation in water level. Fluctuation in water level varies from < 2 to 9 m which indicates that the aquifer of the study area has moderate recharge potential.

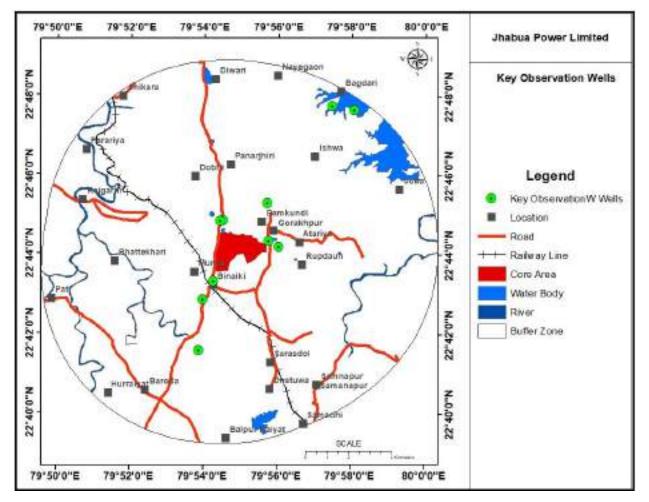


Figure-9: Location map of key observation wells

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P Table-5: Hydrogeological details of wells monitoring in study area:

Sl. No.	Village	Location	District	Block	Latitude	Longitude	Type BW/DW	Dia in m	Depth (m bmp)	Reported Yield In m3/hr	Domestic / Industry	In Promonsoon 2023	Depth to Water Level Post Monsoon 2023 (In m bgl)	Flactuation (In m)	Altitude (m amsl)	WT Pre-2023	WT Post-2023
1	Gorakhpur	JPL Gorakhpur Gate	Seoni	Ghansore	N22°44'4.97"	E79°55'38.53"	Bore well	0.152	90	6.2	Domestic	7.8	4.7	3.10	550.3	542.50	545.58
2	Gorakhpur	Infront of gram panchyat bhawan	Seoni	Ghansore	N22°44'26.68"	E 79°56'1.90"	Bore well	0.152	120	8	Domestic	23.25	13.8	9.45	545.2	521.95	539.78
3	Durjanpur	Gangaram Yadav	Seoni	Ghansore	N22°45'3.60"	E79°55'48.06"	Bore well	0.152	142	5.2	Domestic	14.7	12.3	2.40	555.4	540.70	542.00
4	Panarjhir	Near Rangmanch Main Road	Seoni	Ghansore	N22°46'9.39"	E79°54'49.93"	Bore well	0.152	90	3.1	Domestic	3.25	1.65	1.60	543.2	539.95	535.58
5	Barela	Beside Cullvert JPL Road	Seoni	Ghansore	N22°44'51.67"	E79°54'30.23"	Bore well	0.152	90	5.2	Domestic	4.8	4.72	0.08	548.2	543.40	546.55
6	Binaki	Behind Hanuman Mandir	Seoni	Ghansore	N 22°43'19.65"	E79°54'14.97"	Bore well	0.152	90	2.6	Domestic	7.42	5.42	2.00	535.2	527.78	521.40
7	Guneri	Bhadde Singh Bhagdiya	Seoni	Ghansore	N22°41'57.03"	E79°57'1.24"	Bore well	0.152	151	1.5	Domestic	19.2	13.4	5.80	543.2	524.00	535.29
8	Dola	Near Bhagrath House	Seoni	Ghansore	N22°41'56.18"	E79°54'53.71"	Borewell	0.152	182	4.2	Domestic	10.21	7.62	2.59	529.1	518.89	529.10
			Î								Min.	3.25	1.65	0.08	529.10	518.89	521.40
											Max	23.25	13.8	9.45	555.40	543.40	546.55
											Avg.	11.33	7.91	3.38	543.73	532.40	536.91





Geotagged Photographs of the wells monitoring in the study area.



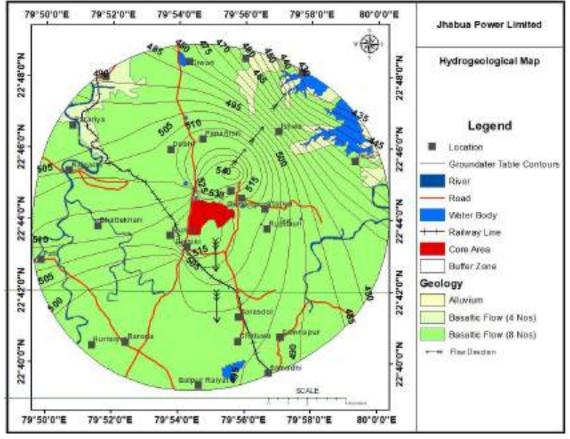


Figure-10: Hydrogeological Map showing groundwater contour elevation and flow directions

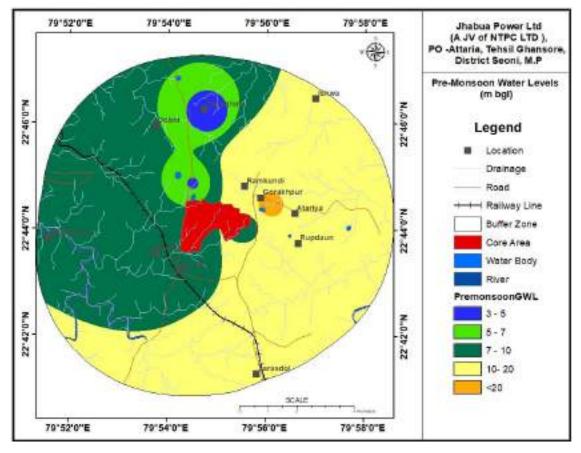
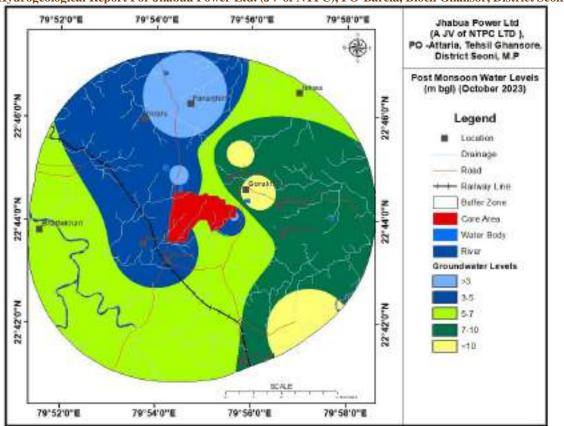


Figure-11: Pre-Monsoon Depth to Water Level of the study area



Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

Figure-12: Post-Monsoon Depth to Water Level of the study area

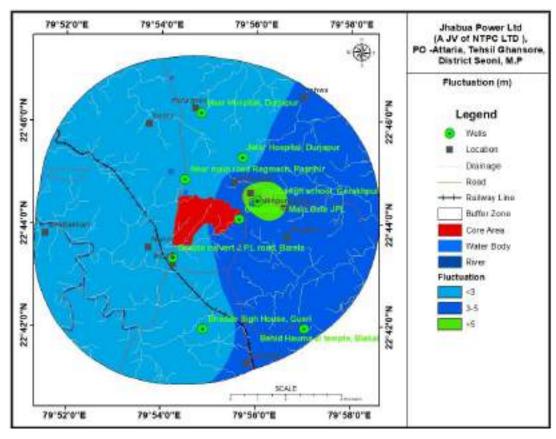


Figure-13: Water Level Fluctuation Map of the study area

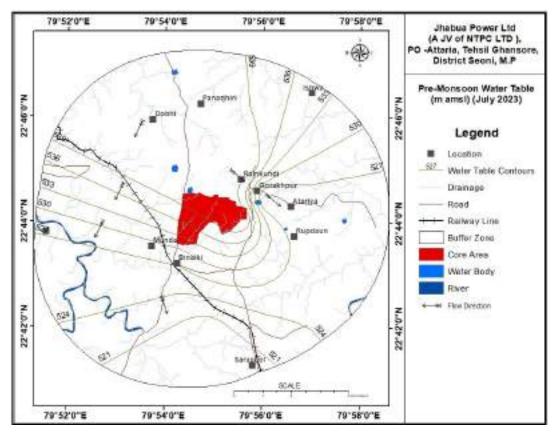


Figure-14: Pre-monsoon Groundwater Table Contour Map of the study area

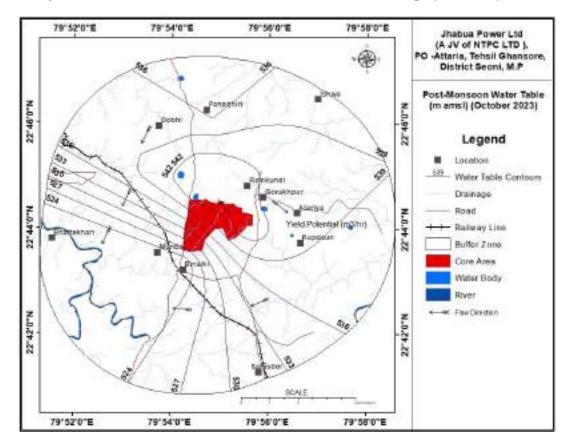


Figure-15: Post-monsoon Groundwater Table Contour Map of the study area

Groundwater Resources

Government Agencies (State Ground Water Department, Govt. of Madhya Pradesh, and Central Ground Water Board- Bhopal Region) had computed block wise ground water resources. The buffer zone of the current project spreads over Ghansor block of Seoni district of Madhya Pradesh. The Ground Water Information available in the DoWR, Ministry of Jal Shakti, Govt. of India for the year 2020 have been used to compute the Net Annual Ground Water Availability and Existing Gross Ground Water Draft on a pro-rata basis. The detailed computation for the buffer zone is shown in the **Table-6** as below.

S. No		Particulars	Ground Water Ro	esource (In Ham)
		_	Ghansor Block	Buffer Zone
1	Area (In He	ctare)	96300.00	8190.00
2	Net Ground	water Availability	6769.06	575.68
3	ual ter	Irrigation draft	1248.0	106.13
	ent Annual ınd Water Draft	Domestic and Industry Draft	363.60	30.92
	Current Annua Ground Water Draft	Existing Gross Groundwater Draft for all uses	1611.6	137.05
4	Stage of Gr	ound Water Extraction (%)	23.80	23.80
5	Category		Safe	Safe

Table-6: Ground Water Resources in Buffer zone

Long term water level data analysis:

In order to understand the long term (7 years) ground water level changes, the CGWB observation wells located in the study area has been downloaded from <u>https://indiawris.gov.in/</u> web site. The water levels observed at Gorkhpur ground water level monitoring station of CGWB has been considered for determining the trend. The geographic coordinate of the Gorkhpur monitoring well as follows.

Location	Latitude	Longitude	Direction from Project Site	Distance from Project Site (In meter)
Gorkhpur	N 22°44'32.99"	E 79°54'48.96"	North	139

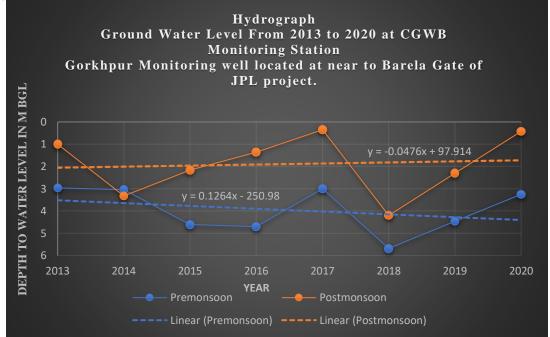


Figure-16: Hydrograph of water level at Gorkhpur Monitoring well of CGWB

Abstract of the long-term groundwater level trend.

Trends for the	Trend	l – Rise	Treno	l - Fall
Hydrograph (Monitoring Well)	Pre-Monsoon Rate of Rise (m/year)	Post-Monsoon Rate of Rise (m/year)	Pre-Monsoon Rate of Fall (m/year)	Post-Monsoon Rate of Fall (m/year)
Gorkhpur	-	0.047	0.126	-

The long-term trend in and around the study area clearly indicates that there is no stress in the Groundwater.

Ground water quality

It is highly essential to assess the quality of groundwater of the area and accordingly its suitability for various purposes viz drinking, irrigation and industrial purposes, etc. For assessing the groundwater quality, groundwater samples were collected from various locations and the water quality parameters were measured to analyze the groundwater quality of the region. The details and coordinates of the water samples collected are shown in **Table-7**. The parameters measured are shown in **Table-8**. Further details on the test of the NABL approved lab are annexed as **Annexure-1**. The water quality maps prepared for Electrical Conductivity concentration, Chloride concentration, Nitrate (point value) and Fluoride (point value) are given in *Figure-17, 18, 19 and 20*, respectively.

Ta	ble 7: Location of	of collected water samp	les.		
S.	Source	Village/Location	Structure	Coord	dinates
No.	Bource	V mage/ Location	Structure	Latitude	Longitude
1	Groundwater	Gorthkpur Main Gate	Bore well	N22°44'4.97"	E79°55'38.53"
2	Groundwater	Gorkhpur Govt High School	Bore well	N22°44'26.68"	E 79°56'1.90"
3	Groundwater	Durjanpur , Nr. Hospital	Bore well	N22°45'17.80"	E79°55'42.57"
4	Groundwater	Panarjhir, Nr Rangmunch	Bore well	N22°46'9.39"	E79°54'49.93"
5	Groundwater	Barela, Nr. culvert JPL Road	Bore well	N22°44'51.67"	E79°54'30.23"

Bore well

Bore well

Bore well

N 22°43'19.65"

N22°41'57.03"

N22°41'56.18"

E79°54'14.97"

E79°57'1.24"

E79°54'53.71"

Binaki, Nr Hanuman

Guneri, Nr. Bhadde

Dola, In Main village

Mandir

Singh House

Groundwater

Groundwater

Groundwater

6

7

8

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P Table 7: Location of collected water samples.



Some Geotagged Photographs during groundwater samples collection in study area

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

Table-8: Results of chemical analysis of ground water samples analyzed by NABL.

S.No.	Test Parameters	Unit	GROUND WATER (Borewell) Gorakhpur Main Gate JPL	GROUND WATER (Borewell) Govt. High school, Gorakhpur	GROUND WATER (Borewell) Near Hospital, Durjanpur	GROUND WATER (Borewell) Near main road Rangmanch, Panarjhir	GROUND WATER (Borewell) Beside culvert J.P.L road, Barela	GROUND WATER (Borewell) Behind Hanuman Ji temple, Binakai	GROUND WATER (Borewell) Bhadde Singh House, Guneri	GROUND WATER (Bore well) Main road near Bhagrath House, Dola
		Coordinates	N22°44'4.97'' E79°55'38.53''	N22°44'26.68'' E 79°56'1.90''	N22°45'17.80'' E79°55'42.57''	N22°46'9.39'' E79°54'49.93''	N22°44'51.67'' E79°54'30.23''	N 22°43'19.65'' E79°54'14.97''	N22°41'57.03'' E79°57'1.24''	N22°41'56.18'' E79°54'53.71''
1	pH	-	7.23	7.33	7.31	7.21	7.21	7.28	7.26	7.09
2	Taste	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
3	Odour	-	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable	Agreeable
4	Temperature	-	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient	Ambient
5	Chloride	mg/I	38.98	29.77	54.59	10.89	31.99	63.81	36.86	34.98
6	Calcium	mg/I	34.46	8.81	55.67	56.11	32.06	68.13	46.49	28.85
7	Total Dissolved Solid	mg/I	311	211	322	439	312	252	306	400
8	Conductivity	µmhos/cm	410	430	380	540	590	850	450	560
9	Alkalinity	mg/I	114	128	140	116	110	151	128	176
10	Fluoride	mg/I	0.61	0.64	0.54	0.61	0.59	0.63	0.81	0.78
11	Phosphate	mg/I	1.54	1.73	1.45	3.19	1.58	0.84	1.21	2.37
12	Sulphate	mg/I	35.60	31.52	25.86	33.69	25.39	25.83	35.30	32.42
13	Nitrate	mg/I	3.32	2.9	6.21	0.68	9.40	1.56	14.5	7.63
14	Magnesium	mg/I	4.37	3.40	9.97	13.60	2.91	17.70	17.98	12.91
15	Total hardness	mg/I	198	238	179	190	135.6	175	190.0	260
16	Total Arsenic As	mg/1	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
17	Cadmium Cd	mg/1	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
18	Chromium Cr	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
19	CopperCu	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
20	Iron Fe	mg/l	0.14	0.11	0.14	0.13	0.14	0.14	0.22	0.22
21	Mercury Hg	mg/I	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
22	Manganese	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
23	Lead Pb	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
24	Zinc Zn	mg/I	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLO	BLQ
25	Boron	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
26	Turbidity	NTU	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
27	Selenium Se	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
28	Aluminium	mg/1	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
29	Residual Free	mg/l	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
30	Phenolic Compound	mg/I	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ	BLQ
31	Total Coliform	Per 100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent
32	E. Coli	Per 100 ml	Absent	Absent	Absent	Absent	Absent	Absent	Absent	Absent

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P Analytical Result of water quality

The perusal of chemical analysis results of ground water and surface water samples collected and analyzed as depicted in above tables that water in general is safe as majority of the constituents are within the permissible limit. From the study of the above table following inferences can be drawn.

- pH: pH value of ground water indicates that water is in general a bit alkaline in nature in Ground Water samples it varies from 7.09 to 7.33 with average value of 7.89 and in surface water sample value of pH is determined as 7.83.
- 2) Electrical Conductivity: The Electrical Conductivity in the water represents concentration of soluble salts as such the high electrical conductivity indicates high concentration of dissolved salts. The maximum and minimum EC concentration in ground water is 850 and 380 µmhos/cm which is potable as per the CPHEEO Standards. The project is located in 530-410 µmhos/cm zone. The spatial distribution of EC concentration reveals that the area is not falls under ground water quality affected zone.
- **3) Total Hardness**: Total Hardness is considered as a major character of drinking water. Hardness is defined as the concentrations of calcium and magnesium ions. Ca and Mg are dissolved from most soils and rocks. Total Hardness varies from 135 to 260 mg/l with an average value of 195.6 mg/l in ground water samples and within the permissible limit.
- 4) Total Dissolved Solids: To ascertain the suitability of groundwater for any purposes, it is essential to classify the groundwater depending upon their hydro-chemical properties based on their TDS values. The ground water of the area is fresh water. Most of the groundwater samples are within the maximum permissible limit for drinking as per WHO international standard. TDS concentration varies from 211to 439 mg/lit in with an average value of 319 mg/ lit in groundwater samples. Most of the groundwater samples are within the maximum permissible limit for drinking as per WHO international standard. TDS concentration varies from 211to 439 mg/lit in with an average value of 319 mg/ lit in groundwater samples. Most of the groundwater samples are within the maximum permissible limit for drinking as per WHO international standard.
- 5) Chloride: Chloride concentration varies from 10.8 to 63.8 mg/lit with an average value of 37.7 mg/lit.
- 6) Nitrate: The concentration of nitrogen in groundwater is derived from the biosphere. Nitrogen is originally fixed from the atmosphere and then mineralized by soil bacteria into ammonium. Under aerobic conditions nitrogen is finally converted into nitrate by nitrifying bacteria. All samples show nitrate concentration within the permissible limit. Nitrate concentration varies from from 0.68 to 14.5 mg/lit with an average value of 5.78 mg/lit.
- 7) Sulphate: Sulphate concentration varies from 25.3 to 35.6 mg/lit with an average value of 30.7 mg/lit. The sulphate concentration in the water samples is less than the desirable range of 200 mg/l. This could be due to less ingress of irrigation water rich in sulphatic fertilizers and absence of sulphide minerals in appreciable quantities in the subsurface geologic formations and moreover less air pollution.

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

8) Fluoride: The fluoride concentration in the water samples is less than the prescribed limit (<1.5 mg/l).

However, all samples examined exhibit suitability for drinking.

The other parameters such as Copper, Chromium, Iron, Magnesium, Mangnese, Sodium, Alluminium. Phosphate, Selenium, Zinc etc are found to be safe and within the permissible limit.

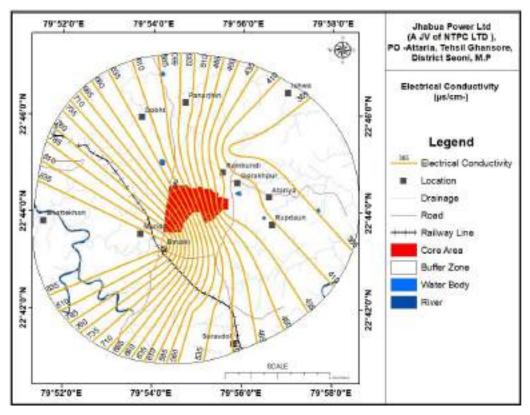


Figure-17: Groundwater Quality Map of Electrical Conductivity

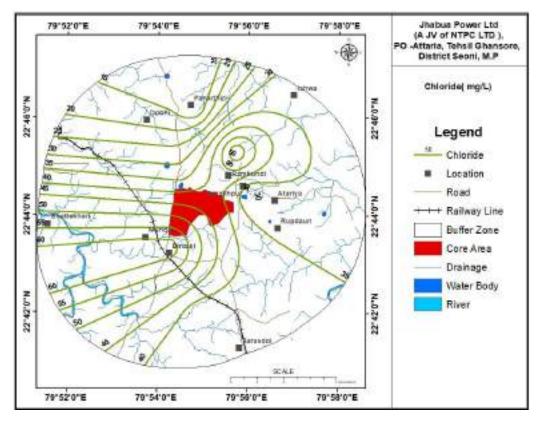


Figure-18: Groundwater Quality Map of Chloride

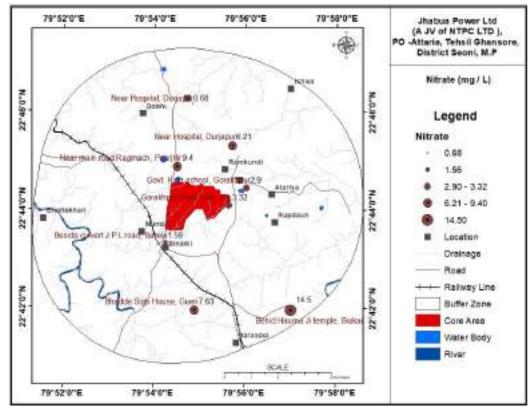


Figure-19: Groundwater Quality Map of Nitrate

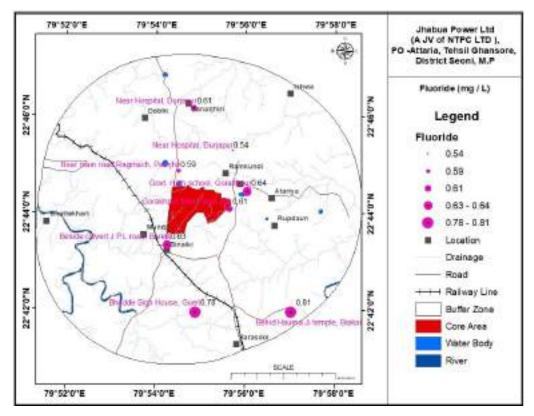


Figure-20: Groundwater Quality Map of Fluoride

Impact on Water Quality:

The groundwater water quality of the bore wells existing in the study area has been assessed and the details are mentioned in **Annexure-6**. Location wise histogram of Electrical Conductivity, Fluoride, Nitrate and Chlorides are prepared for comparison of changes over the years (shown in **Figure-21 to 28**). From the table and figures, it is observed, most of the physical, chemical and biological parameters of the groundwater of the region in are within the limits specified in IS 10500:2012. Further no any adverse changes are observed over the years.

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

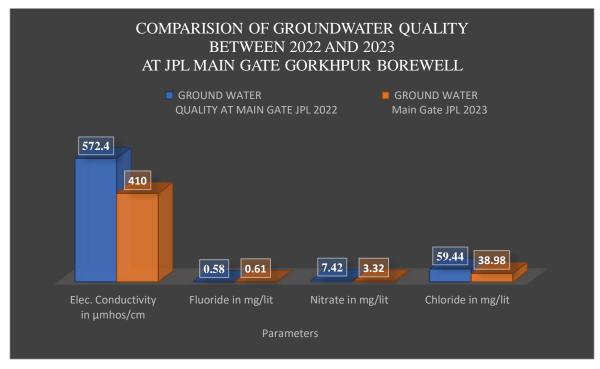


Figure-21: Histogram showing Comparison of Groundwater Quality(2022 and 2023) at JPL Main Gate, Gorkhpur.

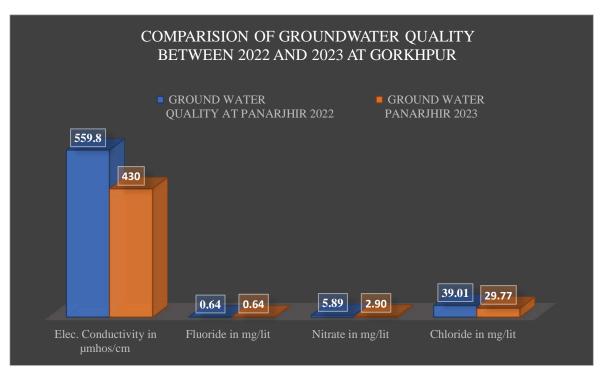


Figure-22: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Gorkhpur.

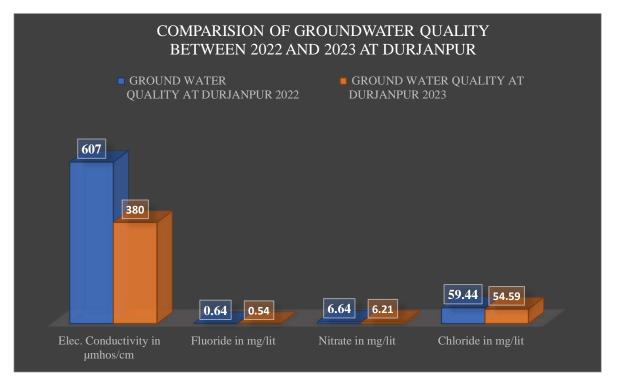


Figure-23: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Durjanpur.

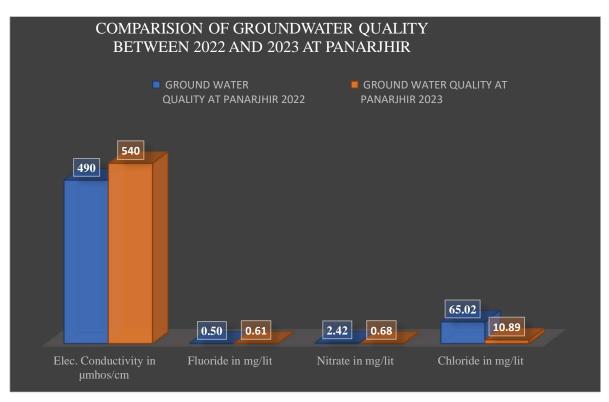


Figure-24: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Panarjhir.



Figure-25: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Barela.

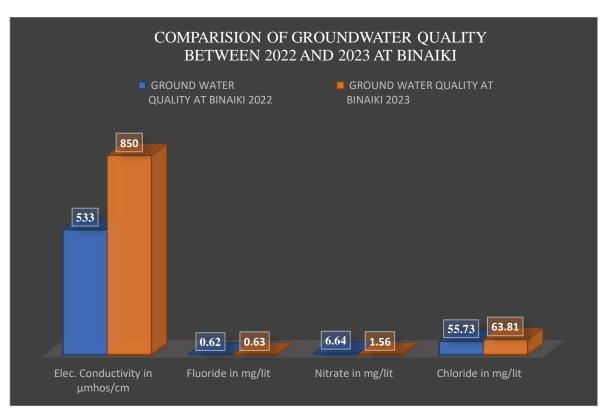


Figure-26: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Binaiki.

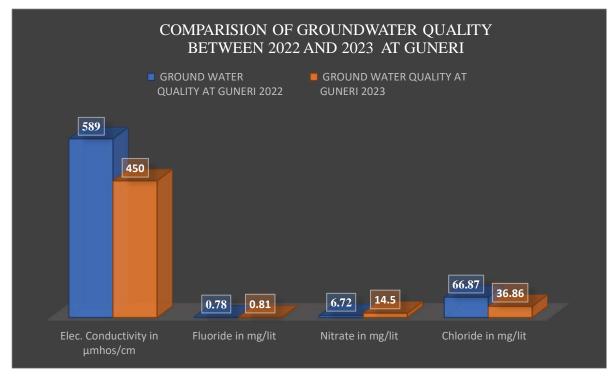


Figure-27: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Guneri.

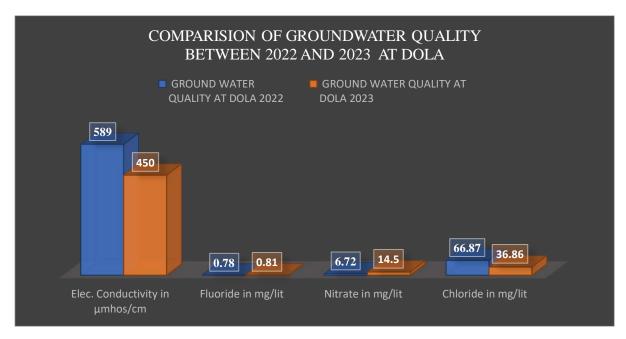


Figure-28: Histogram showing Comparison of Groundwater Quality (2022 and 2023) at Dola.

