

Ref. No-IPL/MoEF&CC/2022-23/164

Dated- 23.06.2022

To,  
The Scientist D,  
Regional Office, Ranchi  
Ministry of Environment Forest and Climate Change,  
Harmu, Ranchi- 834002

**Subject: Regarding compliance of Environment Clearance of Inland Power Limited at village: Tonagatu, Tehsil: Gola, District: Ramgarh, Jharkhand.**


**Ref.: Environment Clearance from MoEF&CC, New Delhi vide letter no. J-13012/115/2008-IA-II(T) dated 20.10.2011 and EC Extension EC/SEIAA/2018-19/2096/2018/150 dated 05.04.2019**

Dear Sir,

We are submitting herewith half yearly compliance report of Environment Clearance of the above mentioned for the period of 01<sup>st</sup> October 2021 to 31<sup>st</sup> March 2022.

Thanking You

For Inland Power Ltd

  
(S. N. Sinha)  
Dy. General Manager. (Coml)

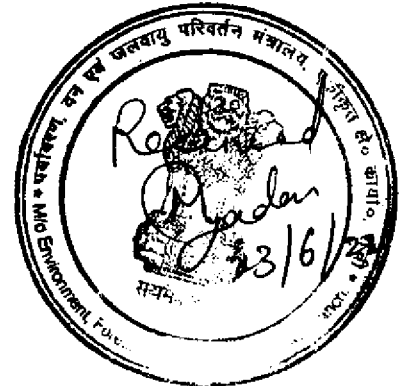
**Encl.:**

i) Compliance Report with all annexure

*Rf*  
*Badri Narayan*  
*23/6/2022*

Copy to

- ☒ i) Member Secretary, JSPCB Ranchi
- ☒ ii) Regional Directorate, CPCB Kolkata



Regd. Office:  
P-221/2 Strand Ban  
Kolkata - 700 001

EJ235159420IN IVR:6974235159420  
SP ASHOK NAGAR SO RANCHI <834002>  
Counter No:1,24/06/2022,12:34  
To:THE REGIONAL ,CENTRAL POLLUTIO  
PIN:700107, Nadurdaha SO  
From:INLAND POWER LTD.TONAGATU  
Wt:325gms  
Amt:70.80(Cash)Tax:10.80

<Track on [www.indiapost.gov.in](http://www.indiapost.gov.in)>

<Dial 18002666868> <Wear Masks, Stay Safe>

- Tonagatu,  
Bypass

Ranchi Office:  
C/218 Road No. 2, Ashok Nagar  
Ranchi - 834 002  
t: +91 651 2240532

CIN: U51909WB199

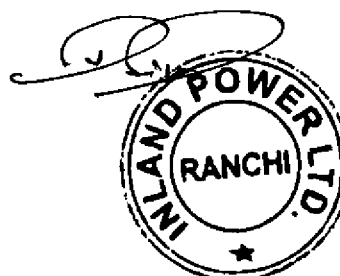
W: [inlandpower.in](http://inlandpower.in) | E: [info@inlandpower.in](mailto:info@inlandpower.in)

**INLAND POWER LIMITED**  
**COMPLIANCE OF ENVIRONMENTAL CLEARANCE**

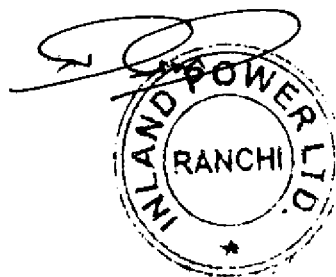
Clearances Certificate	Issuing Dept.	Letter No.	Date	Valid Up to
EC	MOEF	J-13012/115/2008-IA-II(T)	20.12.2011	20.12.2018
EC (Extension)	SEIAA	EC/SEIAA/2018-19/2096/2018/150	05.04.2019	19.12.2020
1 <sup>st</sup> CTO	JSPCB	B-1132	31.03.2014	
Current CTO & Validity	JSPCB	JSPCB/HO/RNC/CTO-3476021/2019/69	09.01.2019	31.12.2023