Groundwater quality of water samples are collected from borewells of the study area and analyzed in NABL accredited laboratory. The ground water quality parameters of EC, Chloride, Nitrate and

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

Fluoride in 2022 and 2023 is more or less same and within the prescribed limit of IS 10500:2012 standards.

To find out the quality of ground water of the area, 8 water samples were collected from the study area core and buffer zone. In view of above histograms of groundwater quality reveals that the water quality is potable and all the chemical constituents are within the permissible limits.

Conclusion:

- Jhabua Power Limited (JPL), is a Joint Venture of National Thermal Power Company Ltd (NTPC) and Banks. It is located in district Seoni of Madhya Pradesh.
- The power plant (earlier Avantha Power) is acquired by NTPC in September 2022. The said site is at a distance of around 56 Km. from Jabalpur, the divisional Head Quarter.
- To access and understand the drinking water need of the villages such as: Barela, Gorakhpur, Binaki, Guneri, Panarjhir, Durjanpur and Dola "A Comprehensive hydrogeological study report to assess the hydrogeological conditions for drinking and domestic uses in the selected habitation around the plant site.
- The study area (5 km radius from the center of the JPL plant) elevation ranges from 555 m in the northeast (near Durjanpur village) to 529 m amsl in southeast part (at Dola village).
- ➤ Geomorphologically, the majority of the study underlying by structural plain.
- The drainage of the study area is controlled by Temhar River, which is the tributary of Narmada River.
- The entire area of buffer zone is underlain by rocks of Upper Cretaceous to Paleogene period comprises basalt rock belongs to Amarkantak group.
- The principal aquifers in the study area have been delineated as Basalt rock. The ground water table generated using the pre and post monsoon data indicates that the groundwater flow direction is towards southwest and southeast.
- Pre-monsoon water level varies from 3.25 to 23.2 m below ground level. Post-monsoon water level varies from 1.65 to 13.8 m below ground level.
- The chemical analysis results of ground water quality reveals that the quality of ground water in the study area is within the permissible limits of drinking water standards, the environmental values are those qualities of the groundwater aquifer that makes it suitable to be used for various purposes such as drinking, domestic, irrigation and industrial purposes.
- > The Net Annual Extractable Ground Water Resource in the Ghansore Block is 6769.02 Ham

Hydrogeological Report For Jhabua Power Ltd. (JV of NTPC), PO-Barela, Block Ghansor, District Seoni.M.P

and Ground Water Extraction from all uses is 1611.6 Ham. The stage of ground water extraction is 23.80 % and the industry falls in Safe category as per Ground water Resources-2022.

Long term water level trend analysis of Gorkhpur Observation well from 2013 to 2020 show falling trend of 0.126 m/year during pre-monsoon. During post monsoon rising of 0.047 m/year is observed. The long-term trend in and around the study area clearly indicates that there is no stress in the Groundwater.

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Annexure-1: Groundwater Quality Reports

Location: Groundwater quality report of Gorkhpur JPL Main Gate.

_		ISO 900	1-2015 ISO 1	4001-2015 ISO 4	5001-2018	B		
			TEST REPORT	GROUND WATER				
Samp	e Number	GERL/W	//230724/0013	Report No	GERL/W	/129/2023		
Name Party	CONTRACTOR CONTRACTOR CONTRACTOR AND		ower Ltd. Post - hal Ghansore Distt.	Format No.	GERL/QA	A/FM/390		
Samp	e Description	Gn	ound Water	Party Ref. Number	Concernence of the second	4/LOI/WQ/01, 0.07.2023		
Locati	ion Gorakhpur		Main Gate JPL	Report Date		9.2023		
Samp	e Collected by		Pairty	Period of Analysis	and the local data and the local data and the	to 01.08.2023		
Prese	vation	Yes in	n deep freezer	Sampling Date	20.0	07.2023		
1037	(83.998)	10.02		Sample Receipt Date		07.2023		
Sampling & Analysis Protocol		1.1.20		Sampling Type	G	rab		
		APHA 23 Edition 2017		Environmental Condition	Temp: 25.9 Humidity: 48.1%			
				Packing Status	Seal	ALP ALS ALL ALL ALL ALL ALL ALL ALL ALL ALL		
				Sample Quantity	2.01	tres		
	1	-		ULR No.	Contraction in the local data	Constant of the second		
	Parameter		Test Method/Pro		Results	Units		
1	pH			4500 H+B electrometric	7.23	-		
			method :2017					
2	Taste	_	IS 3025 (P-8)1984		Agreeable			
3	Odour		APHA 234 ED., 21		Agreeable			
4	Temperature	10 I	APHA 23# ED.255		Ambient			
5	Chloride		APHA 23 ED. 49	Contraction of the local distance in the loc	38.98	mg/l		
6	Calcium	100000000	APHA 23 CED., 35	the second state of the later of the second state of the second st	34.46	mg/l		
7	Total Dissolv	and an a first state of the second	and the second	rimetric Method: 2017	311	mg/l		
8	Conductivity	<u> </u>	APHA 23# ED., 25	Contraction in the second s	2.82	µs/cm		
9	Alkalinity		APHA 234 ED., 23	208:2017	114	mg/l		
10	Fluoride	_	APHA 23* ED., 45	APHA 23* ED., 45	APHA 23* ED., 45	00-FD:2017	0.61	mg/l
11	Phosphate		APHA 23* ED., 45	00-PC:2017	1.54	mg/l		
12	Sulphate		15 2720(Part 27)		35.60	mg/l		
13	Nitrate		APHA 23* ED., 49	00-NO3 B	3.32	mg/1		
14	Magnesiam		APHA 23rd -2340 E	3	4.37	mg/l		
15	Total hardne	55	APHA 23* ED., 25	40 C	198	Pigm		
esults his rep he sun	ort cannot be rep pls will be destro	test sample & roduced with yed after 30 a story is limite	applicable Parameter out the written permi days from the date of i d to the involced amort	ssion of the Head of Laborato issue of test report	φ.			
			Ampita	Technical) Shalini Sriv		auto		



Registered Office: Plot No. 38, Khasra No. 82/3, Harinagar, Lucknow-Ayodhya Road, Near Green City, Babu Banarsi Das University (BBD), Semra, Chinhat, Lucknow, U.P. 226028 ISO 9001-2015 ISO 14001-2015 ISO 45001-2018

TEST REPORT GROUND WATER

ocation	Description			Report No Format No.		W/129/2023 2M/FM/39D
ocation	Description	Attaria Tehsil Ghansore Distt. Seoni (M.P.)			0.02	
area trat	Sample Description		Ground Water	Party Ref. Number	MKA/2023-24/LOI/WQ/01, dated 20.07.2023	
amole	Adamara	Goral	hpur Main gate JPL	Report Date	07.	09.2023
Sample Collected by			Party	Period of Analysis	02.08.202	3to 04.08.2023
reserve	ation	Ye	s in deep freezer	Sampling Date	20.	07.2023
				Sample Receipt Date	24	.07.2023
		1. 200		Sampling Type	1	Grab
Sampling & Analysis Protocol		^	PHA 23 Edition 2017	Environmental Condition	Temp: 25.9 Humidity: 48.1%	
		1		Packing Status	5	ealed
				Sample Quantity	2	0 litres
		-		ULR No.		
r. No.	Parameter		Test Method/Pro	tocol	Results	Units
1	Total Arsenic	As	APHA (23rd Edition		BLQ	mg/l
2	Cadmium Cd			3rd Edition], 3113B: 2017		mg/l
3	Chromium Cr		APHA (23rd Edition	BLQ	mg/i	
4	Copper Cu		APHA (23 rd Edition	n), 3113B: 2017	BLQ	mg/l
5	Iron Fe		APHA (23rd Edition	0.14	mg/i	
6	Mercury Hg		APHA (23rt Edition	BLQ	mg/t	
7	Manganese		APHA (23rd Edition	BLQ mg/l		
8	Lead Pb		APHA (23rd Edition	n],3030D 3113B: 2017	BLQ	mg/l
9	Zinc Zn		APHA (23rt Edition	APHA (23rt Edition),3030D 3113B: 2017		
10	Boron	-	APHA (23 rd Edition	n), 4500B: 2017	BLQ	mg/l
11	Turbidity		15 3025 (P- 10): 1	984,RA:2017	BLQ	NTU
12	Selenium Se		APHA(23 rd Edition), 3114C, 2017	BLQ	ing/i
13	Aluminium		IS 3025(P-55): 200	03, RA: 2019	BLQ	mg/l
14	Residual Free	Chlorine	IS 3025 (P-26):202	21	BLQ	mg/l
15	Phenolic Com	pound	APHA 23 Edition 5	530 C: 2017	BLQ	mg/l
16	Total Coliforn	n	IS 15185:2016		Absent	Per 100 ml
	E. Coli		IS 15185:2016		Absent	Per 100 mi

-----End of the report-----End of the report-----

Page 02 of 02

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Groundwater quality report of Gorkhpur village.

	_	_				
			TEST REPORT	GROUND WATER		
Cample	Blanker	CCDI A	W/230724/0014	1	and but	
and the second second			ower Ltd. Post - hall Ghansore Distt		GERL/W/130/2023 GERL/QM/FM/39D	
- and		Seoni (M.P		·		
Sample	Description	Gr	ound Water	Party Ref. Number	MKA/2023-24/L0I/WQ/01, dated 20.07.2023	
Locatio	n :	Govt. High	h school Gorakhpur	Report Date	07.09.3	
Sample	Collected by		Party	Period of Analysis	01.08.2023 to	
Preserv	ation	Yes in	n deep freezer	Sampling Date	20.07	and the second second
				Sample Receipt Date		2023
Samula	ne & Anabais	401	4A 23 Edition	Sampling Type Environmental Condition	Grab	
Sampling & Analysis Protocol		2017		Environmental Condition	Temp: 25.9 Humidity: 48.1%	
			22770	Packing Status	Sealed 2.0 litres	
				Sample Quantity		
				ULR No.		-
Participan duri	Parameter	-	Test Method/Pr		Results	Units
1	pH		method :2017	4500 H+B electrometric	7.53	÷
2	Taste		IS 3025 (P-8)196	14	Agreeable	+-
3	Odour		APHA 23 rd ED., 2150 B		Agreeable	
4	Temperature	£.	APHA 23# ED.25	50 B	Ambient	+
5	Chloride	_	APHA 23** ED., 4	a distantiant that the second states in the second	29.77	mg/l
6	Calcium Total Dissolv	10.04	APHA 23rd ED., 3	the state of the s	8.81	mg/l
8	Conductivity	the second s	APHA 234 ED. 2	store 2017	211	mg/i µs/cm-
9	Alkalinity		APHA 23" ED. 2	Statute and a long short year	128	mg/l
10	Fluoride		APHA 23rd ED. 4		0.64	mg/l
11	Phosphate		APHA 23** ED. 4500-PC:2017		1.73	mg/l
12	Sulphate		IS 2720(Part 27)		31.52	mg/l
13	Nitrate		APHA 234 ED. 4	500-N03 B	2.9	mg/l
34	Magnesium		APHA 23rd -2340	A CONTRACTOR OF A CONTRACTOR OFTA CONTRACTOR O	3,40	mg/l
15	Total hardne	55	APHA 23 ⁴⁴ ED., 2	540 C	238	mg/l
esults repo his repo he samp he Liabi	ple will be destro	test sample & induced with oyed after 30 atory is limite	applicable Paramet out the written perm days from the date of d to the involced am	nission of the Head of Laborator Fissue of test report	7	(a land
	Thecked By Arpita Srivast	ava	Abilia	Technical Manag Shalini Srivastava		span

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TEST REPORT GROUND WATER

	Number Address of	Jhabua Po	N/230724/0014 ower Ltd. Post - nsil Ghansore Distt.	Report No Format No.		and the state of t	/130/2023 #/FM/39D
Sample Description		and the second sec	ound Water	Farty Ref. Number		MKA/2023-24/LOI/WQ/01, dated 20.07.2023	
locatio		Govt. High	school Gorakhpur	Report Date		07.09.2023	
	Collected by		Party	Period of Analysi	5	04.08.2023	to 06.08.2023
Preservation Yes in		n deep freezer	Sampling Date	85 - C	20.07.2023		
			Sample Receipt Date		24.07.2023		
				Sampling Type	Sampling Type		irab
Samplir Protoco	ıg & Analysis ol	AP	A 23 Edition 2017	Environmental Condition		Temp: 25.9 Humidity: 48.1%	
				Packing Status Sample Quantity ULR No.		Sealed 2.0 litres	
						<u>24</u>	Trans
Sr. No.	Parameter		Test Method/Pro			Results	Units
1	Total Arsenia		APHA [23 rd Editio	tions when the part contract of the local and the local data in the local data of th	BLQ		mg/l
2	Cadmium Cd		APHA (23 rd Editio	over the local designment of t	BLQ		mg/l
3	Chromium Cr		APHA (23 rd Editio		BLQ		mg/l
4	Copper Cu		APHA (23rd Edition), 3113B: 2017		BLQ		mg/l
5	Iron Fe		APHA (23*4 Edition). 31138: 2017		0.11		2000
6	Mercury Hg		APHA (23 Nd Editio		BLQ 2 BLO		figm .
7	Manganese		APHA (23rd Editio	APHA (23rd Edition).3030D 31138: 2			Nam
8	Lead Pb			m).3030D 3113B:			mg/l
9	Zinc Zn			m),3030D 3113B:			mg/l
10	Boron		APHA (23 rd Editio	the second s	BLQ		mg/l
11	Turbidity		IS 3025 (P-10): 1	the second se	BLQ	_	NTU
12	Selenium Se		APHA(23 rd Editio	the second states of the secon	BLQ		mg/l
13	Aluminium		15 3025(P-55): 20	BLQ		mg/1	
14	Residual Fre	and the second se	15 3025 (P-26):2021		BLQ BLO		mg/l
15	Phenolic Compound		APHA 23 Edition 5530 C: 2017 IS 15185:2016		Absen		Per 100 mi
16	Total Colifor E. Coli	m	10 10 10 10 10		Abser		Per 100 mi
lesuita (his rep he sam he Liab	refers only to the ort cannot be re ple will be destr sility of the labor	e test sample sproduced with royed after 30 ratory is limits	Detection Limit) & applicable Parameth hout the written perm days from the date of ed to the invoiced arm to the standard	vision of the Head of I issue of test report	of Laborata	ey	(all all all all all all all all all all
1000	Checked By	stava	Andite	Technical Ma Shalini Srivast			staling

Groundwater quality report of Durjanpur village.

			Concernation of the second s	D), Semra, Chinhat, Lu 14001-2015 ISO 4		20020
			TEST REPORT	GROUND WATER		
Samol	e Number	GERI	/W/230724/0015	Report No	GERL/W/1	500015
and a second second	& Address of	and the second distance of the second distanc	Power Ltd. Post -	Format No.	GERL/QM/	and the second se
Party			ehsil Ghansore Distt.		and the weat	
Carmel.	Description	Seoni (M				
sample	e Description		Found Water	Party Ref. Number	MKA/2023-24/LOI/WQ/01, disted 20.07.2023	
Locatio		Near I	Hospital Durjanpur	Report Date	07.09.2023	
	e Collected by		Party	Period of Analysis	01.08.2023 to	
Preser	vation	Yes	in deep freezer	Sampling Date	20.07.2023	
				Sample Receipt Date Sampling Type	24.07.2023 Grab	
1.017	ing & Analysis	APHA 23 Edition		Environmental Condition	Temp: 25.9	
Protocol			2017	-	Humidity	and the second se
				Packing Status	Sealed 2.0 litres	
				Sample Quantity ULR No.	2.0 15	res
Sr. No	Parameter	-	Test Method/Pro		Results	Units
1	pH		Contraction of the second second second	4500 H+B electrometric	7.31	-
2	Taste	-	method :2017	method :2017 15 3025 (P-8)1984		-
3	Odour		APHA 23 rd ED, 2150 B		Agreeable	
4	Temperature		APHA 23* ED.255		Ambient	+
5	Chloride		APHA 23** ED. 45	the second se	54.59	mg/l
6	Calcium Total Dissolv	Mark Collid	APHA 23 rd ED, 35	and the stand of the local data was a stand of the stand	55.67	mg/l
8	Conductivity		APHA 234 ED, 25	vimetric Method: 2017 108-2017	322	mg/l jis/cm-
9	Alkalinity	100	APHA 23* ED. 23	CIT STATISTICS	140	mg/l
10	Fluoride		APHA 23# ED. 45	00-FD:2017	0.54	mg/l
11	Phosphate		APHA 23* ED. 45		1.45	mg/l
12	Sulphate		IS 2720(Part 27)		25.86	mg/l
13	Nitrate	_	APHA 23* ED., 4500-NO3 B		6.21	mg/l
14	Magnestum Total hardne	55	APHA 23* -2340 B APHA 23* ED, 2540 C		9.97	mg/l
13	Tour mrune		1 40 10 43 - ED. 23	10.0	119	mg/i
DL* (B esults r his rep he sant he Lub	elow Detection I. refers only to the ort cannot be rep ple will be destru- tility of the labor	init) ** (DL test sample roduced wi syed after 3 story is limit	Detection Limit) & applicable Parameter	13 roton of the Nead of Laborato save of test report		
1	Checked By	E.	1	Technical Manage	r	and 1
	Arpita Sriva		Asipita	Shalini Srivastava	3	1
						A Lot Days and the second



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Sample Number GERL/		W/230724/0015	V/230724/0015 Report No		GERL/W/131/2023		
Name 8 Party			Power Ltd. Post – Format No. Tehsil Ghansore Distt, M.P.)		GERL/QM/FM/39D MKA/2023-24/LOI/WQ/01, dated 20.07.2023		
Sample Description G		round Water	Party Ref. Number				
Location	ocation Near H		ospital Durjanpur	Report Date	07	.09.2023	
Sample	Sample Collected by		Party	Period of Analysis	03.08.20	23 to 04.08 2023	
Preserv	ation	Yes	n deep freezer	Sampling Date	20	1.07.2023	
				Sample Receipt Date	2	4.07.2023	
Sampling & Analysis Protocol		APHA 23 Edition 2017		Sampling Type		Grab Temp: 25.9 Humidity: 48.1%	
				Environmental Condition	1000		
				Packing Status	and the second se	Sealed	
				Sample Quantity	2	.0 litres	
				ULR No.	-		
Sr. No.	Parameter		Test Method/Protocol		Results	Units	
1	Total Arsenic As		APHA (23rd Edition	a), 3113C: 2017	BLQ	mg/l	
2	Cadmium Cd		APHA (23rd Edition	1), 3113B: 2017	BLQ	mg/l	
3	Chromium Cr	0	APHA (23rd Edition	ı], 3113B: 2017	BLQ	mg/l	
4	Copper Cu		APHA (23 rd Edition	APHA (23 rd Edition), 3113B: 2017		mg/l	
5	Iron Fe		APHA (23 rd Edition	APHA (23 rd Edition), 3113B: 2017		mg/i	
6	Mercury Hg		APHA (23rd Edition	APHA (23rd Edition), 3113C: 2017		mg/l	
7	Manganese		APHA (23rd Edition),3030D 3113B: 2017		BLQ	mg/i	
8	Lead Pb		The structure of the structure to be the structure of the		BLQ	mg/l	
9	Zinc Zn	_	APHA (23rd Edition),3030D 3113B: 2017		BLQ	mg/l	
10	Boron		APHA (23rd Edition), 4500B: 2017		BLO	mg/l	
11	Turbidity		IS 3025 (P- 10): 1984,RA:2017		BLQ	NTU	
12	Selenium Se		APHA(23 ^{re} Edition	a a substitution of the second s	BLQ	mg/t	
13	Aluminium	200 - NU-	IS 3025(P-55): 200	03, RA: 2019	BLQ	mg/l	
14	Residual Free	Chlorine	IS 3025 (P-26):202	21	BLQ	mg/l	
15	Phenolic Com	pound	APHA 23 Edition 5	530 C: 2017	BLQ	mg/i	
16	Total Coliforn	n	is 15185:2016		Absent	Per 100 ml	
17	E. Coli	m	IS 15185:2016		Absent	Per 100 ml	

TEST REPORT GROUND WATER

BDL* (Below Detection Limit) ** (DL Detection Limit) Results refers only to the test sample & applicable Parameters This report cannot be reproduced without the written recursion

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The liability of the laboratory is limited to the invoiced amount

The results confirmed/not confirmed to the standard

e-mail id : gangaenviroresearchlaboratory@gmail.com, Mobile No: 9458578089, 7985502930

PARTIES,

Groundwater quality report of Panarjhir village.

_				4001-2015 ISO 4		-
			TEST REPORT	GROUND WATER		
Sample	Number	GERL/	w/230724/0016	Report No	GERL/W/13	32/2023
Name & Address of Party		Jhabua Power Ltd. Post – Attaria Tehsil Ghansore Distt. Seoni (M.P.)		Format No.	GERL/QM/FM/39D	
Sample	Description		ound Water	Party Ref. Number	MKA/2023-24/ dated 20.0	
Locatio	n	Near main road Rangmanch Panarjhir		Report Date	07.09.2	028
the state want	Collected by		Party	Period of Analysis	02.08.2023 to	CARLES AND A COMPANY OF A PARTY
Preserv	ation	Yes i	n deep freezer	Sampling Date	20.07.	
-				Sample Receipt Date	24.07	
Sampli	ng & Analysis	APHA 23 Edition 2017		Sampling Type Environmental Condition	Gra Temp: Humidity	25.9
		00000		Packing Status	Seale	
				Sample Quantity	2.0 lit	res
on				ULR No.		-
Sr. No.	Parameter		Test Method/Pro	and the second se	Results	Units
1	pH		a second s	4500 H+B electrometric	7.21	-
			method :2017		Americanity	
2	Taste		15 3025 [P-8]1964		Agreeable	
3	Odour	-	APHA 23# ED., 21		Agreeable	-
4	Temperature Chloride	-	APHA 23rd ED 255 APHA 23rd ED, 45	and the second sec	10.89	mg/l
5	Calcium	_	APHA 23# ED. 45	Contracting and a second s	56.11	mg/l
7	Total Dissolv	bild Solid	the state is the second second second in the second interiment in the second seco	vimetric Method: 2017	439	mg/l
8	Conductivity	Contraction of the local division of the loc	APHA 234 ED. 25	a lot of the lot of the second s	1.83	us/cm-
9	Alkalinity		APHA 234 ED. 23		116	mg/1
19.T						
10	Fluoride		APHA 23* ED. 45		0.61	I\sm Dam
11	Phosphate		APHA 23 ED, 45	A DESCRIPTION OF A DESC	0.68	mg/l
12	Nitrate		APHA 23 rd ED., 45 APHA 23 rd -2340		13.60	mg/i
13	Magnesium Total hardne		APHA 23* -2340 B APHA 23* ED. 2540 C		190	mg/i
15	Sulphate		IS 2720(Part 27)		33.69	mg/i
esuits r his rep he sam he Liab	refers only to the ort cannot be re- ple will be destr ility of the labor	r test sample produced wit oyed after 30 atory is limit	Detection Limit) & applicable Paramete hout the written perm days from the date of ed to the invoiced amo to the standard.	assion of the Head of Laborato Issae of test report	a	a anna anna anna anna anna anna anna a
	Checked B	y astava	Aupita	Technical Manag Shalini Srivastava		white

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Name & Address of Jhabua P Party Attana Tel Seoni (M.F		W/230724/0016 Yower Ltd. Post – Posil Ghansore Distt. P.)	Report No Format No.		/w/132/2023 /QM/FM/39D	
lample	emple Description Gr		round Water	Party Ref. Number	MKA/2023-24/LOI/WQ/01 dated 20.07.2023	
Sector of the se		in road Rangmanch Panarihir.	Report Date	07.09.2023		
ample	e Collected by		Party	Period of Analysis	05.00.20	023 to 06.08.2023
reser	vation	Ves	n deep freezer Sampling Date		20.07.2021	
			Sample Receipt Date	1	4.07.2023	
				Sampling Type		Grab
notoc	ing & Analysis ol	AD	HA 23 Edition 2017	Environmental Condition	Temp: 25.9 Humidity: 48.1%	
				Packing Status Somple Quantity	Sealed	
						2.0 litres
				ULR No.		
r. No	Parameter		Test Method/Pro		Results	Units
1	Total Arsenic	As	APRA (23" Edition	Contraction (which in the late of the late	BLQ	mg/l
2	Cadmium Cd		APHA (23et Edition		BLQ	mg/i
3	Chromium Cr	1	APHA (23 rd Edition	0,3113B 2017	BLO	mg/l
4	Copper Cu		APHA (23rd Edition), 31138: 2017		BLQ	mg/l
5	Iron Fe		APHA (23 rd Edition	P	0.13	mgA
6	Mercury Hg		APHA (23 rd Edition		BLQ	mg/l
7	Manganese		APHA (23rd Edition],3030D 31138: 2017	BLQ	mg/l
8	Lead Pb		APHA [23 rd Edition	30300 31138: 2017	BLQ	mg/1
9	Zinc Zn		APHA (23" Edition),3030D 31138: 2017	BLQ	mg/l
10	Boron		APHA (23rd Edition	i), 4500B: 2017	BLQ	mg/l
11	Turbidity		IS 3025 (P-10): 19	984,RA:2017	BLQ	NTU
12	Selenium Se		APHA{23rt Edition), 3114C, 2017	BLQ	mg/i
13	Aluminium Residual Free Chlorine		IS 3025(P-55): 200	X3, RA: 2019	BLQ	mg/i
14			IS 3025 (P-26):2021		BLQ	mg/i
15	Phenolic Compound		APHA 23 Edition 5	530 C: 2017	BLQ	mg/l
15	Total Coliform		15 15185:2016		Absent	Par 100 mi
17	E. Coli		IS 15185:2016 Netection Limit)		Absent	Per 100 mi
is rep ie sam ie Liab	ort cannot be rep ple will be destro	roduced wit yed after 30 tory is limit	days from the date of it ad to the invoiced amou	ssion of the Head of Laborato ssue of test report	y (a Sates
				Technical Manager		100000

Groundwater quality report of Barela village.

				4001-2015 ISO 45			
			TEST REPORT	GROUND WATER			
Sample	Number	GERL	W/290724/0017	Report No	GERL/W/133/2023		
Name & Address of Party				Format No.	GERL/QM/FM/39D		
Sample	Description	Gr	ound Water	Party Ref. Number	MKA/2023-24/LOI/WQ/01, dated 20.07.2023		
Locatio	n	Beside cub Barela.	vert J.P.L road	Report Date	07.09.3		
Sample	Collected by	our cia.	Party	Period of Analysis	01.08.2023 to	02.08.2023	
Preserv	and the second se	Yest	n deep freezer	Sampling Date	20.07		
1000000	ta con		Indiated and a second	Sample Receipt Date	24.07.2023		
				Sampling Type	Gra	Ь	
Sampling & Analysis Protocol		APHA 23 Edition 2017		Environmental Condition	Temp: 25.9 Humidity: 48.1%		
				Packing Status	Seale		
				Sample Quantity	2.0 lit	res	
Sr. No.	Parameter		Test Method/Pro	ULR No.	Results	1 Photos	
1	pH		and the second se	4500 H+8 electrometric	7.21	Units	
			method :2017	root in belefeloueux			
2	Taste		IS 3025 (F-8) 1984	in the second	Agreeable	-	
3	Odour		APHA 23™ ED, 21	50 B	Agreeable	+	
4	Temperature		APHA 23rd ED.255	08	Amblent	-	
5	Chloride		APHA 23 rd ED., 45		31.99	mg/l	
6	Calcium	10.11.1	APHA 23rd ED., 350	the second se	32.06	mg/I	
8	Total Dissolv Conductivity		and the second se	vimetric Method: 2017	312	mg/l	
9	Alkalinity		APHA 23rt ED, 25 APHA 23rt ED, 23	Change & Constant of Constant	1.79	µs/cm-	
- 72	Contraction of the				100341	mg/i	
10	Fluoride		APHA 23" ED., 45	A REAL PROPERTY AND A REAL	0.59	mg/l	
11	Phosphate Sulphate		APHA 23 rd ED., 45 35 2720(Part 27)	00-PC:2017	1.58	mg/l	
13	Nitrate		and a lot of the second s	00 NO2 B	25.39	mg/l	
14	Magnesium		APHA 23 rd ED, 4500-NO3 B APHA 23 rd -2340 B		2.91	mg/l	
15	Total hardne	\$5	APHA 23" ED, 2540 C		135.6	mg/l	
esults repo his repo he samp he Liabi	rt cannot be rep le will be destru	test sample & roduced with yed after 30 a story is limite	applicable Parameter out the written permi days from the date of i d to the involced amore	ision of the Head of Laborator ssue of test report	7	(a)	
	necked By pita Srivasta	va	Ampita	Technical Man Shalini Srivasta		Studite	

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Sample	Number	GERL/V	/230724/0017	Report No	GERL/	W/133/2023
Name Party	& Address of		wer Ltd. Post – Isil Ghansore Distt)	Format No.	GERL/	QM/FM/39D
Sample	e Description	Ground Water		Party Ref. Number	MKA/2023-24/LOI/WQ/01, dated 20.07.2023	
Locatio	ecation Beside c Barela.		ert J.P.L road	Report Date		.09.2023
Sample	Collected by		Party	Period of Analysis	05.08.20	23 to 06.08.2023
the second second	vation	Yes in	deep freezer	Sampling Date		07.2023
				Sample Receipt Date		4.07.2023
		1		Sampling Type	-	Grab
Sampling & Analysis Protocol		APHA 23 Edition 2017		Environmental Condition		mp: 25.9 midity: 48.1%
				Packing Status	And Address of the Ad	Sealed
				Sample Quantity		2.0 litres
				ULR No.	2.0 mues	
ir. No	Parameter	1	Test Method/Pro		Results	Units
1	Total Arsenic	As	APHA (23" Edition		BLQ	mg/l
2	Cadmium Cd	1.10	APHA (23" Edition	and the second se	BLQ	mg/l
3	Chromium Cr		APHA (23" Edition		BLQ	mg/l
4	Copper Cu		APHA (23 rd Edition		BLQ	mg/l
5	Iron Fe		APHA (23ª Edition		0.14	mg/i
6	Mercury Hg		APHA (23 rd Edition	1 31130: 2017	BLQ	mg/l
7	Mangapese			3030D 31138: 2017	BLQ	mg/l
8	Lead Pb			3030D 31138: 2017	BLQ	mg/l
9	Zinc Zn		A design of the second s	1,3030D 3113B: 2017	BLQ	mg/l
10	Boron		APHA (23 rd Edition	and the second se	BLQ	mg/l
11	Turbidity		15 3025 (P- 10): 19	Management of the state of the	BLQ	NTU
12	Selenium Se		APHA(23" Edition	anna Alberta an Louis a Journa	BLQ	mg/i
13	Aluminium		15 3025(P-55): 200	Provent a prove the second prove	BLQ	mg/i
14	Residual Free	Chiorine	IS 3025 (P-26):202		BLQ	mg/l
15	Phonolic Com	other stations in the local data and the	APHA 23 Edition 5		BLQ	mg/l
16	Total Coliforn	n	IS 15185-2016		Absent	Per 100 ml
17	E. Coli	21-	15 15185:2016		Absent	Per 100 ml
is repo is repo ie samp ie Liab	ort cannot be rep pie will be destro	test sample & roduced with yed after 30 d tory is limited	applicable Parameter out the written permis ays from the date of is I to the invoiced amou	ision of the Head of Laborat isue of test report	ory	(a Ca
	Checked By Arpita Srivast	ava	Astrita	Technical Manage Shalini Srivastava	er	Juli
			End of th	e report-		
			End of th	e report		Page 02 of (

Groundwater quality report of Binaiki village.

-	_	150 90	01-2015 150	14001-2015 ISO 4	5001-2018	
			TEST REPORT	GROUND WATER		
Sampl	e Number	GERL	/W/230724/0018	Report No	GERL/W/1	34/2023
Name Party	& Address of		Power Ltd. Post - ehsil Ghansore Distt .P.]		GERL/QM	the second se
Binakai Sample Collected by		Ground Water		Party Ref. Number	MKA/2023-24 dated 20.	
		Behind H Binakai.	anuman Ji temple,	Report Date	07.09.	the Real Property lies and t
		- Annen-	Party	Period of Analysis	02.08.2023 to	03.08.2023
Preser	vation	Yes	in deep freezer	Sampling Date		2023
				Sample Receipt Date		7.2023
Sampling & Analysis Protocol		Is APHA 23 Edition		Sampling Type Environmental Condition	Grab Temp: 25.9 Humidity: 48.1%	
				Packing Status	Seak	ed
				Sample Quantity	2.0 17	tres
	I manual and		1	ULR No.		
	Parameter	-	Test Method/Pro		Results	Units
1	bji		APHA 23 rd edition method :2017	4500 H+B electrometric	7.28	1.5
2	Taste		15 3025 (P-8)198	4	Agreeable	
3	Odour		APHA 23rd ED. 21		Agreeable	1
4	Temperature		APHA 234 ED.253		Ambient	-
5	Chioride	-	APHA 234 ED. 45	the second s	63.81	mg/l
6	Calcium		APHA 23H ED. 35	and the second se	68.13	mg/l
7	Total Dissolv	ed Solid	and all and the second s	vimetric Method: 2017	252	mg/l
8	Conductivity		APHA 23+ ED., 25	the second se	2.95	us/cm-
9	Alkalinity		APHA 23+ ED., 23	and the second se	151	mg/l
10	Fluoride				1000	-
10	Phosphate		APHA 23 rd ED., 45 APHA 23 rd ED., 45		0.63	mg/l
12	Sulphate		IS 2720(Part 27)	NO-PG2017	25.83	mg/l
13	Nitrate		APHA 23" ED., 45	00.N03 8	1.56	mg/l
14	Magnesium		APHA 23*4 -2340		17.70	
15	Total hardne	55	APHA 234 ED., 25		175	mg/i mg/i
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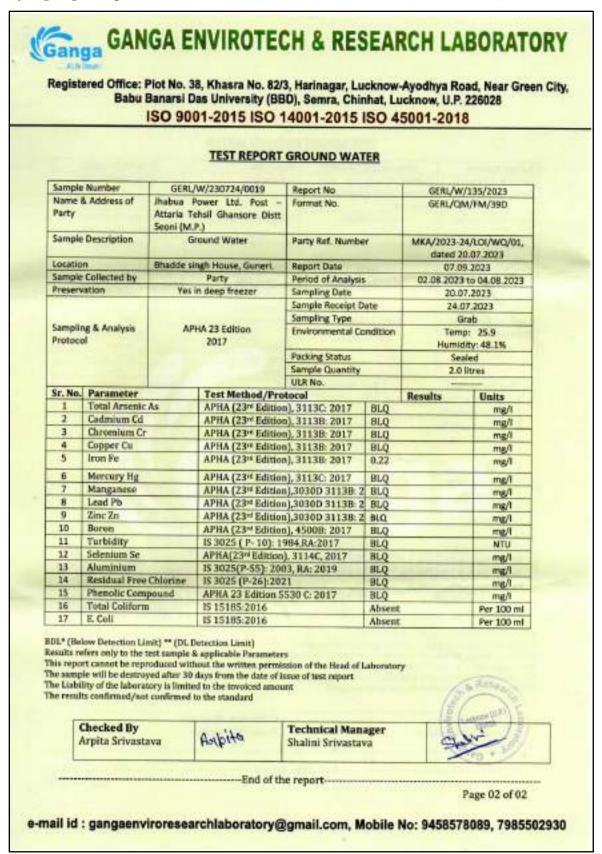
Ganga GANGA ENVIROTECH & RESEARCH LABORATORY

Registered Office: Plot No. 38, Khasra No. 82/3, Harinagar, Lucknow-Ayodhya Road, Near Green City, Babu Banarsi Das University (BBD), Semra, Chinhat, Lucknow, U.P. 226028 ISO 9001-2015 ISO 14001-2015 ISO 45001-2018

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Groundwater quality report of Guneri village.

				D), Semra, Chinhat, Lu 4001-2015 ISO 4		
		100 000	1-2013100	4001-2013 100 4	5001-2010	
			TEST REPORT	GROUND WATER		
Sample	Number	GERU	W/230724/0019	Report No	GERL/W/1	35/2023
the second s	k Address of	Jhabua F	ower Ltd. Post - shail Ghansore Distt.	Format No.	GERL/QM/	Contraction of the local division of the loc
Sample	Description	the state of the second second	round Water	Party Ref. Number	MKA/2023-24/	
		- m - 11 -	the second second		dated 20.1	
Location	n Collected by	Bhadde 5	Party	Report Date Period of Analysis	07.09. 33.07.2023 to	
Preserv	the second second second second second	Yes	in deep freezer	Sampling Date	33.07.2023 to	and the second se
	4.200	163	or weap in weaps	Sample Receipt Date		2023
				Sampling Type	Gra	and the second se
Sampling & Analysis Protocol		APHA 23 Edition 2017		Environmental Condition	Temp: 25.9 Humidity: 48.1%	
				Packing Status	Seals	
				Sample Quantity	2.0 lit	tres
Sr. Ma	Parameter	-	Test Method/Pro	UUR No.	Results	Units
1 1	pH		Contraction of the local division of the loc	4500 H+B electrometric	7.26	Units
10			method :2017	the state of the s		100
2	Taste.		1\$ 3025 (P-8)1984		Agreeable	
3	Odour		APHA 234 ED., 21		Agreeable	+
4	Temperatury	£	APHA 23* ED.255	the second se	Ambient	*
5	Chloride		APHA 23" ED., 45	CONTRACTOR OF A DESCRIPTION OF A DESCRIP	36.86	mg/l
6	Calcium		APHA 23/4 ED., 35	AND THE OWNER AS AN ADDRESS OF AN ADDRESS OF A DRESS OF A DRES	46.49	ing/i
7	Total Dissolv	a state of the sta	and the second se	vimetric Method: 2017	306	mg/l
8	Conductivity	1	APHA 23* ED., 25 APHA 23* ED., 23	the last of all states in the same states in the sa	128	mg/l
- 22	CONTRACTOR OF		a second contractor terres	Design Barrier	1000	
10	Fluoride	_	APHA 23rd ED, 45	A CONTRACTOR OF A CONTRACTOR OFTA CONT	0.81	mg/l
11	Phosphate Sulphate	_	APHA 23# ED., 45 15 2720(Part 27)	00-90:2017	1.21 35.30	mg/l mg/l
12			and the second state is a second state of the	00-NO3 B	and the second se	
	and the state of t	-	and an international statement of the statement of the statement of	Company and a company of the second		and the second diversion of th
15	Total hardne	55	APHA 23 ED. 25	and the second se	190.0	mg/l
13 14 15 BL* (Be lesuits o This repo The samp The Uabl	Nitrate Magnesium Total hardne dow Detection I elers only to the effect only to the effect only to the effect on the re- ple will be destr IDy of the labor	imit) ** (DL test sample produced wit oyed after 30 atory is limit	APHA 23 ^{ord} ED, 45 APHA 23 ^{ord} -2340 (APHA 23 ^{ord} ED, 25 Detection Limit) & applicable Paramete	8 40 C 15 Ission of the Head of Laborator Issue of test report	14.5 17.98 190.0	mg/l mg/l
	Checked By			Technical Manager	1/26	
	Arpita Srivas	tava	Abilita	Shalini Srivastava	Ser.	



Groundwater quality report of Dola village.

GERL/W/136/2023 GERL/QM/FM/39D Number MKA/2023-24/LOI/WQ/ dated 20.07.2023 e 07.09.2023 nalysis 03.08.2023 to 04.08.20 selpt Date 24.07.2023 ype Grab ntal Condition Temp: 25.9 Humidity: 48.1% Sealed
GERL/QM/FM/390 Number MKA/2023-24/LOI/WQ/ dated 20.07.2023 e 07.09.2023 nalysis 03.08.2023 to 04.08.20; ate ate 20.07.2023 sept Date 24.07.2023 ype Grab ntal Condition Temp: 23.9 Humidity: 48.1% Humidity: 48.1%
GERL/QM/FM/390 Number MKA/2023-24/LOI/WQ/ dated 20.07.2023 e 07.09.2023 nalysis 03.08.2023 to 04.08.20; ate ate 20.07.2023 sept Date 24.07.2023 ype Grab ntal Condition Temp: 23.9 Humidity: 48.1% Humidity: 48.1%
dated 20.07.2023 e 07.09.2023 nalysis 03.08.2023 to 04.08.20 uite 20.07.2023 selpt Date 24.07.2023 ype Grab ntal Condition Temp: 25.9 Humidity: 48.1%
nalysis 03.08.2023 to 04.08.20 late 20.07.2023 celpt Date 24.07.2023 ype Grab ntal Condition Temp: 25.9 Humidity: 48.1%
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ype Grab Intal Condition Temp: 23.9 Humidity: 48.1%
ntal Condition Temp: 25.9 Humidity: 48.1%
antity 2.0 litres
Results Un
ectrometric 7.09 -
Agreeable -
Agreeable -
Ambient -
7 <u>34.98</u> m
7 28.85 m
hod: 2017 400 m
2.46 µs/
176 m
0.78 m
2.37 m
32.42 m
7.63 m
12.91 m
260 m

Jhabua Pr Attaria Tel Seoni (M.P Gr	W/230724/0020 ower Ltd. Post tail Ghansore Distt. .) ound Water near Bhagrath	GROUND WATER Report No Format No. Party Ref. Number	GERL/W/1 GERL/QM/ MKA/2023-24	/FM/39D
Jhabua Pr Attaria Tel Seoni (M.P Gr Main road	ower Ltd. Post hall Ghansore Distt. .) ound Water over Bhagrath	Format No. Party Ref. Number	GERL/QM/ MKA/2023-24	/FM/39D
Jhabua Pr Attaria Tel Seoni (M.P Gr Main road	ower Ltd. Post hall Ghansore Distt. .) ound Water over Bhagrath	Format No. Party Ref. Number	MKA/2023-24	101202
Main road	near Bhagrath			A OL/WO/01.
and the second second second second		and the second se	dated 20.1	07.2023
Contraction of the	a former and	Report Date	07.09.	2023
Party		Period of Analysis	05.08.2023 to	and the second se
Yesi	n deep freezer	Sampling Date	20.07.2023	
		Sample Receipt Date	Constant of the second s	2023
APHA 23 Edition 2017		and the second sec	Gra	
			Humidity: 48.1%	
			2.010	cres
-	Test Method /Pro		Results	Units
As				mg/l
			BLQ	mg/l
	and the second of the local design of the loca	APHA (23* Edition), 31138: 2017		mg/l
	APHA (23* Edition), 31138: 2017		BLQ	mg/l
	and the second se	And in the state of the second s	0.22	mg/l
-	APHA (231 Editio	n) 3113C 2017	81.0	mig/l
			BLQ	mg/l
-			BLQ	mg/l
		A REAL PROPERTY OF A REAL PROPER	BLQ	ng/l
			BLQ	mg/l
		the second se	IILQ	NTU
			BLQ	ng/I
1000			BLQ	mg/l
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		5530 C: 2017		mg/l
orm	1.0.00000000000000000000000000000000000		Aburn	Per 100,000
	15 15185:2016	15185:2016		100 100 100
	e As F	2017 Test Method/Pro As APHA (23* Editio APHA (23* Editio	2017 Packing Status Sample Quantity ULR No. Test Method/Protocol cAs APHA (23* Edition), 3113C: 2017 APHA (23* Edition), 3113B: 2017 APHA (23* Edition), 3113B: 2017 APHA (23* Edition), 3113B: 2017 APHA (23* Edition), 3113B: 2017 APHA (23* Edition), 3113B: 2017 APHA (23* Edition), 3030D 3113B: 2017 APHA (23* Edition), 3114C, 2017 IS 3025 (P-55): 2003, RA: 2019 e Chlorine IS 3025 (P-26):2021 mpound	APHA 23 Edition 2017 Invironmental Condition Temp Humid 2017 Finite Condition Temp Humid Packing Status Seal Sample Quantity 2.0 li ULR No. ULR No. APHA (23* Edition), 3113C: 2017 BLQ APHA (23* Edition), 3113B: 2017 BLQ APHA (23* Edition), 3030D 3113B: 2017 BLQ IS 3025 (P- 10): 1984, RA.2017 BLQ IS 3025 (P- 55): 2003, RA: 2019 BLQ IS 3025 (P- 55): 2003, RA: 2019 BLQ IS 3025 (P- 26): 2021<

Annexure-2: Valid NABL certificate of testing agency:

M/s Ganga Envirotech & Research Laboratory.



Annexure -2

Recent Stack Monitoring Report





1 Ws Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

	1996 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 -
Report No.	; VTL/S/2410030001/A
Format No	; 7.8 F-03
Party Reference No	: 4300005689
Report Date	: 10/10/2024

: 03/10/2024

: 03/10/2024-10/10/2024

Period of Analysis

Receipt Date

f stack(m) ent calibration status logical Condition Temperature - Ta (°C) ture of Stack Gases - Ts (°C) of Stack Gases (m/sec.) e of PM (LPM) e of Gas (LPM) g condition used tes		30 m + Calibrated Clear Sky 35°C 124 14.8 47 2.0 OK IS 11255 & USEPA
ent calibration status logical Condition Temperature - Ta (°C) ture of Stack Gases - Ts (°C) of Stack Gases (m/sec.) e of PM (LPM) e of Gas (LPM) g condition		Calibrated Clear Sky 35°C 124 14.8 47 2.0
ent calibration status logical Condition Temperature - Ta (*C) ture of Stack Gases - Ts (*C) of Stack Gases (m/sec.) e of PM (LPM)		Calibrated Clear Sky 35°C 124 14.8 47
ent calibration status logical Condition Temperature - Ta (°C) ture of Stack Gases - Ts (°C) of Stack Gases (m/sec.)		Calibrated Clear Sky 35°C 124 14,8
ent calibration status logical Condition Temperature - Ta (*C) ture of Stack Gases - Ts (°C)		Calibrated Clear Sky 35°C 124
ent calibration status logical Condition Temperature - Ta (°C)		Calibrated Clear Sky 35°C
ent calibration status logical Condition		Calibrated Clear Sky
int calibration status		Calibrated
317 (28 2 %) A2		220 Same 1
f stack(m)	:	30 m +
Control (Manual Version)		
r of stack(m)	:	0.450 m
stack	:	Iron
ached to	2	DG Set
g duration (Minutes)	;	21 min. (13:00 to 13:21 hrs.)
Sampling	1	01/10/2024
Collected By	:	VTL Team
I Information:- g Location	P	1500 KVA (DG Set No2)
n : Stack Emission M	Non	itoring
	Information:- g Location Collected By sampling g duration (Minutes)	Information:- g Location : Collected By : iampling : g duration (Minutes) ;

S.No.	Parameters	Test Method	Results	Units	Limits
1	PM (at 15 % O2 Correction)	IS: 11255 (P-1): 1985, RA 2014	52.83	mg/Nm3	75.0
2	NOX (at 15 % O2 Correction)	IS 11255 (P- 7) 2005, RA 2017	298.5	ppmv	710.0
(CSA - 4	Carbon Monoxide (CO) (at 15 % O2 Correction)	USEPA-10, 1996	69.43	mg/Nm3	150.0

"BLQ= Below Limit Of Quantification, ""LOQ= Limit Of Quantification

End of Report













Page No. 1/1

Approved & Certified EPA 1986 Recognised, ISO:9001 and OHSAS:45001 Certified

Vibrant Techno Lab Pvt. Ltd.

9 SC-40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur Raj. 302020

- 2 0141-2954638
- Bd@vibranttechnolab.com
- www.vibranttechnolab.com







3 Ws Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

VTL/S/2410030001/B
7.8 F-03
: 4300005689
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024

C No	and a second	-	the second se
	Coordinates	:	+ .
	Protocol used	:	IS 11255 & USEPA
	Sampling condition	1	OK
	Flow rate of Gas (LPM)	:	2.0
	Flow rate of PM (LPM)	:	47
	Velocity of Stack Gases (m/sec.)	:	14.8
	Temperature of Stack Gases - Ts ("C)	:	124
	Ambient Temperature - Ta (*C)	:	35°C
	Meteorological Condition	-	Clear Sky
	Instrument calibration status	- 2-	Calibrated
	Height of stack(m)	:	30 m
	Diameter of stack(m)	:	0.450 m
	Make of stack	:	Iron
	Stack attached to	:	DG Set
	Sampling duration (Minutes)	;	21 min. (13:00 to 13:21 hrs.)
	Date of Sampling	1	01/10/2024
	Sample Collected By	÷	VTL Team
	General Information:- Sampling Location	:	1500 KVA (DG Set No2)
Sample	r enten simbledi	WIDI	neering

No.	Parameters	Test Method	Results	Units	Limits
	NMHC (at 15 % O2 Correction)	IS:5182 (P-21), Based On GC, RA 2012	27.16	mg/Nm3	100.0

"End of Report"









RK Yadav	
Lab Incharge B2	-
Authorized Signato	D

erm & conditions PTD

Page No. 1/1

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: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	: VTL/S/2410030002/A
Format No	7 8 F-03
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

Demonstration	-	
nates	-4	-
ol used	:	IS 11255 & USEPA
ing condition	1	OK
ate of Gas (LPM)	:	2.0
ate of PM (LPM)	:	48
ty of Stack Gases (m/sec.)	:	15.34
erature of Stack Gases - Ts (*C)	:	153
nt Temperature - Ta (°C)	4	35°C
rological Condition	:	Clear Sky
ment calibration status	1	Calibrated
Height of stack(m) : 30 m	30 m	
ter of stack(m)	3	0.450 m
of stack	:	Iron
attached to	1	DG Set
ling duration (Minutes)	:	22 min. (12:00 to 12:22 hrs.)
of Sampling	1	01/10/2024
le Collected By	1	VTL Team
ral Information:- ling Location	9	1500 KVA (DG Set No1)
	Mor	nitoring
r	al Information:-	al Information:- ing Location ;

S.No.	Parameters	Test Method	Results	Units	Limits
1	PM (at 15 % O2 Correction)	IS: 11255 (P-1): 1985, RA 2014	49.58	mg/Nm3	75.0
2	NOX (at 15 % O2 Correction)	IS 11255 (P-7) 2005, RA 2017	293.4	ppmv	710.0
	Carbon Monoxide (CO) (at 15 % O2 Correction)	USEPA-10, 1996	68.43	mg/Nm3	150.0

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

End of Report









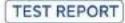
Page No. 1/1

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: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	; VTL/S/2410030002/B
Format No	7.8 F-03
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

	No. Concerne	1995-1920C	-		1
	Coordinates			1200	
	Protocol used		:	IS 11255 & USEPA	
	Sampling condi	tion	:	OK	
	Flow rate of Gas	s (LPM)	:	20	
	Flow rate of PM	(LPM)	:	46	
	Velocity of Stac	k Gases (m/sec.)	:	15.34	
	Temperature of	Stack Gases - Ts (*C)	-5	153	
	Ambient Tempe	rature - Ta (°C)		35*C	
	Meteorological	Condition		Clear Sky	
	Instrument calit	bration status	:	Calibrated	
	Height of stack	m)	2	30 m	
	Diameter of star	ck(m)	:	0.450 m	
	Make of stack		2	Iron	
	Stack attached	to	:	DG Set	
	Sampling durat	ion (Minutes)	:	22 min. (12:00 to 12:22 hrs.)	
	Date of Samplin	Ig	1	01/10/2024	
	Sample Collect	ed By	4	VTL Team	
	General Inform Sampling Locat		:	1500 KVA (DG Set No1)	
Sample	Description	Stack Emission	Mor	nitoring	

No.	Parameters	Test Method	Results	Units	Limits
1	NMHC (at 15 % O2 Correction)	IS:5182 (P-21), Based On GC, RA 2012	26.43	mg/Nm3	100.0

End of Report



Lab Incharge
Authorized Signatory

Page No. 1/1

OT4 aneithne

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Name & Address of the Party : M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	: VTL/S/2410030003/A
Format No	1 7.8 F-03
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	; 03/10/2024

S.No.	Parameters		Test Method
3	Coordinates	:	A CONTRACT
	Protocol used		IS 11255 & USEPA
	Sampling condition	+	OK
	Flow rate of Gas (LPM)	;	2.0
	Flow rate of PM (LPM)	:	31 .
	Velocity of Stack Gases (m/sec.)	\$	10.02
	Temperature of Stack Gases - Ts (°C)	1	140
	Ambient Temperature - Ta (°C)	:	35°C
	Meteorological Condition	;	Clear Sky
	Instrument calibration status	:	Calibrated
	Height of stack(m)	4	275 m
	Diameter of stack(m)	;	7.26 m
	Make of stack	1	RMC
	Stack attached to	ं	
	Sampling duration (Minutes)	1	32 min. (12:00 to 12:32 hrs.)
	Date of Sampling	ेः	02/10/2024
	Sample Collected By	1	VTL Team
	General Information:- Sampling Location	33	TPP (600 MW)
Sample	Description : Stack Emission	Mor	aitoring
Sa	27		

S.No.	Parameters	Test Method	Results	Units	Limits
1	Particulate Matter (PM)	IS: 11255 (P-1): 1985, RA 2019	38.43	mg/Nm3	50
2	Sulphur Dioxide (SO2)	IS: 11255(P-2): 1985, RA.2019	523.6	mg/Nm3	600
3	Oxide of Nitrogen (NO2)	IS-11255 (P-7), RA 2017	229.4	mg/Nm3	300
4	Mercury (Hg)	USEPA 29; 1996	*BLQ(**LOQ-0. 001)	mg/Nm3	0.03

*BLQ= Below Limit Of Quantification, **LOQ= Limit Of Quantification

End of Report











Page No. 1/1

Vibrant Techno Lab Pvt. Ltd.

SC-40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur Raj. 302020 9929108691, 9810205356, 8005707098, 9549956601

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- www.vibranttechnolab.com

Annexure -3

Fly Ash Utilization Audit Report for the Year 2023-24



जानपद अभियांत्रिकी विभाग मोतीलाल नेहरू राष्ट्रीय प्रौद्योगिकी संस्थान इलाहाबाद प्रयागराज–211004 (भारत) Civil Engineering Department Motilal Nehru National Institute of Technology Allahabad Prayagraj-211004 (India)

Letter No.: 1176 / CED / R&C/2024-25

Dated 04/10/2024

To

Er. Anoop Kr. Srivastava, DGM-Environment M/S Jhabua Power Ltd. Village- Barela Post Office – Attaria, Tehsil Ghansore District-Seoni-480997

Subject: Ash Audit on Generation & Utilization for 2023-24

Dear Sir,

This has reference to you letter dated: 29/04/2024 regarding the Ash Audit on Generation & Utilization from NTPC Jhabua, Seoni (MP) for Apri-2023-March 2024. The Ash Audit report attached with this letter for your kind reference.

Thanking you

With Regards

(Dr.N. R. Rawal) Associate Professor & P.I., CED, MNNIT A, Prayagraja (LiP)nent el Civil Engineering Martell T Alahabed Prayagraj-211004, U.P.

Encl.: Report on Ash Audit Generation & Utilization for 2023-24



Report

on

Ash Audit on Generation & Utilization from NTPC Jhabua, Seoni (MP) (For 2023-24)

Submitted to:

Central Pollution Control Board



Submitted by:

Dr. N.R. Rawal & Dr. V. P. Singh

Department of Civil Engineering Motilal Nehru National Institute of Technology Allahabad, Prayagraj UP India

Ash Audit on Generation & Utilization from NTPC Jhabua, Seoni (MP)

(in the year 2023-24)

1.0 Context of Audit:

The Central Pollution Control Board (CPCB) is conducting third-party audits on Fly Ash generation and utilization, as mandated by Clause-E (5) of the Ministry of Environment, Forest and Climate Change (MoEF& CC) Gazette Notification dated 31st December 2021. Compliance audits for ash disposal by thermal power plants are to be performed by auditors authorized by the CPCB. The audit reports must be submitted annually to both the CPCB and the respective State Pollution Control Board (SPCB). These audits are conducted independently.

Jhabua Power Limited (JPL), is a Joint Venture of National Thermal Power Company Ltd (NTPC) and Banks. It is located in district Seoni of Madhya Pradesh. The power plant (earlier Avantha Power) is acquired by NTPC in September 2022. The said site is at a distance of around 56 Km. from Jabalpur, the divisional Head Quarter.

Electricity generation is predominantly coal based. One of the important aspects of any coal based TPPs is necessity of combustion of coal. However, the coal combustion generates two categories of by-products i.e., bottom ash and fly ash. Indian coal is of low grade having very high ash content in the range from 38-41%. Bottom ash is collected at the bottom of the boiler. While, fly ash is collected in the electrostatic precipitators as well as in economizer hoppers. Generally, the combustion of coal produces approximately 20% of by-product in the form of bottom ash and remaining 80% in the form of fly ash. Thus, fly ash generation is significantly large in quantity than the bottom ash. Therefore, utilization of fly ash that has generated in huge quantity is a challenge. A large number of techniques and methods have been developed for gainful utilization and safe management of fly ash. The unutilized ash requires substantial precious land for its storage and its physical presence is a threat to environment and ecosystem, as it can become source of pollution of both air and water. To reduce the requirement of land for storage and disposal of fly ash into ash ponds and to address the problem caused by physical presence of fly ash, a holistic approach is needed. Notifications have been issued by MoEF&CC, Government of India, so as to achieve 100% utilization of fly ash. In order to assess the percentage utilization of fly at NTPC Jhabua, Central Pollution Control Board has been conducting an audit. This report is prepared based on the audit carried out by visiting NTPC Jhabua.