**Period of Compliance : 1<sup>st</sup> October, 2021 to 31<sup>st</sup> March, 2022**

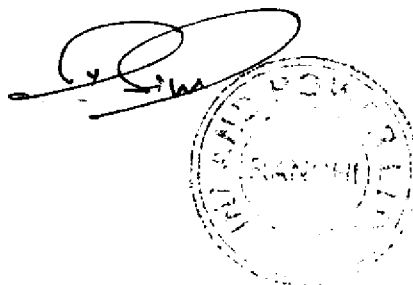
Sl. No.	CONDITION	COMPLIANCE
<b>A.</b>	<b>SPECIFIC CONDITIONS:</b>	
i)	In case source of fuel supply or ratio is to be changed at a later stage (now proposed as mixture of coal, washery rejects and dolachar in the ratio 50:20:30) the project proponent shall intimate the Ministry well in advance along with necessary requisite documents for its concurrence for allowing the change. In such a case the necessity for re-conducting public hearing may be decided by the Ministry in consultation with the Expert Appraisal Committee.	Followed
ii)	Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be formulated and status of implementation shall be submitted to the Regional Office of the Ministry.	We have installed 9x 300 LPD Solar water heaters System and planned to install solar panel on the rest of the buildings. <b>(Photograph Attached)</b>
iii)	Fly ash shall not be used for mine void filling without carrying geo-hydrological study.	Part of the generated ash is utilized for making of the fly ash bricks in our plant with capacity of 252055 nos. bricks per day and rest is supplied to the cement plant as well as local fly ash brick making plant and highway project.
iv)	In case fly ash is to be supplied to brick manufacturing units it shall be ensured that a detailed study on chemical composition particularly heavy metal and radio activity contents shall be first carried out through a reputed institute and report shall be submitted to Regional Office of the Ministry. Only after ascertaining its radioactive level shall be utilized for brick manufacturing or supplied to brick manufacturers.	Fly ash Test Report attached herewith.



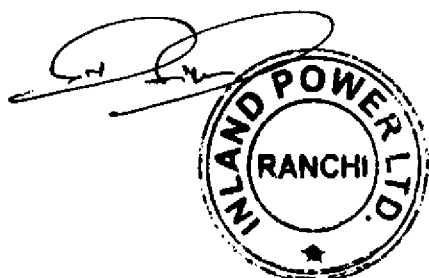
v)	The project proponent shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.	Fugitive emissions will be regularly monitored as per norms. The emissions from the plant are controlled within the latest permissible limits. High efficiency bag filters are installed, and closed system is implemented. All transfer points are fitted with DE and/or DF system.
vi)	Stack of 95 m height with flue gas velocity not less than 22 m/s shall be installed and provided with continuous online monitoring equipment for SO <sub>x</sub> , NO <sub>x</sub> and PM <sub>2.5</sub> & PM <sub>10</sub> . Mercury emissions from stack may also be monitored on periodic basis.	Online monitoring equipment is installed as per the guideline of CPCB. <b>(Photographs attached)</b>
vii)	High Efficiency Electrostatic Precipitators (ESPs) shall be installed to ensure that particulate emission does not exceed 50 mg/ Nm <sup>3</sup> .	ESP to meet emission norms of 50 mg/Nm <sup>3</sup> is installed in the plant. <b>(Photographs attached)</b>
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.	Bag filter are installed, all transfer points fitted with DE and DF system. Water Sprinklers are installed also utilizing water tankers for cleaning of roads in plant area and surrounding area. <b>(Photographs of Water Tanker is attached)</b>
ix)	Utilisation of 100% Fly Ash generated shall be made from 4 <sup>th</sup> year of operation. Status of implementation shall be reported to the Regional Office of the Ministry from time to time.	Noted and is being complied. Fly ash is being utilized in bricks manufacturing, Cement manufacturing and Road/ Highway Construction. IPL has facility of in house brick manufacturing plant installed in the plant premises and supplied to other bricks & cement manufacturing plants also. <b>(Ash Utilization details is attached herewith)</b>
x)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other 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.	Fly ash is collected in dry form and storage facility, as silos, is provided. <b>(Photographs of Silos are attached)</b>
xi)	Ash pond shall be lined with HDP/LDPE lining or any other suitable impermeable media such that no leachate takes place at any point of time. Adequate safety measures shall also be implemented to protect the ash dyke from getting breached.	No ash pond proposed, if any in future it will be lined with HDPE as per norms. Fly ash is collected in dry form to be extent possible.



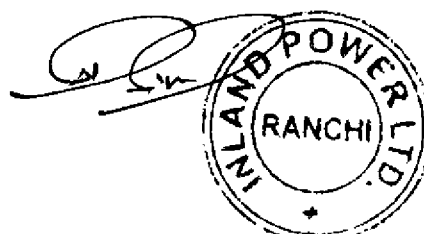
xii)	Existence de-generated water bodies (if any) within the 5.0 Km area shall be regenerated at the project proponent's expenses in consultation with the State Govt.	It has been complied under CSR activities.
xiii)	Source of water for meeting the requirement during lean season shall be specified and submitted to the Regional Office of the Ministry.	We are meeting our water requirement from Senegarha Nala as the permission granted by DVRRC, GOI with adequate size weir and storage tank.
xiv)	No ground water shall be extracted for use in operation of the power plant even in lean season.	Ground water use will be limited to drinking and domestic purpose only.
xv)	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.	Plant layout finalized after detailed contour survey and natural drainage. Existing plantation and drainage in the area maintained.
xvi)	Minimum required Environmental Flow suggested by the Competent Authority of the State Govt. shall be maintained in the Channel Rivers (as applicable) even in lean season.	Water extraction will be limited to the quantity of permission obtained from DVRRC, GOI.
xvii)	COC of 5.0 shall be adopted.	Is being complied with and COC of 5.0 is adopted.
xviii)	Regular monitoring of ground water level shall be carried out by establishing a network of existing wells and constructing new piezometers. Monitoring around the ash pond area shall be carried out particularly for heavy metals (Hg, Cr, As, Pb) and records maintained and submitted to the Regional Office of this Ministry. The data so obtained should be compared with the baseline data so as to ensure that the ground water quality is not adversely affected due to the project.	Is being complied, monitoring for the pre-monsoon has been carried out. <b>(Water analysis report attached)</b>  No ash pond proposed. All collection is in dry form in silos.
xix)	Monitoring surface water quality in the area 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.	Is being complied, <b>(Reports are enclosed)</b> .
xx)	Waste water generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB.	Noted. There is no waste water discharge from the plant. The plant is operated on ZLD concept.



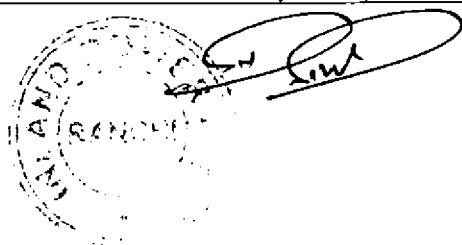
xxi)	A well-designed rainwater harvesting shall be put in place before commissioning of the plant. Central Ground Water Authority/Board shall be consulted for finalization of appropriate rainwater harvesting technology/design and details shall be furnished to the Regional Office of the Ministry. The design of rain water harvesting shall comprise of rain water collection from the built up and open area in the plant premises. Action plan and road map for implementation shall be submitted to the Ministry within six months.	Action plan prepared, and approval obtained from <b>GWD</b> . As per the approved plan harvesting system has been implemented. Existing wells in the premises are being used for RWH.
xxii)	Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Complied. No external filling required.
xxiii)	Green Belt consisting of 3 tiers of plantations of native species around plant and 50m width shall be raised. The density of trees shall not less than 2500 per ha with survival rate not less than 80 %.	Plantation of Sesame, Amla, Aakashmani, Kadam, Teak, Palas, Raintree, Mango, Bokul, Chhatim etc. has been done and maintained as per norms. Rs 2,10,100/- has been spent from 1 <sup>st</sup> Apr 21 to Mar 22 for the plantation. <b>(Photographs Attached)</b>
xxiv)	The project proponent shall also adequately contribute in the development of the neighbouring villages. Special package with implementation schedule for providing potable drinking water supply in the nearby villages and schools shall be undertaken in a time bound manner.	Drinking water facility is being provided to nearby villagers. <b>(Photographs attached)</b>
xxv)	CSR scheme shall be undertaken based on need based assessment in and around the villages within 10.0 km of the site and in constant consultation with the village Panchayat and the District Administration. As part of CSR activity, the company shall impart training to the local youth in the area.	Company already started the CSR activities. From 1 <sup>st</sup> Apr'21 to 31 <sup>st</sup> Mar'22 Rs 36,08,170/- has been spent on CSR for the Medical, Education, Drinking water, Games, Training etc.
xxvi)	It shall be ensured that an in-built monitoring mechanism for the CSR schemes identified is in place and annual social audit shall be got done from the nearest preferably government institute of repute in the region. The project proponent shall also submit the status of implementation of the scheme from time to time. The achievements should be put on company's website.	We are monitoring CSR Schemes by own employed professionals in this field. They are visiting nearby surrounding villages, study their urgent needs to be account for our CSR activities.