Ministry of Environment & Forestry (MoEF), Govt. of India, has issued Notifications country mandating all TPPs for achieving 100% utilization of fly ash in diverse sectors. Adhering to the guidelines of Ministry, most of the TPPs are thriving to achieve 100% utilization of fly ash. This audit is intended to ascertain the correctness of the information supplied by TPPs and in compliance with MoEF guidelines.



1 Page

2.0 Objective of the Work

The objective of the study is to audit & validate of data on Ash generation and utilization by NTPC Jhabua during the year 2023-24.

3.0 Scope of the Work

The scope of the work involves the following activities:

- a) To audit the data available on fly ash generation &utilization by NTPC Jhabua, in different sectors, for the year 2023-24.
- b) To scrutinize and verify the documents and data submitted by NTPC Jhabua for the year 2023-24.
- c) To make field visits to NTPC Jhabu and interact with the plant authorities on fly ash generation and utilization.
- d) To assess the present practices of ash management being adopted by NTPC Jhabua.

4.0 Brief of the Organization

Jhabua Power Limited (JPL), is a Joint Venture of National Thermal Power Company Ltd (NTPC) and Banks. It is located in district Seoni of Madhya Pradesh. The power plant (earlier Avantha Power) is acquired by NTPC in September 2022. The said site is at a distance of around 56 Km. from Jabalpur, the divisional Head Quarter.

5.0 Methodology Adopted for Auditing

The methodology adopted for the completion of auditing is divided into three parts for convenience and easy of doing.

Part-A: Data Collection

Nation

ź

WA Engineering

Department

4/laha03

The information related to data on ash generation and utilization and other relevant supporting documents that have been submitted by NTPC Jhabua for the year 2023-24 was collected. The entire auditing has been progressed solely on the basis of these documents only.

Part-B: Auditing the Data and Information

Auditing has been carried out by physically visiting NTPC Jhabua on 24/11/2023. The schedule of the visit was intimated to NTPC Jhabua in advance so that the concerned officials can make the necessary documents ready for auditing purpose during the visit. Following the intimation, the visit was made on the said date and audit has been conducted. During the audit, the data provided by NTPC Jhabua month wise has been scrutinized and verified vis-à-vis the records that each plant has been maintaining. Auditing includes verification of data pertinent to the capacity of the power plant, coal consumption, fly ash generation& utilization, ash disposal system, etc. All records giving details on the above parameters have been critically scrutinized and verified against each individual parameter to ascertain that the data and information provided by the NTPC Jhabua. Any mismatch in the data and information between that communicated to CPCB and records were noted down and weill brought to the notice of CPCB in the form of this report.

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Part-C: Field Visits

NTPC Jhabua have intimated to CPCB that they are utilizing the fly ash for a variety of applications. Some of the applications include brick or cement or tile or asbestos manufacturing, agriculture land reclamation, small land filling, land development, dike raising, construction of roads, etc. In order to ascertain whether or not fly ash is being utilized in these applications and to assess the exact quantity of fly ash being utilized, sites where fly ash used for a specific activity was physically inspected and photographs have been captured as evidence. Facts or anomalies identified or found during the site visit have been noted down to include in the final report that is herewith submitted to CPCB.

Following the completion of data auditing and field visits, data obtained was collated and assimilated to make final recommendations. A final report is prepared using compiled data and submitted to CPCB.

5.1 Document Verification

During the audit, the following important documents were verified.

- Records in support of daily or monthly fly ash and bottom ash generation & utilization for the period from April-2023 to March-2024.
- 2) Reports of coal and fly ash analysis
- 3) List of brick manufacturers to whom fly ash has been supplied.
- 4) Work Order/PO/Contract Agreement/Formal Letter of Requisition released by TPP engaging a transporting agency for mobility of fly ash for brick manufacturing or road making or land fill or dike raise or agriculture land reclamation or land development or cement making, etc.
- Weigh bridge documents depicting actual quantity of fly ash transported daily/monthly.
- 6) Documents related to fly ash utilization in diverse sectors.

5.2 Interaction with NTPC Jhabua Officials

The following members were present during the site visit on 31.08.2024 (Plate-1).

- 1. Mr. Anoop kr. Shrivastav, DGM Environment and Ash Management, NTPC Jhabua
- 2. Dr. V. P. Singh, Associate Professor, CED, MNNIT Allahabad
- 3. Dr. N.R. Rawal, Associate Professor, CED, MNNIT Allahabad



(Plate 1: Ash pond)

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During the audit and physical visit to the various TPP, active interactions have been made with officials working in Environmental Divisions and those who are dealing with disposal and utilization of fly ash. The officials include civil engineers, environmental engineers, administration, security, lab technicians, etc. It has been noticed during the interactions that several of personnel's dealing with ash disposal and utilization, unaware of recent developments on ash utilization and manufacturing of value added products from fly ash. In addition, the various physical and chemical properties of fly ash produced by respective TPP were verified and generic suggestions were made to the best knowledge of the auditor.

6.0 Fly Ash Generation & Utilization by NTPC Jhabua

The audit has been conducted on NTPC Jhabua, Summary of ash generation and utilization is listed in Table 1.

SI, No.	Details	Particulars
1,	Quantity of coal consumption during reporting period (MT per Annum):	2918269
2.	Average ash content in percentage (per cent):	39,49
3.	Quantity of current ash generation during reporting period (MT per annum)	1167308
ð.	Fly ash (Metric Tons per Annum):	933846
	Bottom ash (Metric Tons per Annum):	233462
4.	Capacity of dry fly ash storage silo(s) (Metric Tons):	3500 MT
	Details of utilization of current ash generate	ed during reporting period
	(a)Total quantity of current ash utilized (MT) during reporting period:	1237386 MT
	(b) Quantity of fly ash utilized (MT):	
	 (i) Fly ash-based products (bricks or blocks or tiles or fiber cement sheets or pipes or boards or panels) 	96755 MT
	(ii) Cement manufacturing:	289585 MT
	(iii)Ready mix concrete:	0
5.	(IV) Highway construction	15960 MT
	(c)Quantity of bottom ash utilized (MTPA)	0
	 (i) Fly ash-based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels): 	0
	(viii) Filling up of low-lying area:	Within Premises: 174998 MT Outside Premises: 660088 MT
	Total quantity of current ash unutilized (MTPA) during reporting period:	1237386 MT
6,	Percentage utilization of current ash generated during reporting period (per cent):	106.00 %
7.	Details of disposal of ash in ash ponds (a) Total quantity of ash available in ash pond(s) (Metric Tons) as on April 2023 (excluding reporting period):	1135308 MT
te or	(b) Total quantity of ash available in ash pond(s) (Metric Tons) as on March 2024 (excluding (-reporting period):	1065229 MT

Table 1 Summary of ash generation and utilization during the 1" April-31" March 2023-24

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	(c) Total number of ash ponds:	02 (Ash Pond No.1 – Bottom Ash Ash Pond No. 2- Fly Ash)
	(i) Active:	Ash Pond No. 2 operational for utilization of fly ash
	(ii) Exhausted (yet to be reclaimed):	NO
	(iii) Reclaimed:	Active
	Individual ash pond details	Ash Pond No.1 – Bottom Ash, Ash Pond No. 2- Fly Ash
	(i) Date of start of ash disposal in ash pond	03/05/2016
8.	(ii) quantity of ash disposed as on 31st March 2024 (Metric Tons):	1065229 MT
0.	 (iii) Available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons): 	Ash Pond No. 1-35% Ash Pond No. 2-40%
	(iv) Expected life of ash pond (number of years and months):	Approx 3.5 Years
9.	(i) Ash water recycling system (AWRS) installed and functioning:	YES
	(ii)Quantity of wastewater from ash pond discharged into land or water body (m3):	NO

8.0 SUMMARY AND RECOMMENDATIONS

- Auditing for ash generation and utilization was done for NTPC Jhabua on 31/08/2024.
- The actual ash generation is 1167308 MT and utilization is 1237386 MT. 106.00% utilization of fly ash is achieved by NTPC Jhabua during the period of 1st April-31st March 2023-24.
- The maximum percentage utilization of fly ash is in Fly ash-based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels), Cement manufacturing and in Highway embankment construction.

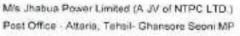
04 (Dr. V P Singh) Associate Professor (Co-PI)

(Dr. N.R.Rawal) Associate Professor (PI) Dr. Nekrom Retori Associate Professor Oepartment of CM Engineering MNNIT Abshabed Proveste-211004 11 P

Department of Civil Engineering Motilal Nehru National Institute of Technology Allahabad Pryagraj, Uttar Pradesh,India **Annexure -4**

Analysis Report of Ash pond effluent





Name & Address of the Party

Sample Description	: Waste Water
Sampling Location	: Ash Pond Effluen
Sample Collected By	; VTL Team
Coordinates	÷

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ULR No.	: TC1122724000002134F
Report No.	: VTL/WW/2410030006/A
Format No	: 7.8 F-01
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Parameter Required	As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pН	IS: 3025 (P-11): 2022	7.42		5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	29.42	mg/l	100
3	Oil & Grease	IS 3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Lead (as Pb)	APHA 23rd Edition-3030 D, 3113 B, 2017	*BLQ(**LOQ-0.1.)	mg/l	0.1
5	Chromium (as Cr)	APHA 23rd Edition 3113 B, 2017	0.29	mg/l	2
6	Arsenic (as As)	APHA 23rd Edition-3114C, 2017	*BLQ(**LOQ-0.05)	mg/i	0,2
7	Mercury (as Hg)	APHA 23rd Edition-3114 C, 2017	*BLQ(**LOQ-0.05)	mg/l	0.01

"BLQ-Below Limit OF Quartification, ""LOQ- Limit Of Detection

"End of Report""













Page No. 1/1

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Annexure -5

Structural Adequacy report of Ash Dyke certified by NIT, WARANGAL

ANNUAL CERTIFICATION OF ASH PONDS AND ASH DYKES FOR JHABUA POPWER, MADHYA PRADESH

Laboratory Proposal No. NITW/SRIC/Civil/WED/PVR/24/121 Dt. 09.03.24

Ref.: CPCB, MoEFCC Notification as per the guidelines on Design, Construction, O&M and Annual Certification of Coal ash ponds, June 23

Our Email Correspondence on 09.03.2024



DEPARTMENT OF CIVIL ENGINEERING NATIONAL INSTITUTE OF TECHNOLOGY WARANGAL - 506 004, TELANGANA, INDIA March 2024

1. INTRODUCTION

Ash Notification dated 31.12.2021 (as amended by amendment notification 30.12.2022) mandates power plants to ensure Annual Certification of the operational as well as stabilized and reclaimed ash pond and dyke on its safety, environmental pollution, available volume, mode of disposal, water consumption or conservation in disposal, ash water recycling and green belt etc., according to the specification and procedures laid down by CPCB in consultation with CEA, and submit annual implementation report about the compliance of provisions in the notification by the 30th day of April, every year to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC), Central Electricity Authority (CEA), and concerned Integrated Regional Office of Ministry of Environment, Forest and Climate Change by the coal or lignite based thermal power plants.

Ash Notification dated 31.12.2021 also mandates that Annual Compliance Audit of Ash Utilization and Disposal by power plants as well as user agencies shall be conducted by auditors, authorized by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report.

2. ANNUAL CERTIFICATION OF ASH POND AND DYKES

Annual certification of ash ponds and dykes shall be carried out by a qualified professional engineer for structural stability and safety assessment and to ensure that the construction, operation, and maintenance of the ash pond and ash dykes is consistent with recognized and generally accepted good engineering standards. The following is the scope of the work.

- 1. Annual certification shall be carried out once in every year and annual implementation report about the compliance of provisions in the notification shall be submitted by the 30th day of April, every year
- 2. Annual certification shall be by a qualified professional Geotechnical engineer.
- 3. Thermal Power Plants (TPP) shall make available any kind of record/Data etc required at the time of certification.
- 4. Certifying Expert shall examine the Compulsory Periodic Maintenance Inspection Checklist for the Ash Pond provided by TPP.
- 5. Certifying Expert shall submit the report which shall cover the following:

a) Structural stability as per IS 7894 construction drawings, quality control documents, monitoring reports etc., to establish that the constructed ash dykes are technically sound and structurally sustainable.

b) Slope Protection as per relevant IS code

c) Adequate Spillway Capacity

d) Dykes compaction

e) Downstream erosion protection

f) Environmental pollution,

g) Available volume

h) Mode of disposal, water consumption or conservation in disposal, ash water recycling

i) Green belt

j) Check list for Annual Safety Audit and Check list for Fly Ash generation and utilization

k) Interpretations from the compulsory maintenance inspections check lists on the overall safety of the Ash Pond

1) Details of the actions taken on the deficiencies noted during the maintenance inspections and annual certification inspection

- 6. Report of the annual certification shall inter alia include observations on points mentioned in Para A(6) of the notification as well as details of the actions taken on the deficiencies noted during the safety audit.
- 7. Details of the Evaluators:

Prof. P. Venkateswara Rao	Dr. Y. Sudheer Kumar
Ph.D in Environmental Engineering	Ph.D in Geotechnical Engineering
Professor, Water and Environment Division	Asst. Professor, Geotechnical Division
Department of Civil Engineering	Department of Civil Engineering
NIT Warangal	NIT Warangal
Email: pvenku@nitw.ac.in	Email: skyamsani@nitw.ac.in
Phone: 9420161800	Phone: 8486367769

3. OBSERVATIONS

The following observations were made during the visit held on 27.03.2024 at NTPC JPL plant located at Seoni, Madhya Pradesh.

- The ash pond has been checked for all the parameters as required by the guidelines provided by the CPCB, MoEFCC as referred for period i.e 1st April, 2023 to 31st March, 2024.
- 2. The dyke is observed to be well maintained by taking all the necessary O&M activities by the NTPC during the evaluation period.
- 3. The detailed observation checklist for annual certification is attached as an *Annexure-1*.

4. RECOMMENDATIONS

Based on the field visit and records verification, the dykes are maintained well as per the O&M guidelines provided by the regulatory authority.

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Prof. P. Venkateswara Rao Professor, Environmental Division Department of Civil Engineering NIT Warangal-TS



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Dr. Y. Sudheer Kumar Asst. Professor, Geotechnical Division Department of Civil Engineering NIT Warangal-TS

Sr No	Component	Observations/ Remarks
1.	Name of Power Plant	NTPC-Jhabua Power Ltd
2.	Name of the company	NTPC-Jhabua Power Ltd (A JV of NTPC Ltd)
3.	District	Seoni
4.	State	Madhya Pradesh
5.	Postal address for communication:	Village Barela, Post Attaria, Tehsil Ghasnore-480997
6.	E-mail:	ashish.khare@jhabuapower.co.in (Head AHP & Ash dyke)
7.	Power Plant installed capacity (MW):	600 MW
8.	No. of units generated (MWh):	3600 (MWh)
9.	Total area under power plant (ha): (including area under ash ponds)	337.5 (Ha)
10.	Method of slurry discharge water consumption or conservation in disposal, ash water recycling	HCSD and the decanted water is being recycled.
11.	TSS of decant Water (Going outside/ for recirculation)	Within limits
12.	Maintenance of Dyke.	
	 Top Width Top level of dyke Adequate Spillway Capacity Free board Available volume Earth covering and turfing U/S slope protection WBM Road Rock Toe, toe drain, berm, rock, pitching Dyke compaction D/S erosion control 	 6m RL 544.5 m Available Available Available 3.3 LCM Available Available Available Available Available Ok
13.	Instrumentation a) Piezometer, b) surface settlement	Procurement under progress
14.	Wet Patches/ softening on down Slope	None
15.	Gully Formation	None
16.	Rat holes/ animal burrows	None

17.	Growth of plants	None
18.	Toe drain and surface drainage system.	Available
19.	Facilities for inspection and maintenance of the dyke	Available
20.	Flooding Lighting.	Available
21.	Seepage or Leakage	None
22.	Monolith Joints	None
23.	Foundation should be examined for damage or possible undermining of the downstream toe	Examined. No damage or undermining is observed.
24.	 Slope Stability dyke: Dyke Slope stability, as per IS 7894: Dyke structural stability to be examined as per construction drawings, quality control documents, monitoring reports etc. Dyke slopes should be examined for irregularities in alignment and variances from smooth uniform slopes, unusual changes from original crest alignment and elevation, evidence of movement at or beyond the toe, and surface cracks which indicate movement. 	 Yes, the Dyke slope stability was performed by IIT Roorkee in 2023. Examined and found OK.
25.	Condition of Drainage Systems	Ok
26.	Condition of Slope Protection	Ok
27.	Environmental Pollution	Under Control
28.	Green belt	Ok
29.	Any other information: Soft copy of the annual compliance report, and shape files of power plant and ash ponds may be e-mailed to: - moefcccoalash@ gov.in	
30.	Signature of Authorized Signatory	 Prof. P. V. Rao, Env. Division, NIT Warangal M. M. M
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Annexure -6

Treated sewage analysis report

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M/s Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Altaria, Tehail- Ghansore Seoni MP

Name & Address of the Party

Sample Description	: Waste Water
Sampling Location	Treated Sewage Water Field Hostel -I
Sample Collected By	: VTL Team
Coordinates	1

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ULR No.	: TC1122724000002135F
Report No.	: VTL/WW/2410030007/A
Format No	; 7.8 F-01
Party Reference No	; 4300006689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Parameter Required	As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	рН	IS: 3025 (P-11): 2022	7.24	*0	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	8.2	mg/l	100
3	Oil & Grease	IS 3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mg/l	10
4	Ammonical Nitrogen (as NH3-N)	IS: 3025 (P-34) : 1988, Sec 4 RA: 2022	4.56	mg/l	50
5	Total Kjeldahl Nitrogen (as NH3)	15: 3025 (P-34): 1968, RA 2022 (Macro Kjeldahl Method)	6.49	mgñ	100
6	Biochemical Oxygen Demand (BOD) (3 days @ 27°C)	IS: 3025 (P-44): 1993, RA: 2019	7.85	mg/l	30
7	Chemical oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA: 2017	33.6	mg/l	250

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

End of Report













Page No. 1/1

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Ws Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Name & Address of the Party

Sample Description	
Sampling Location	
Sample Collected By	
Coordinates	

: Waste Water : Treated Sewage Water Field Hostel -I : VTL Team

Report No.	; VTL/WW2410030007/B			
Format No	: 7.8 F-01			
Party Reference No	: 4300005689			
Report Date	: 10/10/2024			
Period of Analysis	: 03/10/2024-10/10/2024			
Receipt Date	: 03/10/2024			
Sampling Date	: 02/10/2024			
Parameter Required	As per work order			

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Phosphate (as PO4)	IS:3025 (P-31):1988, (stannous Chloride Method) Sec 3 RA: 2022	0.35	mg/l	5
2	Fecal Coliform	IS 1622, 2009	Absent	MPN/100ml	<1000

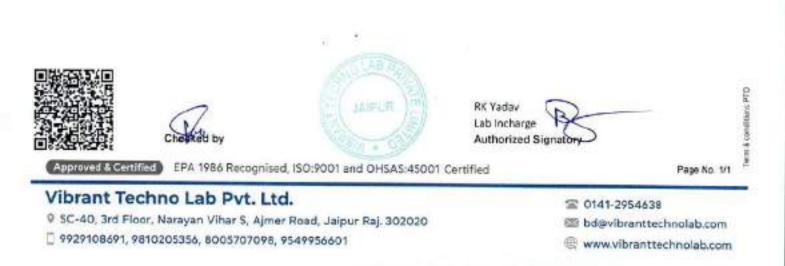
*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

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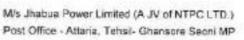
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""End of Report""









Name & Address of the Party :

Coordinates

Sample Description	: Waste Water
Sampling Location	: Treated Sewage Wate
Sample Collected By	: VTL Team

Waste Water Treated Sewage Water Field Hostel - II

ULR No.	: TC1122724000002136F			
Report No.	: VTL/WW/2410030008/A			
Format No	; 7.8 F-01			
Party Reference No	: 4300005689			
Report Date	: 10/10/2024			
Period of Analysis	: 03/10/2024-10/10/2024			
Receipt Date	: 03/10/2024			
Sampling Date	: 02/10/2024			
Parameter Required	As per work order			

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.21		5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3025 (P-17): 2022	6.82	mgil	100
3	Oil & Grease	IS:3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mgil	10
4	Ammonical Nitrogen (as NH3-N)	IS: 3025 (P-34) : 1988,Sec.4 RA: 2022	6.95	mgil	50
5	Total Kjeldahl Nitrogen (as NH3)	IS: 3025 (P-34): 1988, RA 2022 (Macro Kjeldahl Method)	7.24	mgil	100
	Biochemical Oxygen Demand (BOD) (3 days @ 27*C)	IS: 3025 (P-44): 1993, RA: 2019	8 16	mg/l	30
7	Chemical oxygen Demand (COD)	IS: 3025 (P-58) : 2006 RA: 2017	34.5	mg/l	250

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

End of Report













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M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attana, Tehsil- Ghansore Seoni MP

Name & Address of the Party :

Sample Description	: Waste Water
Sampling Location	: Treated Sewage Water Field Hostel - II
Sample Collected By	1 VTL Team
Coordinator	1

Report No.	: VTL/WW/2410030008/B			
Format No	; 7.8 F-01			
Party Reference No	; 4300005689			
Report Date	: 10/10/2024			
Period of Analysis	: 03/10/2024-10/10/2024			
Receipt Date	: 03/10/2024			
Sampling Date	: 02/10/2024			
Parameter Required	As per work order			

Coordinates 1					
S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Phosphate (as PO4)	IS:3025 (P-31):1988, (stannous Chloride Method) Sec 3 RA: 2022	0.33	mg/i	5
2	Fecal Coliform	IS 1622, 2009	Absent	MPN/100ml	<1000

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

""End of Report""





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TEST REPORT





M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Name & Address of the Party :

Coordinated

Sample Description	: Waste Wat
Sampling Location	: Treated Set
Sample Collected By	: VTL Team

Waste Water Treated Sewage Water Site Office
 Report No.
 : VTL/WW/2410030009/A

 Format No
 : 7.8 F-01

 Party Reference No
 : 4300005689

 Report Date
 : 10/10/2024

 Period of Analysis
 : 03/10/2024-10/10/2024

 Receipt Date
 : 03/10/2024

 Sampling Date
 : 02/10/2024

 Parameter Required
 : As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	рН	IS: 3025 (P-11): 2022	7.34	-	5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3026 (P-17); 2022	8.59	mgit	100
3	OI & Grease	IS 3025 (P-39): 2021	*BLQ(**LOQ-4.0)	mgil	10
4	Ammonical Nitrogen (as NH3-N)	IS: 3025 (P-34) 1988,Sec.4 RA: 2022	7.66	ngil	50
5	Total Kjoldahl Nitrogen (as NH3)	IS: 3025 (P-34): 1988, RA 2022 (Macro Kjeldahl Method)	8.14	ngil	100
6	Biochemical Oxygen Demand (BOD) (3 days @ 27°C)	IS: 3025 (P-44): 1993, RA: 2019	9.35	mg/l	30
7	Chemical oxygen Demand (COD)	IS 3025 (P-58) 2008 RA: 2017	38.0	mgA	250

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

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""End of Report""













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M/s Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tahail- Ghansore Sconi MP

Name & Address of the Party :

Sample Description	: Waste Water
Sampling Location	: Treated Sewage Water Site Office
Sample Collected By	: VTL Team
Coordinates	4

; VTL/WW/2410030009/B
: 7.8 F-01
: 4300005689
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024
: 02/10/2024
¹ As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Phosphate (as PO4)	IS:3025 (P-31):1988, (stannous Chloride Method) Sec.3 RA: 2022	0.36	mg/l	5
2	Fecal Coliform	IS 1622, 2009	Absent	MPN/100ml	<1000

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

End of Report











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Approved & Certified EPA 1986 Recognised, ISO:9001 and OHSAS:45001 Certified

Vibrant Techno Lab Pvt. Ltd.

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M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attania, Tehsil- Ghansore Seon MP

Name & Address of the Party :

Sample Description	: Waste Water
Sampling Location	: Plant STP Treated Water
Sample Collected By	: VTL Team
Coordinates	1

ULR No.	: TC1122724000002158F
Report No.	; VTL/WW2410030010/A
Format No	; 7.8 F-01
Party Reference No	: 4300005589
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 03/10/2024
Parameter Required	As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	pH	IS: 3025 (P-11): 2022	7.27		5.5 to 9.0
2	Total Suspended Solids (TSS)	IS: 3026 (P-17): 2022	7.13	mg/l	100
3	OI & Grease	IS:3025 (P-39): 2021	'BLQ("LOQ-4.0)	mg/i	10
4	Ammonical Nitrogen (as NH3-N)	IS: 3025 (P-34) : 1988,Sec.4 RA: 2022	6.92	mg/l	50
5	Total Kjeldahl Nitrogen (as NH3)	IS: 3025 (P-34): 1988, RA 2022 (Macro Kjeldahl Method)	7.59	mg/l	100
	Bischemical Oxygen Demand (BOD) (3 days @ 27*C)	IS: 3025 (P-44): 1993, RA: 2019	7.85	mg/t	30
7	Chemical oxygen Demand (COD)	IS : 3025 (P-58) 2006 RA: 2017	32.0	ന്നൂരി	250

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

End of Report













Page No. 1/1

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Ws Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Sconi MP

Name	8	Address	of	the	Party	1
------	---	---------	----	-----	-------	---

Sample Description	: Waste Water
Sampling Location	: Plant STP Treated Water
Sample Collected By	: VTL Team
Coordinates	:

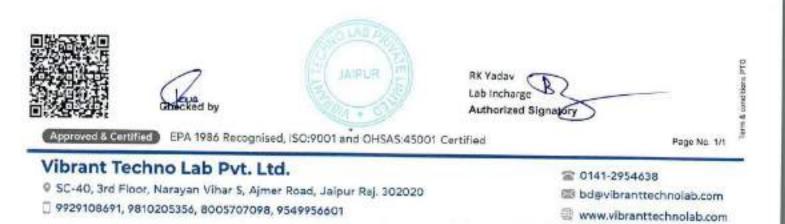
: VTL/WW/2410030010/B
: 7.8 F-01
: 4300005689
: 10/10/2024
; 03/10/2024-10/10/2024
: 03/10/2024
: 03/10/2024
As per work order

S.No.	Test Parameters	Test Method	Result	Unit	Limits
1	Phosphate (as PO4)	IS:3025 (P-31):1988, (stannous Chloride Method) Sec.3 RA: 2022	0.30	mg/l	5
2	Fecal Coliform	IS 1622, 2009	Absent	MPN/100ml	<1000
_	and the second division of the second divisio			the second se	

*BLQ-Below Limit OF Quantification, **LOQ- Limit Of Detection

End of Report





Annexure -7

Ground Water Analysis Report





: M/s Jhabua Power L	imited (A JV of NTPC LTD.)
Post Office - Attaria,	Tehsil- Ghansore Seoni MP

Sample Description	: Ground Water Sample .
Sampling Location	: Project Site
Sample Collected By	: VTL Team
Preservation	: Suitable Preservation
Method of sampling	: IS :3025

ULR No.	: TC1122724000002143F
Report No.	: VTL/W/2410030006/A
Format No	; 7.8 F-01
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Sampling Type	Grab
Sample Quantity	3 2 Ltr.

:--

Coordinates

		LOVE S	Coordin	ates		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.48	-	6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025: (P-10)1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	196	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	61.3	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	165	mg/l	200	600
6	Chloride (as Cl)	IS 3025 (P-32): 1988, RA 2019	68.3	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	10.46	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	465	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	39.4	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition A500FD :2017	0.71	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	9.86	mg/t	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 31118,2017	0.28	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(""LOQ-0.03)	mg/i	0.03	0.2
14	Boron (as B)	APHA 23rd Edition 45008,2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	No Relaxation
16	Phenolic Compounds (C6H5OH)	AFHA 23rd Edition 5530C 2017	"BLQ(""LOQ-0.001)	ng/l	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.34	mg/l	5.0	15.0
		All Contract Contr				











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	Ce the unitraginable" e Number : VTL/W/06		ULR No Report	Sec.	: TC112272400 ; VTL/W/24100	
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012
					Acceptable Limit	Permissible Limit
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	"8LQ(""LOQ-0.05)	mg/l	0.1	0,3
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*8LQ(**LOQ-0.002)	ngil	0.003	No Relaxation
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	"BLQ(""LOQ-0.005)	ng/l	0.01	No Relaxation
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	"BLQ(""LOQ-0.005)	mg/l	0.01	No Relaxation
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation
25	Total Coliform	IS : 15185 - 2016	Absent	per 100 mi	Shail not be detectable in any 100 ml sample	-
25	E.Coli	IS : 15185 : 2016	Absent	per 100 mi	Shall not be detectable in any 100 ml sample	
27	Free Residual Chlorine	IS 3025 (P-25) 2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0

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

End of Report











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	le Number : VTL/W/05				Report	No.	1 VTL/W/24100	30006/8
Name & Address of the Party : M/s Jhabos		habua Power Limited (A JV of NT	abus Power Limited (A JV of NTPC LTD.) Format No			+ 7.8 F-01		
Constrained and the second			Office - Attaria, Tehsil- Ghansore	Sepni MP		aference No	: 4300005689	
		5-9990		2010/07/07				
					Report	3777 V	: 10/10/2024	
2	0.82 - 0.83 -				Period	of Analysis	: 03/10/2024-10	W10/2024
Samp	le Description	: Grou	nd Water Sample		Receipt	Date	: 03/10/2024	
Sampi	ling Location	: Proje	ct Site		Samplin	g Date	: 02/10/2024	
Sampl	le Collected By	: VTL	Tearn		Samplin	ng Type	: Grab	
Prese	rvation	: Suita	ble Preservation		Sample	Quantity	: 2 Ltr.	
Metho	d of sampling	: IS :30	025		Coordin	ates	:*	
S.No. Test Parameters		Parameters Test Method		Results		Units	IS:10500-2012	
							Acceptable Limit	Permissible Limit
1	Colour		IS : 3025:(P-4)1963, :RA 2017	"BLQ(""LC	Q-5.0)	Hazen	5	15
2	Odour		IS : 3025 (P-5) : RA 2018	Agreea	ble	-	Agreeable	Agreeable
3	Taste		IS 3025 (P-8): 1984 RA 2017	Agreea	ble	-	Agreeable	Agreeable
4	Cyanide (as CN)		APHA 23rd Edition 4500D 2017	"BLQ(""LC	Q-5.0)	mg/l	0.05	No Relaxation
5	Anionic Detergents (as M	BAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LO	Q-0.05)	mg/l	0.2	1.0

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

End of Report









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Report No.