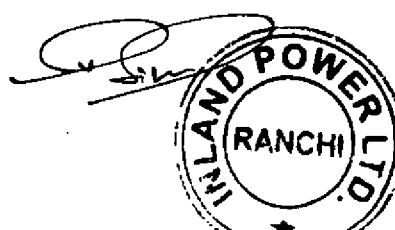
xxvii)	An amount of Rs 3.50 crores shall be earmarked as one-time capital cost for CSR programme as committed by the project proponent. Subsequently a recurring expenditure of Rs 1.50 crores per annum till the life of the plant shall be earmarked as recurring expenditure for CSR activities. Details of the activities to be undertaken shall be submitted within six month along with road map for implementation.	CSR activities being done in consultation with the State Government Authorities.
xxviii)	An Environmental Cell shall be created at the project site itself and shall be headed by an officer of appropriate superiority and qualification. It shall be ensured that the head of the Cell shall directly report to the Head of the Organization.	We have created the environmental cell as directed.
<b>B.</b>	<b>GENERAL CONDITIONS</b>	
i)	The treated effluents conforming to the prescribed standards only shall be re-circulated and reused within the plant. Arrangements shall be made that effluents and storm water do not get mixed.	No discharge of effluent.
ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising greenbelt/plantation.	NA and sewage water is being utilized for plantation.
iii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Onsite/off site emergency management plan has been prepared and approved by the Chief Inspector of factories as per the approved plan, safety measures has been taken in the plant area.
iv)	Storage facilities for auxiliary liquid fuel such as LDO/ 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.	1 tank of capacity 20 KL is installed with the proper approval.
v)	First Aid and sanitation arrangements shall be made for the drivers and other contract workers during construction phase.	First aid center started at site. 14 no toilets, 1 canteen.
vi)	Noise levels emanating from turbines shall be so controlled such that the noise in the work zone shall be limited to 85 dBA from source. For people working in the high noise area, requisite personal protective equipment like ear plugs/ear	Turbine is enclosed in a casing with MS steel cover other noise polluting equipment are fitted with canopy and silencers to lowering the noise level. Ambient noise level test has been carried



	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 none noisy/less noisy areas.	out and found within prescribed limit. Reports are attached herewith. <b>(Photographs is attached)</b>
vii)	Regular monitoring of ambient air ground level concentration of SO <sub>2</sub> , NO <sub>x</sub> , PM <sub>2.5</sub> & PM <sub>10</sub> and Hg shall be carried out in the impact zone and records maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional Office of this Ministry. The data shall also be put on the website of the company.	Monitoring of Ambient air has been carried out regularly. <b>Reports are attached herewith.</b>
viii)	Provision shall be made for the housing of construction labour (as applicable) within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.	Construction workers are locals from nearby villages. Provision for toilets, drinking water, medical health care etc. done at site.
ix)	The project proponent shall advertise in at least two local newspapers widely circulated in the region around the project, one of which shall be in the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are available with the State Pollution Control Board/ Committee and may also be seen at Website of the Ministry of Environment and Forests at <a href="http://envfor.nic.in">http://envfor.nic.in</a> .	Complied  Information to public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry has been published in news papers Hindustan Times (English) & Prabhat Khabar (Hindi) dated 11.01.2012.
x)	A copy of the clearance letter shall be sent by the proponent to concern Panchayat, Zila Parishad / Municipal Corporation, urban local Body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied. Submitted to the local bodies. No representation of NGO.
xi)	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update	Information is available on the web-site of the company.  All monitoring as prescribed will be