1 VTL/W/2410030007/A

ounple humber . From .				teport no.	T A LEGANIZA LINEARDALINE	
Name & Address of the Party : M/s Jhabus Power Limited (A JV of NTPC LTD.)				ormat No	1 7.8 F-01	
		Post Office - Attaria, Tehsil- Ghansore	anananan - G	Party Reference No	: 4300005689	
				Report Date	: 10/10/2024	
				Period of Analysis	: 03/10/2024-10	W10/2024
		Ground Water Sample		Receipt Date	: 03/10/2024	
24960		Village - Barela		ampling Date	: 02/10/2024	
C	1	VTL Team		Sampling Type Sample Quantity	Grab	
1000	The second s	Suitable Preservation IS :3025		and the second	: Z Ltr.	
S.No.				Coordinates	:	
S.NO.	Test Parameters	Test Method	Results	Units	IS:105	00-2012
		ar. ¹³			Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.28		6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025: (P-10)1984, RA 2017	*BLQ(**LOQ	1.0) NTU	1.	5
3	Total Hardness (as CaCO)	I) IS: 3025 (P-21): 2009, RA 2019	146	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	38.6	mg/l	75	200
5	Total Alkalinity (as CaCO3	IS: 3025 (P-23): 1988, RA 2019	120	ing/i	200	600
6	Chloride (as CI)	IS: 3025 (P-32): 1988, RA 2019	55.9	mg/l	250	1000
7	Magnesium (as Mg)	IS 3025 (P-46): 1994, RA 2019	12.07	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	336	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	33.4	Mgm 🖉	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD 2017	0.62	mgi	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34), 1988	8.41	mgA	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 31118.2017	0.21	mgi	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(""LOQ-0).03) mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	*BLQ(**LOQ	0.2) mg/l	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	"BLQ(""LOQ-	0.02) mg/l	0.05	No Relaxation
16	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C 2017	*BLQ(**LOQ-0	0.001) mg/l	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.30	mg/l	5.0	15.0





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RK Yadav

Lab Incharge

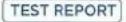
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Sample	Number: VTL/W/07	*	Report	No.	+ VTL/W/24100	30007/A
S.No.	Test Parameters	est Parameters Test Method		Units	IS:105	00-2012
					Acceptable Limit	Permissible Limit
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	ngA	0.05	1.5
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	ngi	0.1	0.3
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*BLQ(**LOQ-0.002)	ngil	0.003	No Relaxation
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mgil	0.01	0.05
24	Mercury (as Hg)	APHA 23rd editon, 3114C 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation
25	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-
26	E.Cdi	IS 15185 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-
27	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0

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

End of Report











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Sampl	le Number : VTL/W/07				Report	No.	1 VTL/W/2410030007/B		
			M/s Jhabua Power Limited (A JV of NTPC LTD.)		Format No		: 7.8 F-01		
		Post	Office - Attaria, Tehsil- Ghansore	Seon: MP	Party Re	eference No	: 4300005689		
					Report	Date	: 10/10/2024		
					Period e	of Analysis	: 03/10/2024-10	/10/2024	
Samp	le Description	: Grou	und Water Sample		Receipt	Date	: 03/10/2024		
Samp	ling Location	: Villa	pe - Barela	- Barela S		g Date	: 02/10/2024		
Samp	ie Collected By	: VTL			Sampling Type		: Grab : 2 Ltr		
Prese	rvation	: Suite			Quantity				
Metho	d of sampling	: 15 :3	. 025		Coordin	ates	2-		
S.No. Test Parameters		5	Test Method	Resu	Results		IS:10500-2012		
							Acceptable Limit	Permissible Limit	
1	Colour		IS: 3025 (P-4)1983, :RA 2017	"BLQ("LC	Q 5.0)	Hazen	5	15	
2	Odour		IS : 3025 (P-5) : RA 2018	Agreea	able		Agreeable	Agreeable	
3	Taste		IS :3025 (P-8): 1984 RA 2017	Agrees	able	-	Agreeable	Agreeable	
4	Cyanide (as CN)		APHA 23rd Edition 4500D.2017	"BLQ(""LC	Q-5.0)	mg/l	0.05	No Relaxation	
5	Anionic Detergents (as M	IBAS)	APHA 23rd Edition . 5540C 2017	*BLQ(**LO	Q-0.05)	mg/l	0.2	1.0	

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

""End of Report""





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Name & Address of the Party : M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Sample Description	: Ground Water Sample
Sampling Location	: Village - Panarjhir
Sample Collected By	: VTL Team
Preservation	Suitable Preservation
Method of sampling	: IS :3025

ULR No.	: TC1122724000002144F
Report No.	; VTL/W/2410030006/A
Format No	: 7.8 F-01
Party Reference No	: 4300005689
Report Date	; 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	; 02/10/2024
Sampling Type	: Grab
Sample Quantity	: 2 Ltr

Metho	d of sampling ; IS	3025	Coordinates :			
S.No.	Test Parameters	Test Parameters Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS 3025 (P+11) 2022	7.33		6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025: (P-10)1984, RA 2017	"BLQ(""LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	162	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	42.8	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	141	mg/i	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	75.8	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-48): 1994, RA 2019	13.42	mg/l	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	388	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	49.5	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD .2017	0.73	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	7.26	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition . 3111B,2017	0.31	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B.2017	*BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	"BLQ(""LOQ-0.02)	mg/l	0.05	No Relaxation
16	Phenolic Compounds (C8H5CH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.40	mg/l	5.0	15.0
		22 9 9 2 5 1 5 4 7 5 1 1 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				









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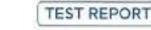
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Sampl	nce the uninteginable" 8 Number : VTL/W/08			ULR No. Report No.		 TC1122724000002144F VTL/W/2410030008/A 		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012		
					Acceptable Limit	Permissible Limit		
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5		
19	Manganese (as Mn)	APHA 23rd Edition, 30300, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	03		
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation		
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B.2017	*BLQ(**LOQ-0.005)	mg/i	0.01	No Relaxation		
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/i	0.01	No Relaxation		
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05		
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation		
25	Total Colform	IS 15185 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	•		
26	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	4		
27	Free Residual Chlorine	IS 3025 (P-26):2021	"BLQ(""LOQ-0.2)	mg/l	0.2	1.0		

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

End of Report











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	e Number : VTL/W/08			Report No.	: VTL/W/24100	30006/B	
Name	& Address of the Party	: M/a Jhabua Power Limited (A JV of NTPC LTD.)		Format No	• 7.8 F-01		
		Poat Office - Attaria, Tehsil- Ghanson		Party Reference No			
				Report Date	: 10/10/2024		
				Period of Analysis	: 03/10/2024-10	0/10/2024	
Sampl	e Description	: Ground Water Sample		Receipt Date	: 03/10/2024		
Sampl	ing Location	1 Village - Panarjhir		Sampling Date	: 02/10/2024		
Sampl	e Collected By	: VTL Team		Sampling Type	: Grati		
Preser	vation	: Suitable Preservation	Sample Quantity		÷ 2 Ltr.		
Metho	d of sampling	: 18 :3025		Coordinates	2.**		
S.No. Test Paramete		Test Method	Result	s Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
1	Colour	IS: 3025:(P-4)1983, :RA 2017	"BLQ("LOO	2-5.0) Hazen	5	15	
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeab	le -	Agreeable	Agreeable	
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeab	ie -	Agreeable	Agreeable	
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOG	2-5.0) mg/l	0.05	No Relaxation	
5	Anionic Detergents (as M	BAS) APHA 23rd Edition . 5540C	"BLQ("LOQ	-0.05) mg/l	0.2	1.0	

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

""End of Report""

2017





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9929108691, 9810205356, 8005707098, 9549956601

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ULR No.





: TC1122724000002145F

nce the unimaginable"		1		100122124000002140P		
			eport No.	- VTLAW/2410030009/A		
& Address of the Party				÷ 7.8 F-01		
	Post Office - Altana, Tehsil- Ghansore			: 4300005689		
				: 10/10/2024		
			8. 가슴 것 같이 다 같은 것 같은 것이다.	: 03/10/2024-10	0/10/2024	
				: 03/10/2024		
	이 같은 것은 것은 것은 것으로 가지? (Constrained)		Real Provide State of the			
11 (20) (1 (1 () () () () () () () ()						
					00-2012	
a cor contractore	, rescincesos	Tre suits	Gints	10.100	00.2012	
				Acceptable Limit	Permissible Limit	
pH (at 25°C)	IS: 3025 (P-11): 2022	7.56		6.5 to 8.5	No Relaxation	
Turbidity	IS: 3025: (P-10)1984, RA 2017	"BLQ("LOQ-	1.0) NTU	1	5	
Total Hardness (as CaCC	03) IS 3025 (P-21) 2009, RA 2019	208	mg/l	200	600	
Calcium (as Ca)	IS: 3025 (P- 40): 1991 RA 2019	56.5	mg/l	75	200	
Total Alkalinity (as CaCO	3) IS 3025 (P-23): 1986, RA 2019	184	mg/l	200	600	
Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	70.3	mg/l	250	1000	
Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	16.28	mg/l	30	100	
Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	479	mg/l	500	2000	
Sulphate (as SO4)	IS 3025 (P-24): 1986, RA 2022	50.3	mg/l	200	400	
Fluoride (as F)	APHA 23rd Edition ,4500FD 2017	0.78	mg/l	1.0	1.5	
Nitrate (as NO3)	IS: 3025 (P-34): 1988	15.4	mg/l	45.0	No Relaxation	
Iron (as Fe)	APHA 23rd Edition . 3111B,2017	0.27	mg/l	1.0	No Relaxation	
Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(""LCQ-0	.03) mg/l	0.03	0.2	
Boron (as B)	APHA 23rd Edition, 4500B,2017	"BLQ(""LOO-(3.2} mg/l	0.5	1.0	
Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	"BLQ("LOQ-0	.02) mg/l	0.05	No Relaxation	
Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	"BLQ(""LOQ-0	001) mg/l	0.001	0 002	
Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.39	mgA	5.0	15.0	
	e Number : VTL/W/09 & Address of the Party e Description ing Location e Collected By vation d of sampling Test Parameters pH (at 25°C) Turbidity Total Hardness (as CaCO Calcium (as Ca) Total Alkalinity (as CaCO Calcium (as Ca) Total Alkalinity (as CaCO Chloride (as Cl) Magnesium (as Mg) Total Dissolved Solids Sulphate (as SO4) Fluoride (as F) Nitrate (as NO3) Iron (as Fe) Aluminium (as Al) Boron (as B) Total Chromium (as Cr) Phenolic Compounds (C6H5OH)	e Number : VTLW/09 & Address of the Party : M/s Jhabua Power Limited (A JV of NT Post Office - Attaria, Tehsil- Ghansore ing Location : Village - Binaiki e Collected By : VTL Team vation : Suitable Preservation d of sampling : IS :3025 Test Parameters Test Method pH (at 25°C) IS : 3025 (P-11) : 2022 Turbidity IS : 3025 (P-10) 1984, RA 2017 Total Hardness (as CaCO3) IS : 3025 (P-10) 1984, RA 2017 Total Hardness (as CaCO3) IS : 3025 (P-21) : 2009, RA 2019 Calcium (as Ca) IS : 3025 (P-21) : 2009, RA 2019 Calcium (as Ca) IS : 3025 (P-21) : 1991, RA 2019 Total Alkalinity (as CaCO3) IS : 3025 (P-23) : 1986, RA 2019 Chloride (as Cl) IS : 3025 (P-32) : 1988, RA 2019 Chloride (as Cl) IS : 3025 (P-32) : 1988, RA 2019 Total Dissolved Solids IS : 3025 (P-34) : 1984, RA 2017 Sulphate (as SO4) IS : 3025 (P-34) : 1984, RA 2017 Nitrate (as NO3) IS : 3025 (P-34) : 1988, RA 2019 Iron (as Fe) APHA 23rd Edition , 4500FD 2017 Nitrate (as NO3) IS : 3025 (P-34) : 1988 Iron (as B) APHA 23rd Edition , 45008, 2017 Total Chromum (as Cr) APHA 23rd Edition 2017 : 3113 B, 2017 Phenolic Compounds APHA 23rd Edition : 530C (C6H5OH) APHA 23rd Edition : 530C 2017 Zinc (as Zn) APHA 23rd Edition : 3020 APHA 23rd Edition : 30217 Zinc (as Zn) APHA 23rd Edition : 3020 Phenolic Compounds APHA 23rd Edition : 30217 APHA 23rd Edition : 30217 APHA 23rd Edition : 2017 Zinc (as Zn) APHA 23rd Edition : 3020 APHA 23rd Edition : 2017 Zinc (as Zn) APHA 23rd Edition : 3020 APHA 23rd Edition : 3020 APHA 23rd Edition : 3020 APHA 23rd Edition : 3020 2017	e Number : VTLW/09 M/s Jhabue Power Limited (A JV of NTPC LTD.) FR & Address of the Party : M/s Jhabue Power Limited (A JV of NTPC LTD.) FR Post Office - Attana, Tehsil- Ghansore Seoni MP R # Description : Water Sample R ing Location : Village - Binsiki S e Collected By : VTL Team S vation : Suitable Preservation S d of sampling : IS : 3025 C Test Parameters Test Method Results pH (at 25°C) IS : 3025 (P-10): 2002 7.56 Turbidity IS : 3025 (P-10): 2009, RA 2017 *BLQ(**LOQ-* Total Hardness (as CaCO3) IS : 3025 (P-21): 2009, RA 2019 208 Calcium (as Ca) IS : 3025 (P-23): 1986, RA 2019 163 Choride (as Cl) IS : 3025 (P-32): 1988, RA 2019 70.3 Magnesium (as Mg) IS : 3025 (P-32): 1988, RA 2019 70.3 Magnesium (as Mg) IS : 3025 (P-34): 1984, RA 2017 479 Sulphate (as SO4) IS : 3025 (P-34): 1986, RA 2019 0.78 Ruride (as F)	e Number: VTL.W/99 & Address of the Party : M/s Jhabue Power Limited (A JV of NTPC LTD.) Post Office - Attaria. Tehsil- Ghansore Seoni MP Party Reference No Report Date Period of Analysis Receipt Date a collected By : VTL Team vation : Suitable Preservation d of sampling 1 is :3025 Test Parameters Test Parameters Test Parameters Test Nethod A failog : 15 : 3025 (P-11) : 2022 Test Parameters Test Nethod A failog : 15 : 3025 (P-11) : 2022 Total Hardness (as CaCO3) IS : 3025 (P-10) 1994, RA 2019 Calcium (as Cal Calcium (as Cal Chord (as CD) NE 3025 (P-20) 1988, RA 2019 Suitable Preservation Total Dissolved Solds IS : 3025 (P-20) 1988, RA 2019 Suitable SC (P-20) 1988, RA 2019 Suitable (as SO4) IS : 3025 (P-24) 1996, RA 2022 So 3 mg/I Suitable (as SO4) IS : 3025 (P-24) 1996, RA 2022 So 3 mg/I Suitable (as SO4) IS : 3025 (P-24) 1996, RA 2022 So 3 mg/I Suitable (as SO4) IS : 3025 (P-34) 1988 IS : 4 Mg/I Iron (as Fe) APHA 23rd Edition, 4500P Paulor * BLQ(**LOQ-0.01) mg/I Boron (as B) APHA 23rd Edition 2017 * BLQ(**LOQ-0.02) mg/I Boron (as B) APHA 23rd Edition 530C: *BLQ(**LOQ-0.01) mg/I Zinc (as Zn) APHA 23rd Edition 530C: *BLQ(**LOQ-0.01) mg/I Suita Cas Zn) APHA 23rd Edition 530C: *BLQ(**LOQ-0.01) mg/I	Number: VTLW000 Report No. VTLW124100 & Address of the Party : M/s Jhabus Power Limited (A JV of NTPC LTD.) Pormat Na : 7.8 F-01 Post Office - Attaria. Tehsil- Ghansore Seeni MP Party Reference No. : 4302005689 e Description : Water Sample Garadi : 03/10/2024-10 Period of Analysis : 03/10/2024-10 e Collected By : VTL Team Sampling Date : 03/10/2024 : 03/10/2024 e Collected By : VTL Team Sampling Date : 03/10/2024 : 03/10/2024 e Collected By : VTL Team Sampling Type : 03/10/2024 : 03/10/2024 e Collected By : VTL Team Sampling Type : 03/10/2024 : 03/10/2024 e d sampling : IS : 3025 Coordinates : : 03/10/2024 d of sampling : IS : 3025 Coordinates : : 03/10/2024 prot table : IS : 3025 Coordinates : : 03/10/2024 ratio is an is is : 3025 (P-10) : IS : 3025 (P-10) NTU : IS : 10/10 : 2 !Lr tad is	











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Experim	nor the unimaginable" a Number : VTL/W/09	W.	ULR No Report		TC1122724000002145F ; VTL/W/2410030009/A		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOO-0.02)	mg/l	0.05	1.5	
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3	
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*ELQ(**LOQ-0.002)	ngil	0.003	No Relaxation	
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	"BLQ(""LOQ-0.005)	mg/l	0.01	No Relaxation	
22	Selenium (as Se)	APHA 23rd Edition, 3114C. 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
23	Arsenic (as As)	APHA 23rd Edition, 3114C. 2017	"BLQ(**LOQ-0.005)	mg/l	0.01	0.05	
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation	
25	Total Coliform	IS : 15185 : 2016	Absent	per 100 mi	Shall not be detectable in any 100 mi sample	-	
28	E.Coli	IS : 15185 : 2016	Absent	per 100 ml	Shal not be detectable in any 100 ml sample	-	
27	Free Residual Chlonne	IS 3025 (P-26) 2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0	

*BLQ-Below Limit Of Quantification, **LOO- Limit of Quantification

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	e Number : VTL/W/09					Report	No.	: VTL/W/24100	30009/B	
Name	& Address of the Party	: M/s .	M/s Jhabua Power Limited (A JV of NTPC LTD.)			Format	No	- 7.8 F-01		
		Post	Office - Attaria.	Tehsil- Ghansore	Seoni MP	0.00000	eference No	· · · · · · · · · · · · · · · · · · ·		
						Report	Date	: 10/10/2024		
						Period (of Analysis	: 03/10/2024-10	10/2024	
Sampl	le Description	: Wate	r Sample	4 3		Receipt		: 03/10/2024	1012024	
Sampl	ling Location		je - Binaiki			Samplin	o Date	: 02/10/2024		
Sampl	le Collected By	: VTL	Team			Samplin	1700 COLUMN	; Grab		
Prese	rvation	: Suita	ble Preservatio	n		Sample	Quantity	÷ 2 Ltr.		
Metho	d of sampling	: IS :3	025			Coordin	ates	:		
S.No. Test Parameter		5	Test Method		Resu	Results		IS:10500-2012		
								Acceptable Limit	Permissible Limit	
1	Colour		IS: 3025:(P-4)1983, :RA 2017	"BLQ(""LC	Q-5.0)	Hazen	5	15	
2	Odour		IS : 3025 (F	P-5) : RA 2018	Agrees	able	-	Agreeable	Agreeable	
3	Taste		IS 3025 (P-8	1984 RA 2017	Agrees	able	-	Agreeable	Agreeable	
4	Cyanide (as CN)		1000	3rd Edition 0D.2017	"BLQ(""LC	00-5.0)	mg/l	0.05	No Relaxation	
5	Anionic Detergents (as M	BAS)	0.0000000000000000000000000000000000000	Edition , 5540C	"BLQ(""LO	Q-0.05)	mg/i	0.2	1.0	

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

""End of Report""









RK Yadav	T
Lab inchar	se B2
Authorized	Signatory

Page No. 1/1

conditions PTC

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ULR No.





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		eport No.	: VTL/W/2410030010/A			
& Address of the Party		12018132532 - 202		; 7.8 F-01		
	Post Office - Attana, Tensil- Ghansore	Seoni MP Pa	arty Reference No	: 4300005689		
		R	eport Date	: 10/10/2024		
Deseriation	11111 II - 1110			: 03/10/2024-10	2/10/2024	
			16 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y	: 03/10/2024		
110 T	승규는 것이 같은 것이 같은 것이 같이		N (1997) - C (1997) - C (1997)	(1, <u>2, 5, 5, 7, 7, 7, 7</u> , 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,		
	1000 C 200 C		1	(18 V)	00 0040	
reor raiameters	reschiethoù	Results	Units	15:105	00-2012	
				Acceptable Limit	Permissible Limit	
pH (at 25°C)	IS: 3025 (P-11): 2022	7.63	**	6 5 to 8 5	No Relaxation	
Turbidity	IS: 3025: (P-10)1984, RA 2017	"BLQ(""LOQ-1	.0) NTU	1	5	
Total Hardness (as CaCC	3) IS: 3025 (P-21): 2009, RA 2019	186	mg/l	200	600	
Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	54.8	ngm	75	200	
Total Alkalinity (as CaCO	3) IS 3025 (P-23): 1986, RA 2019	157	mp/l	200	600	
Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	70.3	mg/l	250	1000	
Magnesium (as Mg)	IS 3025 (P-46): 1994, RA 2019	11.97	mg/l	30	100	
Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	435	mg/l	500	2000	
Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	40.5	mg/l	200	400	
Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	0.81	mg/l	1.0	1.5	
Nitrate (as NO3)	IS: 3025 (P-34): 1988	12.6	mg/i	45.0	No Relaxation	
lron (as Fe)	APHA 23rd Edition , 31118,2017	0.30	ngn	1.0	No Relaxation	
Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(""LOQ-0	03) mg/l	0.03	0.2	
Boron (as B)	APHA 23rd Edition, 45008,2017	*BLQ(**LOQ-0	.2) mg/l	0.5	1.0	
Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	*BLQ(**LOQ-0	02) mg/l	0.05	No Relaxation	
Phenolic Compounds (CSH5OH)	APHA 23rd Edition 5530C: 2017	"BLQ(""LOQ-0.0	1001) mg/l	0.001	0.002	
Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.43	mg/i	5.0	15.0	
	e Number : VTL/W/10 & Address of the Party e Description ing Location e Collected By vation d of sampling Test Parameters pH (at 25°C) Turbidity Total Hardness (as CaCO Calcium (as Ca) Total Alkalinity (as CaCO Calcium (as Ca) Total Dissolved Solids Sulphate (as SO4) Fluoride (as F) Nitrate (as NO3) Iron (as Fe) Aluminium (as Al) Baron (as B) Total Chromium (as Cr) Phenolic Compounds (CSHSOH)	e Number : VTL/W/10 & Address of the Party : Mis Jhabus Power Limited (A JV of NT Post Office - Attains, Tehsil- Ghansore Post Office - Attains, Tehsil- Ghansore e Collected By : VTL Team vation : Suitable Preservation d of sampling : IS :3025 Test Parameters Test Method pH (at 25°C) IS : 3025 (P-11) : 2022 Turbidity IS : 3025 (P-11) : 2022 Turbidity IS : 3025 (P-10) 1984, RA 2017 Total Hardness (as CaCO3) IS : 3025 (P-10) 1984, RA 2019 Galcium (as Ca) IS : 3025 (P-21) : 2009, RA 2019 Calcium (as Ca) IS : 3025 (P-21) : 1991, RA 2019 Total Alkalinity (as CaCO3) IS : 3025 (P-23) : 1988, RA 2019 Chloride (as Cl) IS : 3025 (P-32) : 1988, RA 2019 Chloride (as Cl) IS : 3025 (P-32) : 1988, RA 2019 Total Dissolved Solids IS : 3025 (P-34) : 1984, RA 2017 Sulphate (as NO3) IS : 3025 (P-34) : 1984, RA 2017 Nitrate (as NO3) IS : 3025 (P-34) : 1988, RA 2022 Fluoride (as F) APHA 23rd Edition , 4500FD :2017 Nitrate (as NO3) IS : 3025 (P-34) : 1988 Iron (as Fe) APHA 23rd Edition , 4500FD :2017 Aluminium (as Al) IS : 3025 (P-55) : 2003, RA 2019 Boron (as B) APHA 23rd Edition 2017 : 3113 B, 2017 Phenolic Compounds (CSH5OH) APHA 23rd Edition 2017 : 3113 B, 2017 Zinc (as Zn) APHA 23rd Edition 303D,	e Number : VTL/W/I0 & Address of the Party : M/s Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil-Ghansore Sepni MP Post Office - Attaria, Tehsil-Ghansore Sepni MP Prost Office - Attaria, Tehsil-Ghansore Sepni MP Provide (as Ca) IS: 3025 (P-10): 12022 Provide (as Ca) IS: 3025 (P-11): 2022 Auminium (as Al) IS: 3025 (P-23): 1988, Prost 2017 Auminium (as Al) IS: 3025 (P-46): 1994, Prost 2017 Auminium (as Al) IS: 3025 (P-46): 1984, Prost 2017 Auminium (as Al) IS: 3025 (P-46): 1984, Prost 2017 Auminium (as Al) IS: 3025 (P-34): 1988 APHA 23rd Edition, 4500FD 2017 Phenolic Compounds APHA 23rd Edition, 2017 3113 PLQ(**LOQ-0, B, 2017 Phenolic Compounds APHA 23rd Edition, 2017 3113 PLQ(**LOQ-0, B, 2017 Phenolic Compounds APHA 23rd Edition, 303DD, 0, 43 PLA (**LOQ-0, C) Phenolic Compounds APHA 23rd Edition, 303DD, 0, 43 PLA (**LOQ-0, C) PLA (**LOQ-0, C) PLA (**LOQ-0, C) PLA (**LOQ-0, C) PLA (**LOQ-0, C) PLA (**LOQ-0, C) PLA (**LOQ-0, C) PL	e Number: VTL/W/I0 & Address of the Party : Mis Jhabus Power Limited (A. JV of NTPC LTD.) Post Office - Attains. Tehsil: Ghansore Seoni MP Party Reference No Report Date Period of Analysis e Description : Water Sample ing Location : Village - Durjanpur e Collected By : VTL Team vation : Suitable Preservation d f sampling : IS :3025 Test Parameters Test Parameters Test Parameters Test Parameters Test Method Priod Sample Quantity d f sampling : IS : 3025 (P-11) :2022 7.63 	e Number : VTLWND & Address of the Parky : Mis Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Attains, Tehsil-Ghansore Sean IMP Post Office - Attains, Tehsil-Ghansore Sean IMP Parky Reference No. : 7.8 F-01 Parky Reference No. : 4300005059 Report Date : 03/10/2024 Period of Analysis : 03/10/2024 Period of Analysis : 03/10/2024 e Description : Water Sample : 03/10/2024 e Collected By : VTL Team vation : Suitable Preservation : Sample Quantity : 2 Liz of sampling : 18 : 3025 : Coordinates : Test Parameters Test Method Results : Test Parameters I : 3025 : Coordinates : Tabibily : 15 : 3025 (P-11) : 2022 7.63 : 6.5 to 8.5 Tarbibily : 15 : 3025 (P-10) 1984, RA 2017 'BLQ(*LQ-1.0) NTU 1 Total Hardness (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 1985 mg/l : 200 Calcium (as Ca) : 15 : 3025 (P-10) 1984, RA 2019 1985 mg/l : 200 Chierde (as Ci) : 15 : 3025 (P-10) 1984, RA 2019 1957 mg/l : 200 Chierde (as Ci) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-10) 1984, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-24) : 1988, RA 2019 119.7 Total Akalinity (as CaCO3) : 15 : 3025 (P-24) : 1988, RA 2019 119.7 Magneasium (as Mg) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as SO4) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as SO4) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as RO3) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as RO3) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as RO3) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as RO3) : 15 : 3025 (P-24) : 1988, RA 2019 20.3 Sulphate (as RO3) : 15 : 3025 (P-24) : 1988, RA 2020 20.3 Parcel (as B) : APHA 23rd Edition , 2037 20.3 Beron (as B) : APHA 23rd Edition , 2017 3113 BLQ(**LOQ-0.02)	











Page No. 1/2

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Sampl	SKAN I nor the unimogloadie" e Number : VTL/W/10		ULR No Report		+ TC112272400 ; VTL/W/24100	
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012
					Acceptable Limit	Permissible Limit
18	Copper (ss Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B.2017	"BLQ(""LOQ-0.005)	mg/l	0.01	No Relaxation
22	Selerium (as Se)	APHA 23rd Edition, 3114C, 2017	"BLQ(""LOQ-0.005)	mg/l	0.01	No Relaxation
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	D.01	0.05
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	"BLQ(*"LOQ-0.001)	mg/l	0.001	No Relaxation
25	Total Colform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-
	E.Coli	IS: 15185: 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-
27	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/t	0.2	1.0

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

End of Report











Page No. 2/2

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Samp	e Number : VTL/W/10				Report No.		: VTL/W/2410030010/8		
Name & Address of the Party : M/s Jha			Vs Jhabus Power Limited (A JV of NTPC LTD.)		Format No		+ 7.6 F-01		
		Post Office - Attaria, Tehsil- Ghansore Se			Party R	eference No	: 4300005689		
					Report	Date	: 10/10/2024		
					Period	of Analysis	: 03/10/2024-10	0/10/2024	
Sampl	e Description	: Wate	er Sample		Receipt	Date	: 03/10/2024	2012/2012/2011	
Sampl	ing Location	: Villa;	je - Durjanpur		1.2 (5.1	ng Date	: 02/10/2024		
Sampl	e Collected By	: VTL	Team		Samplin	ng Type	: Grab		
Preser	vation	: Suita	ble Preservation	Sample Quantity			1 2 Ltr.		
Metho	d of sampling	: 15 :3	3025 -		Coordinates		1-		
S.No. Test Parameter		1	Test Method	Results		Units	IS:105	00-2012	
							Acceptable Limit	Permissible Limit	
1	Colour		IS: 3025:(P-4)1983, RA 2017	*BLQ(**LC	Q-5.0)	Hazen	5	15	
2	Odour		IS: 3025 (P-5): RA 2018	Agreea	ble	-	Agreeable	Agreeable	
3	Taste		IS :3025 (P-8): 1984 RA 2017	Agrees	ible	+	Agreeable	Agreeable	
4	Cyanide (as CN)		APHA 23rd Edition _4500D,2017	"BLQ("'LC	Q-5.0)	mgʻi	0.05	No Relaxation	
5	Anionic Detergents (as Mi	BAS)	APHA 23rd Edition , 5540C	*BLQ(**LO	Q-0.05)	mg/l	0.2	1.0	

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

End of Report

2017









RK Yadav	A
Lab Inchar	Be B2
Authorize	d Signatory

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Consilion





: M/s Jhabus Power Limited (A JV of NTPC LTD.) Post Office - Atlana, Tehsil- Ghansore Seoni MP

Sample Description	: Water Sample				
Sampling Location	: Village - Guneri				
Sample Collected By	: VTL Team				
Preservation	: Suitable Preservation				
Method of sampling	: 19 3025				

ULR No.	: TC1122724000002147F
Report No.	: VTL/W/2410030011/A
Format No	- 7.8 F-01
Party Reference No	: 4300005589
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Sampling Type	: Grab
Sample Quantity	1 2 Ltr.

		3025	Coordin	ates	1.00	
S.No.	Test Parameters	Test Parameters Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (el 25°C)	IS : 3025 (P-11) : 2022	7.46	-	6.5 to 8.5	No Relaxation
2	Turbidity	IS: 3025. (P-10)1984, RA 2017	"BLQ(""LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21): 2009, RA 2019	178	mg/i	200	600
4	Calcium (as Ca)	IS 3025 (P- 40): 1991 RA 2019	52.3	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	143	mg/l	200	600
6	Chloride (as Cl)	IS: 3025 (P-32): 1988, RA 2019	66.8	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	11.54	mg/t	30	100
8	Total Dissolved Solids	IS :3025 (P-16): 1984, RA 2017	396	mg/l	500	2000
9	Sulphate (as SC4)	IS: 3025 (P-24): 1986, RA 2022	44.8	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition .4500FD :2017	0.83	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	13.6	mg/i	45.0	No Relaxation
12	Iron (as Fe)	APHA 23/d Edition . 3111B.2017	0.35	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	"BLQ(""LOQ-0.2)	mg/l	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B; 2017 +	*BLQ(**LOQ-0.02)	mg/l	0.05	No Relaxation
	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	"BLQ("*LOQ-0.001)	mg/l	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.49	mg/l	5.0	15.0











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"Experience the unimogenable" Sample Number : VTL/W/11			ULR No Report		TC1122724000002147F : VTL/W/2410030011/A		
S.No.	Test Parameters	Test Parameters Test Method	Results	Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	ng/t	0.05	1.5	
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	"BLQ(""LOQ-0.05)	mg/l	0.1	03	
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	"BLQ(""LOQ-0.002)	mg/l	0.003	No Relaxation	
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	"BLQ(""LOQ-0.005)	mg/l	0.01	0.05	
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	"BLQ(""LOQ-0.001)	mgΛ	0.001	No Relaxation	
25	Total Coliform	IS 15185 2018	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	-	
	E Col	IS : 15185 ; 2016	Absent	per 100 mi	Shall not be detectable in any 100 ml sample	-	
27	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0	

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

End of Report











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,	: M/s Jhabua Power Limited (A JV of NTPC LTD.)
	Post Office - Attaria, Tehsil- Ghansore Seoni MP

Sample Description	: Water Sample
Sampling Location	: Village - Guneri
Sample Collected By	: VTL Team
Preservation	: Suitable Preservation
Method of sampling	: IS :3025

Report No.	: VTL/W/2410030011/B
Format No	; 7.8 F-01
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Sampling Type	: Grab
Sample Quantity	÷ 2 Ltr.

+10,3020			Coordinates		;		
S.No.	9. Test Parameters	Test Method	Results	Units	IS:10500-2012		
					Acceptable Limit	Permissible Limit	
1	Colour	IS: 3025:(P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15	
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	·	Agreeable	Agreeable	
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agreeable	+	Agreeable	Agreeable	
4	Cyanide (as CN)	APHA 23rd Edition ,45000,2017	"BLQ(""LOQ-5.0)	mg/l	0.05	No Relaxation	
5	Anionic Detergents (as MBAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LOQ-0.05)	mg/l	0.2	1.0	

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

End of Report









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Lab Incharge	-
Authorized Signatory	>

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Name & Address of the Party : M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Sample Description	: Water Sample
Sampling Location	: Village - Dola
Sample Collected By	: VTL Team
Preservation	: Suitable Preservation
Method of sampling	: IS :3025

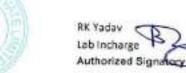
ULR No.	: TC1122724000002148F
Report No.	: VTL/W/2410030012/A
Format No	: 7.8 F-01
Party Reference No	: 4300005689
Report Date	; 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	; 02/10/2024
Sampling Type	: Grab
Sample Quantity	2 Lir.

		3025	Coordin	nates	:	
S.No	Test Parameters	ameters Test Method	Results	Units	IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS: 3025 (P-11): 2022	7.51	++	6.5 to 8.5	No Relaxation
2	Turbidity	IS . 3025: (P-10)1984, RA 2017	*BLQ(**LOQ-1.0)	NTU	1	5
3	Total Hardness (as CaCO3)	IS: 3025 (P-21), 2009, RA 2019	234	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	70.63	mg/l	75	200
5	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	214	mg/i	200	600
6	Chloride (as CI)	IS: 3025 (P-32): 1988, RA 2019	79.5	mg/l	250	1000
7	Magnesium (as Mg)	IS: 3025 (P-46): 1994, RA 2019	14.04	mg/t	30	100
8	Total Dissolved Solids	IS .3025 (P-16): 1984, RA 2017	478	mg/l	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	48.6	mg/l	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	0.87	mgJI	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	18.5	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B.2017	0.33	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	*BLQ(**LOQ-0.03)	mg/l	0.03	0.2
14	Boron (as 8)	APHA 23rd Edition, 4500B,2017	'BLQ(**LOQ-0.2)	mg/l	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	No Relaxation
	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C: 2017	*BLQ(**LOQ-0.001)	mg/t	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.50	mg/l	5.0	15.0

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"Experience the write ophable" Sample Number : VTL/W/12			ULR No Report		TC1122724000002148F 1 VTL/W/2410030012/A		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
18	Copper (as Cu)	APHA 23rd Edition 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5	
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*8LQ(**LOQ-0.05)	mg/l	0.1	0.3	
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation	
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	0.05	
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	*BLQ(**LOQ-0.001)	mg/l	0.001	No Relaxation	
25	Total Coliform	IS : 15185 : 2016	Absent	per 100 ml	Shall not be detectable in any 100 ml sample	~	
	E.Coli	IS : 15185 : 2016	Absent	per 100 mi	Shall not be detectable in any 100 mi sample	-	
27	Free Residual Chlorine	IS 3025 (P-26):2021	*BLQ(**LOQ-0.2)	mg/l	0.2	1.0	

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

End of Report









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Samp	le Number : VTL/W/12				Report	No.	: VTL/W/24100	30012/8
Name & Address of the Party : M/s Jhabua Power Limited (A JV of N Post Office - Attaria, Tehsil- Ghabson				Format Party P	No eference No	- 7.8 F-01		
		1.6023	Contra Co	ooyiii ar	822000	98.	: 4300005669	
					Report		: 10/10/2024	
					of Analysis	: 03/10/2024-10	W10/2024	
232 17	le Description	: Wate	er Sample		Receipt	Date	: 03/10/2024	
Samp	ling Location	: Villa	ge - Dola		Samplin	ng Date	: 02/10/2024	
Samp	le Collected By	: VTL	Team		Samplin	ng Type	: Grab	
Prese	rvation	: Suita	ble Preservation		Sample	Quantity	: 2 Ltr	
Method of sampling : IS :3025		025	Coordinates		:-			
S.No. Test Parameter		Parameters Test Method F		Resu	lts Units		IS:10500-2012	
							Acceptable Limit	Permissible Limit
1	Colour		IS: 3025:(P-4)1983, RA 2017	*BLQ(**LC	00-5.0]	Hazen	5	15
2	Odour		IS : 3025 (P-5) : RA 2018	Agrees	able		Agreeable	Agreeable
3	Taste		IS :3025 (P-8): 1984 RA 2017	Agrees	able	-	Agreeable	Agreeable
4	Cyanide (as CN)		APHA 23rd Edition * ,4500D,2017	*BLQ(**L0	DQ-6.0)	mg/l	0.05	No Relaxation
5	Anionic Detergents (as M	BAS)	APHA 23rd Edition , 5540C 2017	*BLQ(**LO	Q-0.05)	mg/l	0.2	1.0

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

End of Report











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ULR No.

Report No.





1 TC1122724000002149F

: VTL/W/2410030013/A

Samp Samp Samp Prese	& Address of the Party le Description ling Location le Collected By rvation d of sampling	: M/s Jhabua Power Limited (A JV of NT Post Office - Attaria, Tehsil- Ghansore : Water Sample : Village - Gorskhpur : VTL Team : Suitable Preservation : IS :3025	1 0 11 0 11 0 10 0		: 10/10/2024 : 03/10/2024-10/10/2024 : 03/10/2024 : 02/10/2024 : Grab : 2 Ltr.	
S.No	Test Parameters		Results	Units	: IS:10500-2012	
					Acceptable Limit	Permissible Limit
1	pH (at 25°C)	IS : 3025 (P-11) : 2022	7.68		6.5 to 8.5	No Relaxation
2	Turbidity	IS : 3025: (P-10)1984, RA 2017	*BLQ(**LOQ-1	.0) NTU	1	5
3	Total Hardness (as CaCC	3) IS: 3025 (P-21): 2009, RA 2019	247	mg/l	200	600
4	Calcium (as Ca)	IS: 3025 (P-40): 1991 RA 2019	67.52	mg/l	75	200
5	Total Alkalinity (as CaCO)	3) IS: 3025 (P-23): 1986, RA 2019	192	mg/i	200	600
6	Chloride (as CI)	IS: 3025 (P-32): 1988, RA 2019	70.5	mg/l	250	1000
7	Magnesium (as Mg)	IS 3025 (P-46): 1994, RA 2019	19.08	mg/i	30	100
8	Total Dissolved Solids	IS .3025 (P-16): 1984, RA 2017	420	ng/ī	500	2000
9	Sulphate (as SO4)	IS: 3025 (P-24): 1986, RA 2022	35.2	ll,gm	200	400
10	Fluoride (as F)	APHA 23rd Edition ,4500FD :2017	0.69	mg/l	1.0	1.5
11	Nitrate (as NO3)	IS: 3025 (P-34): 1988	15.3	mg/l	45.0	No Relaxation
12	Iron (as Fe)	APHA 23rd Edition , 3111B,2017	0.36	mg/l	1.0	No Relaxation
13	Aluminium (as Al)	IS 3025 (P-55): 2003, RA 2019	"BLQ(""LOQ-0.0	03) mg/l	0.03	0.2
14	Boron (as B)	APHA 23rd Edition, 4500B,2017	"BLQ("'LOQ-0	2) mg/i	0.5	1.0
15	Total Chromium (as Cr)	APHA 23rd Edition 2017 3113 B, 2017	"BLQ(""LOQ-0.0	02) mg/l	0.05	No Relaxation
16	Phenolic Compounds (C6H5OH)	APHA 23rd Edition 5530C. 2017	"BLQ[""LOQ-0 0	01) mg/l	0.001	0.002
17	Zinc (as Zn)	APHA 23rd Edition,3030D, 3113 B , 2017	0.45	mg/l	5.0	15.0











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Sampl	rce the unimogitable" e Number : VTL/W/13		ULR N Report	51. C	1 TC1122724000002149F 1 VTL/W/2410030013/A		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
18	Copper (as Cu)	APHA 23rd Editor 3111B 2017	*BLQ(**LOQ-0.02)	mg/l	0.05	1.5	
19	Manganese (as Mn)	APHA 23rd Edition, 3030D, 3111 B, 2017	*BLQ(**LOQ-0.05)	mg/l	0.1	0.3	
20	Cadmium (as Cd)	APHA 23rd Edition, 3030D, 3113 B, 2017	*BLQ(**LOQ-0.002)	mg/l	0.003	No Relaxation	
21	Lead (as Pb)	APHA 23rd Edition, 3030D, 3113 B,2017	"BLQ(""LOQ-0.005)	mg/l	D.01	No Relaxation	
22	Selenium (as Se)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/l	0.01	No Relaxation	
23	Arsenic (as As)	APHA 23rd Edition, 3114C, 2017	*BLQ(**LOQ-0.005)	mg/î	0.01	0.05	
24	Mercury (as Hg)	APHA 23rd edition, 3114C 2017	"BLQ(""LOQ-0.001)	mg/l	0.001	No Relaxation	
25	Total Colform	IS : 15185 : 2016	Absent	per 100 mi	Shall not be detectable in any 100 ml sample	2	
	E.Coli	IS : 15185 : 2016	Absent	per 100 mi	Shall not be detectable in any 100 ml sample	-	
27	Free Residual Chlorine	IS 3025 (P-26) 2021	"BLQ(""LOQ-0.2)	mg/i	0.2	1.0	

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

End of Report











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5

Sampl	e Number : VTL/W/13		Repor	t No.	: VTL/W/24100	30013/8	
Name	& Address of the Party	: M/s Jhabua Power Limited (A JV of NT	's Jhabua Power Limited (A JV of NTPC LTD.) Format No : 7.6 F-01		2201210		
		Post Office - Attaria, Tehsil- Ghansore	Seoni MP Party	Reference No			
			Repor	t Date	: 10/10/2024		
a araa			Period	d of Analysis	: 03/10/2024-10	0/10/2024	
Sampl	e Description	1 Water Sample	Receip	pt Date	: 03/10/2024		
Sampl	ing Location	: Village - Gorakhpur	Samp	ling Date	: 02/10/2024		
Sampl	e Collected By	: VTL Team	Sampl	ling Type	Grab		
Preser	Preservation : Suitable Preservation		Sampl	Sample Quantity : 2 Ltr.			
Metho	d of sampling	: IS :3025	Coord	inates	1		
S.No.	Test Parameters	Test Method	Results	Units	IS:105	00-2012	
					Acceptable Limit	Permissible Limit	
1	Colour	IS: 3025 (P-4)1983, RA 2017	*BLQ(**LOQ-5.0)	Hazen	5	15	
2	Odour	IS : 3025 (P-5) : RA 2018	Agreeable	-	Agreeable	Agreeable	
3	Taste	IS :3025 (P-8): 1984 RA 2017	Agresable		Agreeable	Agreeable	
4	Cyanide (as CN)	APHA 23rd Edition ,4500D,2017	*BLQ(**LOQ-5.0)	mg/l	0.05	No Relaxation	

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

Anionic Detergents (as MBAS)

*** End of Report***

APHA 23rd Edition , 5540C

2017



*BLQ(**LOQ-0.05)









mg/l

0.2

Term & conditions PTD

Page No. 1/1

1.0

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Annexure -8

Surface water Analysis Report

ULR No.



S.No.



Unit

Complete Humber - 0 11/01/00	· · ·
Name & Address of the Party	; Ws Jhabua Power Limited (A JV of NTPC LTD.)
	Post Office - Attaria, Tehsil- Ghansore Seoni MP

Sample Description	: SURFACE WATER
Sampling Location	: Pariyat River
Sample Collected By	: VTL Team
Preservation	: Suitable Preservatio
Method of sampling	: 15 :3025

ULR No.	: TC1122724000002150F
Report No.	; VTL/W/2410030014/A
Format No	: 7.8 F-01
Party Reference No	: 4300005659
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Sampling Type	: Grab
Sample Quantity	: 2 Ltr.

2.00

Results

\$ ×. Coordinates **Test Parameters** Test Method 3025 /P-111 2022 10 -

-				- Office
1	pH value	IS: 3025 (P-11): 2022	7.55	-
2	Turbidity	IS : 3025 (P-10) : 1984, RA 2017	"BLQ(""LOQ-1.0)	NTU
3	Total Dissolved Solids (TDS)	IS 3025 (P-16) 1984, RA 2017	392	mg/l
4	Chloride (as CI)	IS 3025 (P-32) 1988, RA 2019	34.8	mg/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1988, Sec.RA 2022	17.6	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P-23) : 1986, RA 2019	176	mg/l
7	Total Suspended Solids (TSS)	IS: 3025 (P-17) : 2022	9.2	mg/l
8	Total Hardness (CaCO3)	IS: 3025 (P- 21) : 2009, RA 2019	227	mg/l
9	Calcium (as Ca)	IS : 3025 (P-40) : 1991 RA 2019	49.6	mg/l
10	Magnesium (as Mg)	IS : 3025 (P- 46) : 1994, RA 2019	25.09	mg/l
11	Fluoride (as F)	APHA 23rd Edition, 4500D, 2017	0.58	ng/l
12	Nitrate (as NO3)	IS: 3025 (P- 34) : 1988 RA 2022	6.54	mg/l
13	Biochemical Oxygen Demand (BOD) (3 days at 27°C)	IS: 3025 (P-44) : 1993, RA : 2019	10.8	mg/l
4	Chemical Oxygen Demand (COD)	IS : 3025 (P-58) : 2006 RA 2017	37.3	mg/l
15	Iron (as Fe)	APHA 23rd Edition.3111B, 2017	0.21	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 3030D,3113B, 2017	0.32	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B. 2017	*BLQ(**LOQ- 0.02)	mg/l
18	Manganese (as Mn)	APHA_23rd Edition, 3030D,3113B, 2017	"BLQ(""LOQ- 0.05)	mg/l
19	Leed (as Pb)	APHA 23rd Edition, 3030D,3113B. 2017	*BLQ(**LOQ- 0.005)	mg/l
20	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C. 2017	*BLQ(**LOQ- 0.005)	mg/l
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ- 0.2)	mg/l











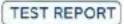
Page No. 1/2

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e Number : VTL/SW/01			
Test Parameters	Test Method	Results	Unit
Chromium (as Cr)	APHA 23rd Edition,3113B, 2017	*BLQ(**LOQ- 0.02)	mg/l
Cadmium (as Cd)	APHA 23rd Edition,3113B 2017	*BLQ(**LOQ- 0.002)	mg/l
Selenium (as Se)	APHA 23rd Edition,3114C, 2017	"BLQ(""LOQ- 0.005)	mg/i
Mercury (as Hg)	APHA 23rd Edition,3114C, 2017	"BLQ(""LOQ- 0.001)	mg/i
Phenolic Compounds	APHA 23rd Edition,5530C, 2017	"BLQ(**LOQ- 0.05)	mg/l
	e Number : VTL/SW/01 Test Parameters Chromium (as Cr) Cadmium (as Cd)	Internetworkingkoble* ULL e Number : VTL/SW/01 Reg Test Parameters Test Method Chromium (as Cr) APHA 23rd Edition,3113B, 2017 Cadmium (as Cd) APHA 23rd Edition,3113B, 2017 Selenium (as Se) APHA 23rd Edition,3114C, 2017 Mercury (as Hg) APHA 23rd Edition,3114C, 2017	Internet intermediate ULR No. 1 TC1122724 e Number : VTL/SW/01 Report No. : VTL/W/241 Test Parameters Test Method Results Chromium (as Cr) APHA 23rd Edition.3113B.2017 *BLQ(**LOQ- 0.02) Cadmium (as Cd) APHA 23rd Edition.3113B.2017 *BLQ(**LOQ- 0.002) Selenium (as Se) APHA 23rd Edition.3114C.2017 *BLQ(**LOQ- 0.005) Mercury (as Hg) APHA 23rd Edition.3114C.2017 *BLQ(**LOQ- 0.001)

*BLQ Blow limit of Quantification **LOQ Limit of Quantification

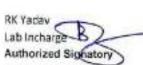
End of Report













Page No. 2/2

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Samp	le Number : VTL/SW/0	1		Report No.	: VTL/W/241	0030014/B
Name & Address of the Party ; M/s Jhabua Po		er Limited (A JV of NTPC LTD.) aria, Tohsil- Ghansore Seoni MP	Format No	; 7.8 F-01		
		r ost onice - run	and, renal- Gransple Sechime	Party Reference No	: 430000568	9
				Report Date	: 10/10/2024	
1210-05				Period of Analysis	: 03/10/2024	-10/10/2024
Samp	le Description	: SURFACE WAT	ER	Receipt Date	: 03/10/2024	
Samp	ling Location	: Pariyat River		Sampling Date	: 02/10/2024	
Sample Collected By : VTL Team		: VTL Team		Sampling Type	: Grab	
Preservation : Suitable Preservation		: Suitable Preserv	ation	Sample Quantity	: 2 Ltr.	
Metho	d of sampling	: IS :3025		Coordinates	:	
S.No.	Test Param	eters	Test Method	Resu	Its	Unit
1	Colour		IS: 3025 (P-4) = 2021	*BLQ(**L0	Q-5.0)	Hazen
2	Odour		IS: 3025 (P-5): 2018	Agreea	ble	
3	Taste		IS : 3025 (P-8) : 1984 RA 2017	Agreea	ble	**
4	Residual Free Chlorine (F	FC)	IS : 3025 (P-25) :2021	'BLQ(**LO	Q-0.2)	mgA
5	Cyanide (as CN)		APHA 23rd Edition, 4500D, 201	7 'BLQ(**LO	Q-5.0)	mg/l
6	Anionic Detergents (MBA	S)	APHA 23rd ed., 2017, 5530C	"BLQ(""LO	2 0.02)	mg/l

*BLQ Blow limit of Quantification **LOQ Limit of Quantification



""End of Report""









Page No. 1/1

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a 0141-2954638 Bd@vibranttechnolab.com

Coordinator





Name & Address of the Party ; M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Atlaria, Tehsil- Ghansore Seoni MP

Sample Description	: SURFACE WATER
Sampling Location	: Tomar River
Sample Collected By	: VTL Team
Preservation	: Suitable Preservation
Method of sampling	÷ IS :3025

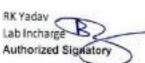
ULR No.	1 TC1122724000002151F
Report No.	; VTL/W/2410030015/A
Format No	: 7.8 F-01
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024
Sampling Date	: 02/10/2024
Sampling Type	© Grab
Sample Quantity	÷ 2 Ltr.

S.No.	Test Parameters	Test Method	Results	Unit
1	pH value	IS : 3025 (P-11) : 2022	7.68	- Unit
2	Turbidity	IS : 3025 (P-10) : 1984, RA 2017	*BLQ(**LOQ-1.0)	NTU
3	Total Dissolved Solids (TDS)	IS: 3025 (P-16): 1984, RA 2017	320	mg/l
4	Chloride (as Cl)	IS: 3025 (P-32) : 1988, RA 2019	36.4	ng/l
5	Sulphate as (SO4)	IS: 3025 (P- 24) : 1966,Sec.RA 2022	17.1	mg/l
6	Total Alkalinity (as CaCO3)	IS: 3025 (P-23): 1986, RA 2019	168	ngn hgm
7	Total Suspended Solids (TSS)	IS: 3025 (P-17) : 2022	6.9	mgit
8	Total Hardness (CaCO3)	IS 3025 (P- 21) 2009, RA 2019	141	mg/l
9	Calcium (as Ca)	IS: 3025 (P-40) : 1991 RA 2019	27.46	mg/l
10	Magnesium (as Mg)	IS : 3025 (P- 45) : 1994, RA 2019	17.61	mg/l
11	Fluoride (as F)	APHA 23rd Edition, 4500D, 2017	0.51	mg/l
12	Nitrale (as NO3)	IS: 3025 (P- 34) : 1968 RA 2022	7.23	mg/l
13	Biochemical Oxygan Demand (BOD) (3 days at 27*C)	IS: 3025 (P-44) : 1993, RA : 2019	6.18	mg/l
14	Chemical Oxygen Demand (COD)	IS 3025 (P-58) 2006 RA 2017	28.6	mg/l
15	iron (as Fe)	APHA 23rd Edition,3111B, 2017	0.21	mg/l
16	Zinc (as Zn)	APHA 23rd Edition, 30300,31138. 2017	0.35	mg/l
17	Copper (as Cu)	APHA 23rd edition, 3111B, 2017	*BLQ(**LOQ- 0.02)	mg/l
18	Manganese (as Mn)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ- 0.05)	mg∕l
19	Lead (as Pb)	APHA 23rd Edition, 3030D,3113B, 2017	*BLQ(**LOQ- 0.005)	mg/l
20	Arsenic (as As)	APHA 23rd Edition, 3030D,3114C, 2017	*BLQ(**LOQ- 0.005)	mg/l
21	Boron (as B)	APHA 23rd Edition, 4500D, 2017	*BLQ(**LOQ- 0.2)	mg/l











Page No. 1/2

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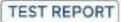
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le Number : VTL/SW/02	ULR No. : TC1122724000002151F Report No. : VTL/W/2410030015/A			
Test Paramotors	Test Method	Results	Unit	
Chromium (as Cr)	APHA 23rd Edition, 3113B, 2017	"BLQ(""LOQ- 0.02)	mgil	
Cadmium (as Cd)	APHA 23rd Edition,3113B ,2017	*BLQ(**LOQ- 0.002)	mgl	
Selenium (aș Se)	APHA 23rd Edition,3114C, 2017	"BLQ(""LOQ- 0.005)	mgil	
Mercury (as Hg)	APHA 23rd Edition,3114C, 2017	*BLQ(**LOQ- 0.001)	mg/l	
Phenolic Compounda	APHA 23rd-Edition,5530C, 2017	*BLQ(**LOQ-0.05)	ngi	
	Ie Number : VTL/SW/02 Test Parameters Chromium (as Cr) Cadmium (as Cd) Selenium (as Se)	Incretifie unimaginable" ULL Re Incretifie unimaginable INUMU02 INUMU0	ULR No. : TC1122724 Number : VTL/SW/02 Report No. : VTL/W/241 Test Parameters Test Method Results Chromium (as Cr) APHA 23rd Edition.3113B.2017 'BLQ(**LOQ- 0.02) Cadmium (as Cd) APHA 23rd Edition.3113B.2017 'BLQ(**LOQ- 0.002) Selenium (as Se) APHA 23rd Edition.3114C.2017 'BLQ(**LOQ- 0.005) Mercury (as Hg) APHA 23rd Edition.3114C.2017 'BLQ(**LOQ- 0.001)	

*BLQ Blow limit of Quantification **LOQ Limit of Quantification

End of Report













Page No. 2/2

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	ic Number : VTL/SW/0	2		Report No.	: VTL/W/2410	0030015/8
Post Sample Description : SURP Sampling Location : Toma Sample Collected By : VTL 1		: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehail- Ghansore Sconi MP : SURFACE WATER : Tomar River		Format No	- 7.8 F-01	0.0000000000000000000000000000000000000
				Party Reference No	: 4300005689	
				Report Date	: 10/10/2024 : 03/10/2024-10/10/2024 : 03/10/2024 : 02/10/2024	
				Period of Analysis		
				Receipt Date		
				Sampling Date		
		: VTL Team	VTL Team Sullable Preservation		: Grab : 2 Ltr	
		: Suitable Preserva				
Metho	d of sampling	; IS :3025		Coordinates	\$ ++	
S.No.	Test Param	eters	Test Method	Resul	ts	Unit
1	Colour		IS: 3025 (P-4): 2021	*BLQ(**LO	Q-5.0)	Hazer
2	Odour		IS: 3025 (P-5): 2018	Agreeat	ble	-
3	Taste		IS: 3025 (P-8) 1984 RA 2017	Agreeal	ble	
4	Residual Free Chlorine (F	FC)	IS : 3025 (P-26) :2021	"BLQ(""LO	9-0.2)	mg/l
5	Cyanide (as CN)		APHA 23rd Edition, 4500D, 2017	7 *BLQ(**LO	0-5.0)	mg/l
8	Anionic Detergents (MBA	S)	APHA 23rd ed., 2017, 5530C	"BLQ(""LOO	0.02)	mg/l

---End of Report---









RK Yadav	
Lab Incharge	
Authorized Signatory	

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Annexure -9

Green belt development report

Annexure-9

Green Belt Development

Plantation on 33% land of 406 acres	134 acres
Density of plantation	2500 plants/Hectare
Area required per plant	4.0 SQM
Total plantation required on 134 acres (542164 SQM) of land	135541 Nos
No of plantation completed	186232

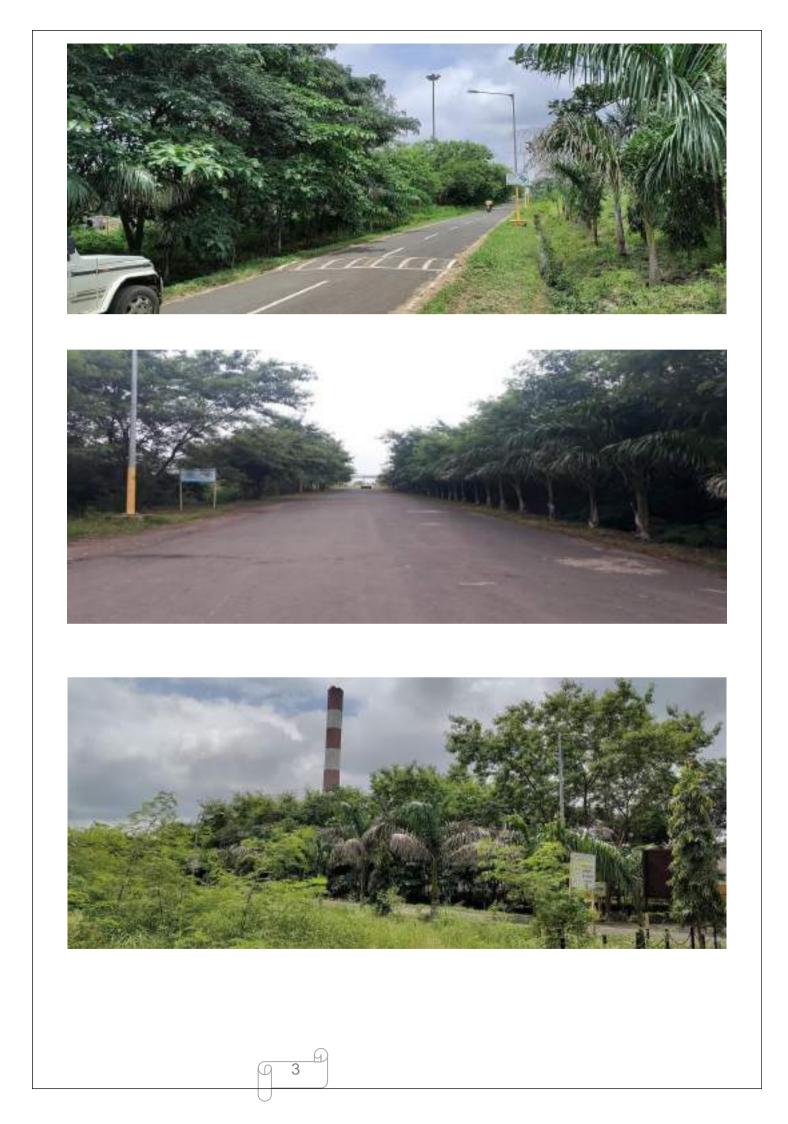
PLANTATION PHOTOGRAPH















5

D

Annexure -10

COD Letter



শান্ত যব্দা! Government of India बेन्द्रीय विद्युत गाविकरण Central Electricity Authority पश्चिम सेनीय विद्युत गणिति Western Regional Power Committee



उमई एव और 2008 ; 2008 ISO : 900J;2008

एक -3, एपआवसोसे क्षेत्र, कोंगेंग (पूर्व), बुंबई - 93 F-3, MIDC Area, Andheri (East), Mumbai -93 इन्चर Phone: 022- 28221636; 28200195; 28200164 ; देवा Fax : 022-28370193 Website : www<u>www.wmc.zov.jn</u> E-mail : ms-wrpc@nic.in

NO.WRPC/OPN/MBPMPL-COD/2016/ $\otimes \Im = \frac{1}{22}$ The state: 05.05.2016

Тο,

Chief Engineer (OM Division), Central Electricity Authority Sowa Bhavan, R.K.Poram, New Dolhi - 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. Jhabus Power Limited, vide letter No.JPL/RD/WRPC/6/1, dated 03.05.2016 have intimated the date of Commercial Operation (COD) of Unit No.1 (600 MW) of 1260 MW Jhabua Power Limited in Disti Sconi of Madhya Pradesh with effect from 00:00 hrs of 03.05.2016. In support of this M/s. Jhabua Power Limited in Disti Seoni of Madhya Pradesh, have submitted certificate from Director in prescribed format (Appendix -VL) 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 2rd May, 2016 at 95% and above of its rated capacity.

WRLDC Mumbai has furnished the verified data for continuous 72 lins running of the unit No.1(600 MW) between 20:00 Hrs of 29th April, 2016 to 20:00 Hrs of 2st 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 Jhabra 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 Deini.
- 2. Chief Engineer (GM), CEA, New Delhi.
- 3. Scoreiary, CEA, New Deihi
- 4. Director, Jhabua Power Limited in Distt Seoni of Madhya Pradesh.
- 5. Shri Gattu Rambhav, COO, Avantha Power Ltd. Gurgoon.

Annexure -11

Photographs of medical center & sanitation

First Aid Center



First Aid Center



First Aid Center



Urinals



Urinals



Toilet attached bath rooms



Annexure -12

Ambient Noise Level monitoring report

Т	E	¢.	T.	D	D	0	D	т
		3		n	F. 1		n	





: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

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

General Information:-

Ambient Temperature ("C)

Surrounding Activity

Parameter Required

	Receip
e Level Monitoring	Sampli
quirment	Sample

Report No.

Format No	: 7.8 F-04
Party Reference No	: 4300005669
Report Date	: 10/10/2024
Receipt Date	: 03/10/2024
Sampling Duration	: 24 Hrs
Sample Collected	: VTL Team
Instrument Calibration Status	; Calibrated

: VTL/N/2410030001/A

Sampling Location	3
Instrument Code	÷
Meteorological condition during monitoring	:
Date of Monitoring	1
Time of Monitoring	:

Project Site (Jhabua Power Plant) VTL/SLM/01 Clear Sky 30/09/2024 To 01/10/2024 08:00 to 06:00 Hrs. : Min.22" Max 33"

: Human, Vehicular & Plant Activities As per work order

Coordinates

S.No.	Test Parameters	Protocol	Test Re:	sult dB(A)	
			Day Time	Night Time	
1	Leq	IS 9989 - 1981 RA 2020	63.8	52.5	

Area Code	Category of Area/Zone	Limits in dB(A) Leq*		
NUMBER OF STREET		Day Time	Night Time	
٨	Industrial area	75	70	
8	Commercial area	65	55	
C	Residential area	55	45	
D	Silence Zone	50	40	

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

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

3.Sience Zone is defined as an irrea up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is benned in these apres.

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

End of Report











Page No. 1/1

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TEST REPORT





: VTL/N/2410030002/A

: 7.8 F-04

; 4300005689

: 10/10/2024

Report No.

Format No

Report Date

Party Reference No

: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria. Tehsil- Ghansore Seoni MP

				Receipt Date	: 03/10/2024
Sample Description	: Ambient Noise Level	Mon	itoring	Sampling Duration	: 24 Hrs.
Scope of Monitoring	: Regulatory Requirment	6.00	1000-00 0 0	Sample Collected	: VTL Team
Protocol Used	1 IS 9989				
Instrument Used	: SLM		*	Instrument Calibration Status	; Calibrated
General Inform	nation:-				
Sampling Locati	on	3	Village - Barela		
Instrument Code			VTL/SLM/02		
Meteorological of	condition during monitoring	4	Clear Sky		
Date of Monitori	ng	1	30/09/2024 To 01	10/2024	
Time of Monitori	ing	1	05:00 to 06:00 Hrs	5	
Ambient Temper	ature (°C)		Min.22" Max 33"		
Surrounding Act	livity	:	Human, Vehicular	& Other Activities	
Parameter Requ	ired		As per work order		

Coordinates

S.No.	Test Parameters	st Parameters Protocol		sult dB(A)
		1/2 march	Day Time	Night Time
Leq		15 9989 - 1981 RA 2020	54.2	42.8

Area Code	Category of Area/Zone	Limits in dB(A) Leq*	
		Day Time	Night Time
Å	Industrial area	75	70
6	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

2. Night Time is reckoned between 10.00 PM to 6.00 AM. 3.STence Zone is defined as an area up to 100 m around premises of Hespitals, Educational and Courts. Use of vehicle horn, Caudipoolier and Bursting of creckers is banned in these zones. Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

""End of Report""











Page No. 1/1

Vibrant Techno Lab Pvt. Ltd.

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Т	EST	R	E	PC	DR	T
			-			





Test Param	lotore		Protocol		Test Result dB/A)
Coordinates		+	7		
Parameter Required		4	As per work order		
Time of Monitoring Ambient Temperature (*C) Surrounding Activity		D5:00 to 06:00 Hrs Min.22" Max 33" Human, Vehicular & Other Activities			
Date of Monitoring		: 30/09/2024 To 01/10/2024			
Meteorological condition	on during monitoring	\$	Clear Sky		
Instrument Code		: VTL/SLM/03			
Sampling Location		3	Village - Gorakhpur		
General Information:-					
				Instrument Calibration Status	; Calibrated
	10.80.702.80.5	្		Sample Collected	: VTL Team
A BR Contraction of the set			itoring	Sampling Duration	: 24 Hrs
			Receipt Date	: 03/10/2024	
					: 4300005889 : 10/10/2024
		이 이 같은 것은 것은 것은 것이 이가 같은 것을 것 같아요.			: 7.8 F-04
Number : VTL/AN/03		20		Report No.	: VTL/N/2410030003/A
	Address of the Party Description f Monitoring I Used ent Used General Information Sampling Location Instrument Code Meteorological condition Date of Monitoring Time of Monitoring Ambient Temperature (Surrounding Activity Parameter Required Coordinates	Number : VTL/AN/03 Address of the Party : M/s Jhabua Power Lin Post Office - Attaria, To Post Office - Attaria, To Monitoring : Regulatory Requirment Used : IS 9989 ent Used : IS 9989 ent Used : SLM General Information:- Sampling Location Instrument Code Meteorological condition during monitoring Date of Monitoring Time of Monitoring Ambient Temperature (*C) Surrounding Activity Parameter Required	Number : VTL/AN/03 Address of the Party : M/s Jhabua Power Limited Post Office - Attaria, Tehsil Description : Ambient Noise Level Mon f Monitoring : Regulatory Requirment I Used : IS 9989 ent Used : SLM General Information:- Sampling Location : Instrument Code : Meteorological condition during monitoring : Date of Monitoring : Time of Monitoring : Ambient Temperature (*C) : Surrounding Activity : Parameter Required : Coordinates :	Number : VTL/AN/03 Address of the Party : M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attania, Tahsil- Ghansole Seoni MP Description : Ambient Noise Level Monitoring f Monitoring : Regulatory Requirment I Used : IS 9989 ent Used : SLM General Information:- Sampling Location : Village - Gorakhpur Instrument Code : VTL/SLM/03 Meteorological condition during monitoring : Clear Sky Date of Monitoring : 30/09/2024 To 01/10/2 Time of Monitoring : 05:00 to 06:00 Hrs Ambient Temperature (*C) : Min.22* Max 33* Surrounding Activity : Human, Vehicular & Ot Parameter Required : As per work order Coordinates : -	Number : VTL/AN/03 Report No. Address of the Party : M's Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghensole Seoni MP Format No Party Reference No Report Date Description : Ambient Noise Level Monitoring Sampling Duration f Monitoring : Regulatory Requirment Sampling Duration Used : IS 9989 Instrument ent Used : SLM Calibration Status General Information:- : VIIage - Gorakhpur Calibration Status Sampling Location : VIIage - Gorakhpur Calibration Status Meteorological condition during monitoring : Clear Sky Date of Monitoring Date of Monitoring : 05:00 to 06 00 Hrs Ambient Temperature (*C) Surrounding Activity : Human, Vehicular & Other Activities Parameter Required : As per work order

S.No.	Test Parameters	Protocol	Test Result dB(A)	
		A/	Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	52.6	42.7

A Industrial area 8 Commercial area	Day Time	Night Time
8 Commercial area	75	70
	65	55
C Residential area	55	45
D Silence Zone	50	40

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

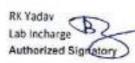
Z. Night Time is reckaned between 10.00 PM to 6.00 AM. 3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crockers is barned in these cones. Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply

End of Report











Page No 1/1

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: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Sample Description	: Ambient Noise Level Monitoring
Scope of Monitoring	: Regulatory Requirment
Protocol Used	: 15 9989
Instrument Used	: SLM

Report No.	VTL/N/2410030004/A
Format No	: 7.8 F-04
Party Reference No	: 4300005669
Report Date	: 10/10/2024
Receipt Date	: 03/10/2024
Sampling Duration	: 24 Hrs.
Sample Collected	: VTL Team
Instrument Calibration Status	; Calibrated

General Inf	ormation:-
-------------	------------

Sampling Location	1	Village - Binaiki
Instrument Code	÷	VTL/SLM/04
Meteorological condition during monitoring	4	Clear Sky
Date of Monitoring	-	30/09/2024 To 01/10/2024
Time of Monitoring	:	06:00 to 06:00 Hrs.
Ambient Temperature (°C)	:	Min.22" Max 33"
Surrounding Activity	\$	Human, Vehicular & Other Activities
Parameter Required	4	As per work order
Coordinates		-

S.No.	Test Parameters	Protocol	Test Re	sult dB(A)
			Day Time	Night Time
1	Leq	IS 9989 - 1981 RA:2020	50.4	37.8

Area Code	Category of Area/Zone	Limits i	n dB(A) Leq*
		Day Time	Night Time
4	Industrial area	75	70
8	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

2. Night Time is reckaned between 10.00 PM to 6.00 AM. 3.Senter Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle norm, Loudspeaker and bursting of crackers is berned in these abnes.

Note: Maked categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shell apply ***End of Report***











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Report No.

Format No

Report Date

Receipt Date

Instrument

Party Reference No

Sampling Duration

Sample Collected

Calibration Status





VTL/N/2410030005/A

78F-04

: 4300005669

; 10/10/2024

: 03/10/2024

: VTL Team

- Calibrated

: 24 Hrs.

: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsi- Ghansore Seoni MP

Sample Description	: Ambient Noise Level Monitoring
Scope of Monitoring	2 Regulatory Requirment
Protocol Used	: IS 9989
Instrument Used	: SLM
General Inform	ation:-

Sampling Location	Village - Panarjhi	r
Instrument Code	: VTL/SLM/01	
Meteorological condition during monitoring	: Clear Sky	
Date of Monitoring	: 30/09/2024 To 01	/10/2024
Time of Monitoring	: 06:00 to 06:00 Hr	5
Ambient Temperature (°C)	: Min.22° Max 33*	
Surrounding Activity	: Human, Vehicula	r & Other Activities
Parameter Required	: As per work order	¢

Coordinates

S.No.	Test Parameters	Protocol	Test Re:	sult dB(A)
			Day Time	Night Time
1	Leg	IS 9989 - 1981 RA 2020	53.5	42.1

Area Code	Category of Area/Zone	Limits	n dB(A) Leq*
	and an other states	Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
C	Residential area	55	45
D	Silence Zone	50	40

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

2. Night Time is reckoned between 10.00 PM to 6.00 AM. 3.Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts, Use of whicle horn, Loudspoaker and bursting of crackers is banned in these zones.

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



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A conditions PTC

Report No.

Format No

Report Date

Receipt Date

Instrument

Party Reference No.

Sampling Duration

Sample Collected

Calibration Status





: VTL/N/2410030006/A

: 7.8 F-D4

: 4300005689

: 10/10/2024

: 03/10/2024

: VTL Team

- Calibrated

: 24 Hrs.

: M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria. Tehsil- Ghansore Sechi MP

Sample Description	: Ambient Noise Level Monitorin
Scope of Monitoring	: Regulatory Requirment
Protocol Used	: 15 9989
Instrument Used	: SLM
General Inform	ation:-

Sampling Location	12	Coal Road
Instrument Code		VTDSLM/02
Meteorological condition during monitoring	:	Clear Sky
Date of Monitoring	:	01/10/2024 To 02/10/2024
Time of Monitoring	:	06:00 to 06:00 Hrs.
Amblent Temperature (*C)	:	Min.22" Max 34"
Surrounding Activity	:	Human, Vehicular & Other Activities
Parameter Required	:	As per work order
Coordinates		

S.No.	Test Parameters	Protocol	Test Re	sult dB(A)
			Day Time	Night Time
1	Leq	IS 9969 - 1961 RA 2020	49.5	38.5

Area Code	Category of Area/Zone	Limits i	n dB(A) Leq*
0.8955.0024		Day Time	Night Time
A	Industrial area	75	70
B	Commercial area	65	55
¢	Residential area	55	45
D	Silence Zone	50	40

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

2. Night Time is reckoned between 19.00 PM to 6.00 AM. 3. Silonce Zene is delined as an area up to 300 m around premises of Hospitals, Educational and Courts, Use of vehicle horn, Loudspeaker and bursting of crackers is basined in these sones.

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











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S.No. Test Para	meters	Protocol		Test Result dB(A)
Coordinates		: -		
Parameter Required		: As per work order		
Surrounding Activity		: Human, Vehicular & O	ther Activities	
Ambient Temperature	(°C)	: Min 22" Max 34"		
Time of Monitoring		: 06:00 to 05:00 Hrs.		
Date of Monitoring		: 01/10/2024 To 02/10/2	024	
Meteorological condi	tion during monitoring	: Clear Sky		
Instrument Code		: VTL/SLM/03		
Sampling Location		: Village - Guneri		
General Informatio	n:-			
Instrument Used	: SLM		Instrument Calibration Status	; Calibrated
Protocol Used	 Regulatory Requirment IS 9989 	e	Sample Collected	: VTL Team
Sample Description Scope of Monitoring	: Ambient Noise Level		Sampling Duration	: 24 H/s.
Casarata Proto data			Receipt Date	: 03/10/2024
			Report Date	: 10/10/2024
	Post Office - Attaria, Tr	ehsil- Ghansore Seoni MP	Party Reference No	: 4300005889
Name & Address of the Party		ited (A JV of NTPC LTD.)	Format No	: 7.8 F-04
Sample Number : VTL/AN/0	7		Report No.	: VTL/N/2410030007/A

S.No.	Test Parameters	Protocol	Test Re	sult dB(A)
			Day Time	Night Time
Leq		IS 9989 - 1981 RA 2020	51.3	42.1

Area Code	Category of Area/Zone	Limits	n dB(A) Leq*
		Day Time	Night Time
A	Industrial area	75	70
0	Commercial area	65	55
c	Residential area	55	45
D	Silence Zone	50	40

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

2. Night Time is reckoned between 10:00 PM to 6:00 AM. 3. Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle horn, Loudspeaker and bursting of crackers is based in

these zones. Note: Mixed categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply ***End of Report***











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Name & Address of the Party : M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Sechi MP

Sample Description	: Amblent Noise Level Monitoring
Scope of Monitoring	: Regulatory Requirment
Protocol Used	: IS 9989
Instrument Used	: SLM

Report No.	: VTL/N/2410030008/A
Format No	: 7.8 F-04
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Receipt Date	: 03/10/2024
Sampling Duration	: 24 Hrs.
Sample Collected	; VTL Team
Instrument Calibration Status	2 Calibrated

General Information:-

Sampling Location	: Village - Dola
Instrument Code	: VTL/SLM/04
Meteorological condition during monitoring	: Clear Sky
Date of Monitoring	: 01/10/2024 To 02/10/2024
Time of Monitoring	: 05:00 to 06:00 Hrs.
Ambient Temperature (°C)	: Min 22° Max 34*
Surrounding Activity	: Human, Vehicular & Other Activities
Parameter Required	: As per work order
Coordinates	· ·

S.No.	Test Parameters	Test Parameters Protocol		Test Result dB(A)		
			Day Time	Night Time		
1	Leq	IS 9989 - 1981 RA 2020	52.8	41.6		

Area Code	Category of Area/Zone	Limits in dB(A) Leg*		
	and the second sec	Day Time	Night Time	
Α	Industrial area	75	70	
B	Commercial area	65	55	
C	Residential area	55	45	
D	Silence Zone	50	40	

1. Day Time is from 5.00 AM to 10.00 PM.

2. Night Time is reckoned between 10.00 PM to 6.00 AM. 3 Silence Zone is defined as an area up to 100 m around premises of Hospitals, Educational and Courts. Use of vehicle hom, Laudspeaker and burging of crackers is barned in these zones.

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











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TEST REPORT





1	Leq	Noise Quality Standards a		1000000	9 - 1961 RA:20	100	0.7	40.1
	1.00		4	/			Time	Night Time
S.No.	Test Paran	neters	. 1		Protocol		Test Res	ult dB(A)
	Coordinates		:	7				
	Parameter Required			As per v	work order			
	Surrounding Activity		1	Human,	Vehicular & O	ther Activities		
	Ambient Temperature	(°C)		Min.22°	Max 34°			
	Time of Monitoring		4		06:00 Hrs.			
	Date of Monitoring	83 - L2D)	1		024 To 02/10/2	2024		
	Meteorological condition	on during monitoring	-	Clear S				
	Instrument Code		4	VTL/SL	() () () () () () () () () () () () () (
	Sampling Location		3	Village .	- Durjanpur			
	General Information	1:-						
Instru	nent Used	: SLM				Instrument Calibration Status	; Calibrated	1
2022	of Used	 Regulatory Requirmer IS 9989 	if.			Sample Collected	: VTL Tean	n
	e Description of Monitoring	: Ambient Noise Level		nitoring		Sampling Duration	: 24 Hrs.	
P	- Martin State					Receipt Date	: 03/10/202	24
						Report Date	: 10/10/202	34
		Post Office - Attaria, T	ensi	- Ghanso	re Seoni MP	Party Reference No	: 43000056	89
Name	& Address of the Party	: M/s Jhabua Power Lin			0 TALE 10 CHOROCOLD	Format No	7 8 F-04	
Sampl	e Number: VTL/AN/09					Report No.	: VTL/N/24	10030009/A

Area Code	Category of Area/Zone	Limits in dB(A) Leg*		
		Day Time	Night Time	
A	Industrial area	75	70	
8	Commercial area	65	55	
c	Residential area	55	45	
D	Silence Zone	50	40	

L Day Time is from 6.00 AM to 10.00 PM.

2. Night Time is reckaned between 10.00 PM to 6.80 AM.

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

Here cones. Note: Moved categories of areas be declared as one of the four above mentioned categories by the competent Authority and the corresponding standards shall apply ""End of Report""











Page No. 1/1

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Annexure -13

Ambient Air Quality monitoring report





Name & Address of the Party ; Ws Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	: VTL/A/2410030001/A
Format No	: 7.8 F-02
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

S.No.	Parame	ters	Tes	t Method	Results	Units
	Parameter Requi	red	\$	As per work order		
	Sampling Duratio	on	4	24 Hrs.		
	Method of Sampl	ing	1	IS :5182		
	Scope of Monitor	ring	1	Regulatory Requirment		
	Surrounding Act		1	Human, Vehicular & Pl	ant Activities	
	Ambient Tempera	ature (°C)	1	Min.22* Max 33*		
	Time of Monitoria	6.1 - C.	\$	10:00 to 10:00 Hrs.		
	Date of Monitorin	99	1	30/09/2024 To 01/10/2	024	
	Meteorological c	ondition during monitoring	4	Clear Sky		
	Coordinates		1	79"55'03" & 22"44'14"		
	Instrument Code		4	VTL/RDS/FPS/01		
	Sampling Equipr	nent used	1	RDS/FPS		
	Sample Collected	d By	1	VTL Team		
	General Inform Sampling Location	on	:	Project Site (Jhabua Po	ower Plant)	
Sample	Description	: AMBIENT AIR QUAL	ITY M	ONITORING		
2011 San 2	200 00000000000000000000000000000000000					

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS 5182 (P- 23)-2006, RA. 2017	62 83	hð/w _a	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	27.49	µg/m*	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P- 6)-2006, RA.2018	14 76	µg/m ^a	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA. 2018	8.94	µg/m*	80

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













Page No. 1/1

Approved & Certified) EPA 1986 Recognised, ISO:9001 and OHSAS:45001 Certified

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Report No.	÷	VTL/A/2410030001/B
Format No	:	7.8 F-02
Party Reference No	;	4300005689
Report Date	1	10/10/2024
Period of Analysis	ġ	03/10/2024-10/10/2024
Receipt Date	4	03/10/2024

SNA	Baramat			A Blathad	Description	IL STOC	
	Parameter Require	d	:	As per work order	1		
	Sampling Duration		4	24 Hrs.			
	Method of Samplin	g	1	IS :5182			
	Scope of Monitoria	1g	14	Regulatory Requirme	ent		
	Surrounding Activ	ity	4	Human, Vehicular &	Plant Activities		
	Ambient Temperat	ure (°C)	1	Min 22* Max 33*			
	Time of Monitoring	1	1	10.00 to 10.00 Hrs.			
	Date of Monitoring	l.	:	30/09/2024 To 01/10	/2024		
	Meteorological con	ndition during monitoring	: 1	Clear Sky			
	Coordinates		. iž	79*55'03" & 22*44'14	r.		
	Instrument Code		4	VTL/RDS/FPS/01			
	Sampling Equipme	ant used	- 1	RDS/FP\$			
	Sample Collected	19200-0-0.U	1	VTL Team			
	Sampling Location	1	12	Project Site (Jhabua	Power Piant)		
	General Informa						
Sample	Description	: AMBIENT AIR QUA	LITY N	ONITORING	1000		223
						A COMPT PARTY	

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis,3rd ed. 1988, Method No.317	"BLQ (""LOQ 0.5)	hā/wa	(##)

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

End of Report





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Report No.	: VTL/A/2410030002/A
Format No	7.8 F-02
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

S.No.	Parame	aters	Tes	t Method	Results
	Parameter Requi	red	1	As per work order	1
	Sampling Durati		Ŧ	24 Hrs.	
	Method of Samp	ling	ing :	IS :5182	
	Scope of Monito	ring		Regulatory Requiment	t
	Surrounding Act	ivity	1	Human, Vehicular & O	& Other Activities
	Ambient Temper	ature (*C)	- 1	Min.22* Max 33*	
	Time of Monitori	ng	10:10 to 10:10 Hrs.		
	Date of Monitoria		: 30/09/2024 To 01/10/2024	024	
	Meteorological condition during moni		9 : Clear Sky		
	Coordinates		: VTL/RDS/FPS/02 : 79°54'27" & 22°44'53'		
	Instrument Code				
	Sampling Equip	ment used	:	RDS/FPS	
General Informa Sampling Location Sample Collected			VTL Team		
			: Village - Barela		
Sample Description : AMBIENT AI		: AMBIENT AIR QUA	UALITY MONITORING		

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS 5182 (P-23)-2006, RA 2017	58.43	hðyw _a	100
2	Particulate Matter (as PM2.5)	IS 5182 (P- 24)-2019	24.62	µg/m*	60
3	Nitrogen Dioxide (as NO2)	IS.5182 (P-6)-2008, RA 2018	12.88	µg/m ^a	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA. 2018	7 56	µg/m³	80
			1 °	A State of the second sec	

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













Page No. 1/1

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; VTL/A/2410030002/B
: 7.8 F-02
: 4300005689
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024

Surrounding Activity Scope of Monitoring Method of Sampling Sampling Duration Parameter Required	Human, Vehicular & Other Activities Regulatory Requirment IS 5182 24 Hrs. As per work order
Scope of Monitoring Method of Sampling Sampling Duration	: Regulatory Requirment : IS:5182
Scope of Monitoring Method of Sampling	: Regulatory Requirment
	Human, Vehicular & Other Activities
The second	
Ambient Temperature (*C)	: Min.22° Max 33*
Time of Monitoring	: 10.10 to 10:10 Hrs.
Date of Monitoring	: 30/09/2024 To 01/10/2024
Meteorological condition during monitor	nonitoring : Clear Sky
Coordinates	: 79"54'27" & 22*44'53"
Instrument Code	: VTL/RDS/FPS/02
Sampling Equipment used	: RDS/FPS
Sample Collected By	: VTL Team
General Information:- Sampling Location	: Vilage - Barela
	AIR QUALITY MONITORING
	General Information:- Sampling Location Sample Collected By Sampling Equipment used Instrument Code Coordinates

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1 Mercury (as Hg)		Methods of air sampling and analysis,3rd ed. 1968, Method No.317			-

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

End of Report









RK Yadav	
Lab Incharge	-
Authorized Signatory	

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Name & Address of the Party ; M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attana, Tehsil- Ghansore Seoni MP

; VTL/A/2410030003/A
: 7.8 F-02
: 4300005689
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024

C No	0.000	1000 MP			and the second second
65 - 115	Parameter Requir	red	:	As per work order	
	Sampling Duratio	n	+	24 Hra.	
	Scope of Monitoring Method of Sampling		:	IS :5182	
			4	Regulatory Requirmen	t
	Surrounding Acti	vity	ः	Human, Vehicular & Other Activitie	
	Meteorological condition during monitoring Date of Monitoring Time of Monitoring Ambient Temperature (*C)		:	10:30 to 10:30 Hrs. Min 22° Max 33°	
			1		
			:	30/09/2024 To 01/10/2	/09/2024 To 01/10/2024
			ring ;	Clear Sky	
	Coordinates			79*55'44' & 22*44'15"	
	Instrument Code		;	VTU/RDS/FPS/03	
	Sampling Equips	nent used	-2	RDS/FPS	
Sample Collected		1 By	÷	VTL Team	
	General Informa Sampling Location	n		Villaga - Gorakhpur	
Sample	Description	: AMBIENT AIR C	UALITY M	ONITORING	
C	the second se				

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA 2017	55.36	µg/m ^a	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	22.82	µg/m²	60
3	Nitrogen Dicxide (as NO2)	IS:5182 (P-6)-2006, RA:2018	11.62	µg/mª	80
4	Sulphur Dioxide (as SO2)	IS 5182 (P- 2)-2001, RA. 2018	5.92	µg/m ⁸	80

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Page No. 1/1

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Report No.	: VTL/A/2410030003/B
Format No	: 7.8 F-02
Party Reference No	; 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

CAL	Provide the second second	100	a second s			
	Parameter Required	:	As pet work order			
	Sampling Duration	1	24 Hrs.			
	Surrounding Activity Scope of Monitoring Method of Sampling		IS :5182			
			Regulatory Requirment			
			urrounding Activity :		Human, Vehicular & Other Activities	
	Ambient Temperature (°C)	1	Min 22* Max 33*			
	Time of Monitoring	1	10.30 to 10:30 Hrs.			
	Instrument Code Coordinates Meteorological condition during monitoring Date of Monitoring		30/09/2024 To 01/10/2024			
			Clear Sky			
			79°55'44" & 22°44'15"			
			VTL/RDS/FPS/03			
	Sampling Equipment used	1	RDS/FPS			
	Sample Collected By	4	VTL Team			
C S	General Information:- Sampling Location		Village - Gorakhpur			
	같았다. [2] 가 있었다. 10 ~ Hand Song Control 2 2 2 2	BIENT AIR QUALITY MONITORING				
10 A	W					

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis.3rd ed.,1988, Method No.317	"BLQ (""LOQ 0.5)	hð\w _a	**

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

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Report No.	; VTL/A/2410030004/A
Format No	: 78 F-02
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

	Parameter Require	d	1	As per work order	
	Sampling Duration		:	24 Hrs.	
	Method of Samplin	0	2	IS :5182	
	Scope of Monitoria	D	1	Regulatory Requirme	int
	Surrounding Activ	ity	1	Human, Vehicular &	Other Activities
	Ambient Temperat		4	Min.22" Max 33"	
	Time of Monitoring		4	10:45 to 10.45 Hrs.	
	Date of Monitoring		\$	30/09/2024 To 01/10	/2024
	Meteorological co	ndition during monitorin	9 :	Clear Sky	
	Coordinates			79*55'44" & 22*14'15	5"
	Instrument Code		\$	VTL/RDS/FPS/04	
	Sampling Equipme	ent used	3	RDS/FPS	
	Sample Collected		0	VTL Team	
	General Informa Sampling Location	1	4	Village - Binaiki	
imple	Description	: AMBIENT AIR QUA	LITY N	IONITORING	
1.1.4					Contraction and the

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009	
1 Particulate Matter (as PM10)		IS 5182 (P- 23)-2006, RA, 2017 54.66		hð/u4a	100	
2 Particulate Matter (as PM2.5)		IS:5182 (P-24)-2019	21.18	µg/m³	60	
3 Nitrogen Diaxide (as NO2)		en Dioxide (as NO2) IS:5182 (P-6)-2006, RA 2018		µg/m³	80	
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA. 2018	5.61	µg/m³	60	
	and the second se					

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

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Page No. 1/1

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Report No.	: VTL/A/2410030004/B
Format No	: 78 F-02
Party Reference No	: 4300005689
Report Date	; 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

Sample	Description	: AMBIENT AIR QUAL	AMBIENT AIR QUALITY MONITORING					
Sample	General Informa Sampling Location Sample Collected Sampling Equipme Instrument Code Coordinates Meteorological con Date of Monitoring Time of Monitoring Ambient Temperat Surrounding Active Scope of Monitoring Method of Samplin	tion:- By ent used ndition during monitoring l g ure (°C) ity ng		Village - Binaiki VTL Team RDS/FPS VTL/RDS/FPS/04 79°55'44" & 22°14'15" Clear Sky 30/09/2024 To 01/10/2 10:45 to 10:45 Hrs. Min 22° Max 33* Human, Vehicular & O Regulatory Requirmen IS :5182	1024 ther Activities			
	Sampling Duration Parameter Require		ţ	24 Hrs. As per work order				
S.No.	Paramete	ans l	Tes	t Method	Recuite	Linite	-	

S.No. Parameters		Test Method	Results	Units	NAAQS 2009	
1 Mercury (as Hg)		Methods of air sampling and analysis,3rd ed. 1988. Method No 317	*BLO (**LOQ .0.5)	hði,wa	**	

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

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VTL/A/2410030005/A
: 7.8 F-02
: 4300005889
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024

S.No.	Parameters	Tes	t Method	Result
	Parameter Required	;	As per work order	1
	Sampling Duration	:	24 Hra.	
	Method of Sampling	:	IS :5182	
	Scope of Monitoring	:	Regulatory Requirment	
	Surrounding Activity	1	Human, Vehicular & Otl	ter Activities
	Ambient Temperature ("C)	1 1	Min.22° Max 33*	
	Time of Monitoring	;	11:00 to 11:00 Hrs.	
	Date of Monitoring	:	30/09/2024 To 01/10/20	24
	Meteorological condition	during monitoring :	Clear Sky	
	Coordinates	;	79*55'47" & 22*45'35"	
	Instrument Code	:	VTURDS/FPS/05	
	Sampling Equipment used	1 :	RDS/FPS	
	Sample Collected By		VTL Team	
	General Information:- Sampling Location		Village - Durjanpur	
Sample	Description : A	MBIENT AIR QUALITY N	IONITORING	0.000000000

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009	
1 Particulate Matter (as PM10)		IS 5182 (P- 23)-2006, RA 2017 53.82		hð (m,	100	
2 Particulate Matter (as PM2.5)		IS:5182 (P-24)-2019	18.78	µg/m*	60	
3	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)-2006, RA 2018	9.35	µg/m²	80	
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA. 2018	5.28	µg/m³	80	
_						

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

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Report No.	-	VTL/A/2410030005/B
Format No	:	7.8 F-02
Party Reference No	1	4300005689
Report Date	4	10/10/2024
Period of Analysis	ž	03/10/2024-10/10/2024
Receipt Date	1	03/10/2024

Sample Description	: AMBIENT AIR QUALIT	YM	ONITORING	
General Informa Sampling Location Sample Collected	1		Vilage - Durjanpur VTL Team	
Sampling Equipme	ent used	:	RDS/FPS	
Instrument Code		4	VTL/RDS/FPS/05	
Coordinates		:	79"55'47" & 22"45'35"	
Meteorological co	ndition during monitoring	:	Clear Sky	
Date of Monitoring	1 1	:	30/09/2024 To 01/10/2024	
Time of Monitoring	3	:	11:00 to 11:00 Hrs.	
Ambient Temperat	ure (°C)	:	Min 22* Max 33*	
Surrounding Activ	ity		Human, Vehicular & Other Activities	
Scope of Monitoria	ng .		Regulatory Requirment	
Method of Samplin	פר	÷	IS :5182	
Sampling Duration	1	:	24 Hra.	
Parameter Require	ıd	1	As per work order	

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis,3rd ed, 1938, Method No 317	*BLQ (**LOQ 0.5)	ug/m³	-

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

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	Checked by	AIPUR	RK Yadav Lab Incharge Authorized Signatory		
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: VTL/A/2410030006/A
: 7.8 F-02
: 4300005689
: 10/10/2024
: 03/10/2024-10/10/2024
: 03/10/2024

S.No.	Parameters	Test Method	Results
	Parameter Required	: As per work order	1
	Sampling Duration	; 24 Hrs.	
	Method of Sampling	: IS 5182	
	Scope of Monitoring	: Regulatory Requirment	
	Surrounding Activity	: Human, Vehicular & Plant	Activities
	Ambient Temperature ("C)	: Min.22* Max 34*	
	Time of Monitoring	2 10:10 to 10:10 Hrs.	
	Date of Monitoring	: 01/10/2024 To 02/10/2024	
	Meteorological condition during	monitoring : Clear Sky	
	Coordinates	: -	
	Instrument Code	: VTL/RDS/FPS/01	
	Sampling Equipment used	: RDS/FPS	
	Sample Collected By	: VTL Team	
	General Information:- Sampling Location	: Coal Road	
Sample		NT AIR QUALITY MONITORING	1942-1947
			a series was

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2006, RA. 2017	54 92	µg/m³	100
2	Particulate Matter (as PM2.5)	IS:5182 (P-24)-2019	17.69	µg/m*	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)-2006, RA.2018	10.98	µg/m³	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P- 2)-2001, RA. 2018	5.86	µg/m³	80

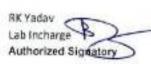
*BLQ-Below Limit Of Quantification, **LOQ-Limit Of Quantification













Page No. 1/1

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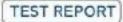
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Report No.	£	VTL/N/2410030006/B	
Format No	;	7 8 F-02	
Party Reference No	1	4300005689	
Report Date	÷	10/10/2024	
Period of Analysis	÷	03/10/2024-10/10/2024	
Receipt Date	÷	03/10/2024	

S No.	Deserves		Tes	A Stational	Describe	
	Parameter Requi	red	5	As per work order		
	Sampling Duration			24 Hrs		
	Surrounding Activity Scope of Monitoring Method of Sampling		1	IS :5182		
			- 4	Regulatory Requiment		
			1	Human, Vehicular & Plant Activities		
	Ambient Temperature (°C)			Min. 22" Max 34"		
	Time of Monitori	ng	- 4	10:10 to 10:10 Hrs.		
	Date of Monitoria	19	: 01/10/2024 7	01/10/2024 To 02/10/20	0 02/10/2024	
	General Information:- Sampling Location Sample Collected By Sampling Equipment used Instrument Code Coordinates Meteorological condition during monitoring			Clear Sky		
				-		
				VTL/RDS/FPS/01		
				RDS/FPS		
				VTL Team		
				Coal Road		
Sample	a Description	: AMBIENT AIR QUAL	ITY M	ONITORING		

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	*BLQ (**LOQ 0.5)	hð\w _a	

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

"End of Report""









RK Yadav	
Lab Incharge	
Authorized Signatory	

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Report No.	: VTL/A/2410030007/A
Format No	; 78 F-02
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

S.No.	Paramet	ers	Tes	t Method	Results	
	Parameter Require	bd	1	As per work order	1	
	Sampling Duration	n	1	: 24 Hrs.		
	Method of Sampling		4	IS 5182		
	Scope of Monitori	ng	:	Regulatory Requirment	t	
	Surrounding Activ	rity	4	Human, Vehicular & O	ther Activities	
	Ambient Temperat	ture (°C)	: Min 22* Max 34*			
	Time of Monitorin	9	4	10:30 to 10:30 Hrs.		
	Date of Monitoring	3	;	01/10/2024 To 02/10/2	2024	
	Meteorological co	ndition during monitor	ing ;	Clear Sky		
	Coordinates		**	79*57'7' & 22*42'10*		
	Instrument Code			VTURDS/FPS/02		
	Sampling Equipm	ent used	5	RDS/FPS		
	Sample Collected	Ву		VTL Team		
	General Informa Sampling Location		÷	Village - Generi		
Bample	Description	: AMBIENT AIR Q	UALITY N	IONITORING		

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P-23) 2006, RA. 2017	55.49	hð\ws	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	19.66	µg/m³	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)-2006, RA 2018	11.97	µg/m²	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA. 2018	6.18	µg/mª	80

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













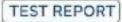
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Name & Address of the Party 1 M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attana, Tehsil- Ghansore Seoni MP

Report No.	ŧ	VTL/A/2410030007/B	
Format No	÷	7.8 F-02	
Party Reference No	;	4300005689	
Report Date	ŝ	10/10/2024	
Period of Analysis	1	03/10/2024-10/10/2024	
Receipt Date	ż	03/10/2024	

Sample Descript	ion : AMBIENT AIR QUALI	TY N	IONITORING	
Sampli	al Information:- ng Location Collected By		Vilage - Guneri VTL Team	
Samplin	ng Equipment used		RDS/FPS	
Instrum	ent Code	1	VTL/RDS/FPS/02	
Coordin	nates		79'57'7" & 22"42'10"	
Meteore	Meteorological condition during monitoring		Clear Sky	
Date of	Monitoring	:	01/10/2024 To 02/10/2024	
Time of	Monitoring	:	10:30 to 10:30 Hrs.	
Ambien	t Temperature (°C)	:	Min.22* Max 34*	
Surrour	iding Activity	:	Human, Vehicular & Other Activities	
Scope	of Monitoring	:	Regulatory Requirment	
Method	of Sampling	:	IS :5182	
Samplin	ng Duration	:	24 Hrs.	
Parame	ter Required	4	As per work order	
a		1.12		-

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis, 3rd ed., 1988, Method No.317	"BLQ (""LOQ 0.5)	hð/w _a	*

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

End of Report









RK Yadav	
ab Incharge	
Authorized Signatory	

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Name & Address of the Party ; M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attania, Tehail- Ghansore Seoni MP

Report No.	; VTL/A/2410030006/A
Format No	: 7.8 F-02
Party Reference No	; 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

S.No.	Parameters	Test Method	Results
	Sampling Duration Parameter Required	24 Hrs.	
	Method of Sampling	: IS 5182	
	Scope of Monitoring	: Regulatory Requirme	nt
	Surrounding Activity	: Human, Vehicular & (Other Activities
	Ambient Temperature (*C)	: Min.23" Max 31"	
	Time of Monitoring	: 10:40 to 10:40 Hrs.	
	Date of Monitoring	: 01/10/2024 To 02/10	/2024
	Meteorological condition during me	onitoring : Clear Sky	
	Coordinates	: 79"54'39" 8 22"42'3"	
	Instrument Code	: VTL/RDS/FPS/03	
	Sampling Equipment used	: RDS/FPS	
	General Information:- Sampling Location Sample Collected By	: Village - Dola : VTL Team	
Samp		AIR QUALITY MONITORING	
20203	것 [말방/] 중 것 같은 말 :		

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Particulate Matter (as PM10)	IS:5182 (P- 23)-2005, RA. 2017	54.82	ug/m ^a	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	18.55	hðiuu _s	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)-2006, RA 2018	12.43	µg/mª	80
4	Sulphur Dioxide (as SO2)	IS:5182 (P-2)-2001, RA 2018	6.10	µg/m²	80

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













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Name & Address of the Party : Ws Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attana, Tehsil- Ghansore Seoni MP

Report No.	: VTL/A/2410030006/B
Format No	7.8 F-02
Party Reference No	: 4300005889
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

SNo	Darama	a target	+		-	
	Parameter Requ	ired	-B	As per work order		
	Sampling Durati		;	24 His		
	Method of Samp	ling	t	IS :5182		
	Scope of Monito		4	Regulatory Requirment		
	Surrounding Activity		÷	Human, Vehicular & Ot		
	Ambient Temper	ature (°C)		Min.23" Max 31"		
	Time of Monitor			10:40 to 10:40 Hrs.		
	Date of Monitori	ng	2	01/10/2024 To 02/10/20	024	
	Meteorological o	condition during monitoring	1	Clear Sky		
	Coordinates		4	79°54'39" & 22°42'3"		
	Sampling Equipment used Instrument Code		4	: VTL/RDS/FPS/03		
			4	RDS/FPS		
	Sample Collecte	CONTRACTOR AND	4	VTL Team		
	Sampling Locat	on	4	Village - Dola		
country	General Inform	: AMBIENT AIR QUAL	JTY N	IONITORING		
Samula	Description					, oprove

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1 Mercury (as Hg)		Methods of air sampling and analysis,3rd ed.,1988, Method No.317	*BLQ (**LOQ 0.5)	hð\w ₃	

'BLQ-Below Limit Of Quantification, **LOQ-Limit Of Quantification

End of Report









RK Yadav	-	
Lab Inchar	se B2	
Authorized	d Signatory	

conditione PTC Page No. 1/1

Approved & Certified EPA 1986 Recognised, ISO:9001 and OHSAS:45001 Certified

Vibrant Techno Lab Pvt. Ltd.

SC-40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jaipur Raj. 302020 9929108691, 9810205356, 8005707098, 9549956601

C 0141-2954638

bd@vibranttechnolab.com

www.vibranttechnolab.com







Name & Address of the Party ; M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	: VTL/AJ2410030009/A
Format No	; 7.8 F-02
Party Reference No	: 4300005689
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

SNo	Paramotors	Tee	t Mathad	Destrike
	Parameter Required	-	As per work order	1
	Sampling Duration	+	24 Hrs.	
	Method of Sampling	IS :5182		
	Scope of Monitoring	1		
	Surrounding Activity	1	Human, Vehicular & Ot	& Other Activities
	Ambient Temperature ("C)	4	Min.22" Max 34"	
	Time of Monitoring	 01/10/2024 To 02/10/2024 10:55 to 10:55 Hrs. 		
	Date of Monitoring			
	Meteorological condition during monitoring	1	Clear Sky	
	Coordinates	;	79"54'33" & 22"46'13"	
	Instrument Code	4	VTL/RDS/FPS/04	
	Sampling Equipment used	;	RDS/FPS	
	Sample Collected By	1	VTL Team	
	General Information:- Sampling Location	1	Village - Panarjhir	
Sample	Description : AMBIENT AIR QUAL	ITY N	ONITORING	
				Receipt Date

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Perticulate Matter (as PM10)	IS 5182 (P- 23)-2006, RA. 2017	53.29	µg/m³	100
2	Particulate Matter (as PM2.5)	IS:5182 (P- 24)-2019	16.73	hðyua,	60
3	Nitrogen Dioxide (as NO2)	IS:5182 (P-6)-2006. RA 2018	11.45	hð(w _a	80
4	Sulphur Dioxide (as 502)	IS:5182 (P-2)-2001, RA. 2018	572	µg/m*	80

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













Page No. 1/1

m & candidans, PTD

Approved & Certified EPA 1986 Recognised, ISO:9001 and OHSAS:45001 Certified

Vibrant Techno Lab Pvt. Ltd.

0 SC-40, 3rd Floor, Narayan Vihar S, Ajmer Road, Jalpur Raj, 302020

9929108691, 9810205356, 8005707098, 9549956601

- 0141-2954638
- Bd@vibranttechnolab.com
- @ www.vibranttechnolab.com





; M/s Jhabua Power Limited (A JV of NTPC LTD.) Post Office - Attaria, Tehsil- Ghansore Seoni MP

Report No.	: VTL/A/2410030009/B
Format No	; 78 F-02
Party Reference No	: 4300005589
Report Date	: 10/10/2024
Period of Analysis	: 03/10/2024-10/10/2024
Receipt Date	: 03/10/2024

SNO	Daramat		Ter	a state of a		
	Parameter Require	bd	3	As per work order		
	Sampling Duration		÷	24 Hrs.		
	Method of Samplin		1	IS :5182		
	Scope of Monitori		2	Regulatory Requimen	t	
	Surrounding Activ			Human, Vehicular & O	ther Activities	
	Ambient Temperat	Children and Chi	\$	Min 22° Max 34*		
	Time of Monitorin		1	10:55 to 10:55 Hrs.		
	Date of Monitoring		;	01/10/2024 To 02/10/2	2024	
		ndition during monitoring	4	Clear Sky		
	Coordinates		1	79*54'33' & 22°46'13*		
	Instrument Code		- 3	VTL/RDS/FPS/04		
	Sampling Equipm	ent used	;	RDS/FPS		
	Sample Collected	The Concern	3	VTL Team		
	Sampling Location	n	:	Village - Panaghir		
	General Informa		1	on on one		
Sample	Description	: AMBIENT AIR QUAL	ITY N	ONITORING	(include the second	12

S.No.	Parameters	Test Method	Results	Units	NAAQS 2009
1	Mercury (as Hg)	Methods of air sampling and analysis,3rd ed.,1988. Method No.317	"BLQ (""LOQ 0.5)	hð/w _s	**

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

End of Report



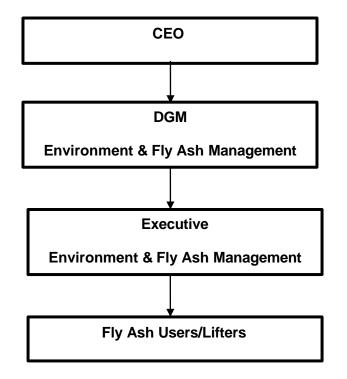


Expenditure details under CSR

	JHABUA POWER LTD. DETAILS OF EXPANSES DONE UNDER CSR SINCE INCEPTION TO SEPTEMBER 2024 (In Crore) ANNEXURE-14															
	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	2023-24	2024-25	Total in Cr
	RECURRING EXPENDITURE															
А	1	Skill development, Education and Women empowerment	2.30	0.72	0.45	0.36	0.09	0.09	0.26	0.29	0.32	0.25	0.46	0.23	0.323	6.14
	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	0.32	0.17	0.187	5.89
	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	0.00	0.000	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	0.08	.15.6	0.600	20.29
	Total 7.36 5.44 1.02 1.12 0.25 0.32 5.74 10.29 0.60 0.51 0.86								0.86	0.40	1.110	35.02				
	Recurring expanses as per EC of MoEF (2010-2024) Rs. 2.5 crore per annum x 15 year								37.50							
в	B One time capital expanses as per Environmental Clearance in Crore										12.00					
_	Expanses done under one time capital expanses in crore											22.00				
То	al CS	R expenditure as per E.C. till Septen	1ber 2024	in Cr. (A+	-B)											49.50
To	Total CSR Expenditure done by JPL till September 2024									59.50						

Details of Environment Management cell

ENVIRONMENT MANAGEMENT CELL



Sr. No	NAME	QUALIFICATION	DESIGNATION
1	Mr. Neeraj Jalota		CHIEF EXECUTIVE OFFICER
2	Mr. Anoop Kumar Srivastava	M.Sc. Environment P.G. Diploma in Industrial Safety	DGM (Environment & Ash Management)

Receipts of last compliance report submission

Hume Page

Your (Environment Clearance) application has been Submitted with following details					
Proposal No	IA/MP/THE/10294/2008				
Compliance ID	64984906				
Compliance Number(For Tracking)	EC/M/COMPLIANCE/64984906/2024				
Reporting Year	2024				
Reporting Period	01 Jun(01 Oct - 31 Mar)				
Submission Date	02-05-2024				
IRO Name	Shri Ashok Kumar Şinha				
IRO Email	tg035@ifs.nic.in				
State	MADHYA PRADESH				
IRO Office Address	Integrated Regional Offices, 8hopat				

Note:- SMS and E-Mail has been sent to Shn Ashok Kumar Sinha, MADHYA PRADESH with Notification to Project Proponent.

From: Sent: To: Cc:	Anoop srivastava 07 May 2024 12:15 'yogendra78@nic.in'
Subject:	'sudheer,ch@gov.in' Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeon, Madhya Pradorh: Six Marable S
Attachments:	Pradesh: Six Monthly Compliance Report (October' 2023 to March' 2024) Director Environment Delhi Phase Lpdf

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' 2023 to March' 2024)** 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-Parlyesh.

Kindly acknowledge.

Regards,

Anoop Srivastava

From:	Anoop srivastava
Sent	07 May 2024 12:18
To:	ms-mppcb@mp.gov.in
Cc:	'romppcbjbp@rediftmail.com"
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal Power Plant, Villages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya
	Pradesh: Six Monthly Compliance Report (October: 2023 to March: 2024)
Attachments:	Member Secretary MPPCB Bhopal Phase Lpd!

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' 2023 to March' 2024)** 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,

Anoop Srivastava

Fram:	Anoop srivastava
Sent:	07 May 2024 12:20
To:	'cpcb.bhopal@gmail.com'
Subject:	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Villages- Barela & Gorakpur, Tehsili- Ghansore, DisttSeoni, Madhya
	Pradesh: Six Monthly Compliance Report (October' 2023 to March' 2024)
Attachments:	Director CPCB Bhopal Phase pdf

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' 2023 to March' 2024)** 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,

Anoop Srivastava

From:	Anoop srivastava
Sent:	07 May 2024 12:23
To:	'mscb.cpcb@gov.in', 'mseb.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, DisttSeoni, Madhya
	Pradesh: Six Monthly Compliance Report (October' 2023 to March' 2024)
Attachments:	Chairman CPCB Delhi Phase Lpdf

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' 2023 to March' 2024)** 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,

Anoop Srivastava

From:	Anoop srivastava
Sent:	07 May 2024 12:30
To:	'apccfbhopal@gmail.com'
Subject	Submission of Six Monthly Compliance Report - 1x600 MW Coal Based Thermal
	Power Plant, Viflages- Barela & Gorakpur, Tehsil- Ghansore, DisttSeoni, Madhya
Attachments:	Pradesh: Six Monthly Compliance Report (October' 2023 to March' 2024) Director Environment Bhopal Phase Lpdf

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' 2023 to March' 2024)** 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,

Anoop Srivastava

Submission receipt of Environment Statement



JHABUA POWER

August 12, 2024

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 2023-24 for 1 x 600 MWThermal Power Plant at Village-Barela & Gorakhpur, Tehsil- Ghansore, Distt.- Seoni,
Madbya Pradesh by M/s Jhabua Power Plant.

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

Dear Sir,

Please find attached the **Environmental Statement** for the year 2023 - 2024 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 & 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,

12/08/2024

For Jhabua Power Ltd Authorized Signatory

Encl.: Environment Statement Report for the year 2023-24. CC: Regional Office, MPPC8, Vijaynagar, Jabalpur, MP.

habua Power Limited

Joint Venture of NTPC Limited) 1 1,40105W51995PLC058616 rporate Office: Unit No. 307, 3rd Floor, ABW Tower, M.G. Road, Near IFFCO Chowk, Gurugram- 122002, Heryaita, India 0124-4392000/01 E- Mail: communications@ihabuapower.co.in Web: www.jhabuapower.co.in jistered Office: Macmet House, 7th Floor, 10B, O.C. Ganguly Sarani, Kolkata- 700.020, West Bengal, India office: Village- Bareta, Post Office- Attana, Tehsil- Ghansore, District-Seona- 480997, Madhya Pradesh, India

Expenditure break-up April 2024 to September 2024

ANNEXURE - 18 EXPENDITURE DETAILS ON ENVIRONMENT FROM APRIL 2024 TO SEPTEMBER 2024					
DESCRIPTION	EXPENDITURE				
ENVIRONMENT					
World Environment Day Celebration	121300				
Third Party Environmental Quality monitoring	197425				
Hydrogeological study of the area	88659				
Disposal of conditioned fly ash through railway rake	8471150				
Tarpaulin covering of conditioned Fly Ash wagon.	1287600				
Legacy Ash disposal in low lying area near Rajgadhi	42943268				
Legacy Ash disposal in low lying area near Umerpani	42775200				
Spare of AAQMS	1046626				
p H elctrode for EQMS	76676				
AMC for online monitoring system-AAQMS	232106				
Connectivity of EQMS with CPCB & MPPCB	70800				
AMC for water Sprinkling	1550000				
AMC CEMS	79650				
AMC PTZ camera connectivity	11800				
Biomedical waste disposal to MPPCB authorised vender	182000				
Motilal Nehru Institute of Technology for ash utilization audit	177000				
Total expenditure in Rs	99311260				
Total expenditure in Cr.	9.93113				