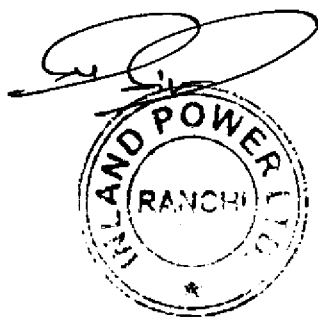


	the same periodically. It shall simultaneously be sent to the Regional Office of MoEF&CC, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM <sub>2.5</sub> & PM <sub>10</sub> ), SO <sub>2</sub> , NO <sub>x</sub> (Ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	followed. Reports are being regularly submitted to concerned authorities  Information displayed at Main gate
xii)	The environment statement for each financial year ending 31 <sup>st</sup> March in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by e-mail.	Plant has started the Commercial production from 21.05.2014. Environmental statement for financial year ending 31 <sup>st</sup> March 2021 in Form-V has been submitted and uploaded on website.
xiii)	The project proponent shall submit six monthly reports on the status of the implementation of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by e-mail to the Regional Office, Ministry of Environment and Forests.	Six monthly compliance reports as directed submitted to the concerned authority in the month of June (for the period October to March) and in December (for the period April to September) every year.
xiv)	Regional Office of the Ministry of Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and Environment Management Plan along with the additional information submitted from time to time shall be forwarded to the Regional Office for their use during monitoring. Project proponent will up-load the compliance status in their website and update the same from time to time at least six-monthly basis. Criteria pollutants levels including NO <sub>x</sub> (from Stack & Ambient air) shall be displayed at the main gate of the power plant.	All monitoring as prescribed will be followed. Reports regularly submitted to concerned authorities  Information is displayed at Main gate.
xv)	Separate funds shall be allocated for implementation of environmental protection measures along with item-wise break-up. These	Complied. <b>(Item wise breakup is attached herewith)</b>





	costs shall be included as part of the project cost. The funds earmarked for the environment protection measures shall not be diverted for other purposes and year-wise expenditure should be reported to the Ministry.	
xvi)	The project authorities shall inform the Regional Office as well as the Ministry at New Delhi regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	The source of funds finalized. Term Loan for the Project has been sanctioned by consortium of banks SBI, Bank of Baroda, State Bank of Bikaner & Jaipur and State Bank of Patiala. Loan agreement executed on 12 <sup>th</sup> August 2011.
xvii)	Full co-operation shall be extended to the Scientists/Officers from the Ministry / Regional Office of the Ministry/ CPCB/ SPCB who would be monitoring the compliance of environmental status	Noted. Full co-operation will be extended to visiting officers.



# Solar Water Heater System





# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-S01
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/S/May-22/01
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022				
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Mode of sample collection	By YBAEEL Team
Sampling Location	Silo			Sample Code	220502-S-X01
Sample pkg. Condition	Sealed Pack in Zipper Bag			Sampling Source	Fly Ash
Meteorological Cond. of Field	W.C. - Clear			Sample Quantity	2.5 Kg Approx.
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	09/05/2022
					Temp. - 42°C

\*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results
1.	Iron (as Fe)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.73	20.02
2.	Zinc (as Zn)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.44	0.26
3.	Copper (as Cu)	USEPA 3050 B :1996/APHA 3111 B	ppm	10.18	BDL (MDL 0.01)
4.	Lead (as Pb)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.82	BDL (MDL 0.02)
5.	Nickel (as Ni)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.10	BDL (MDL 0.02)
6.	Cadmium (as Cd)	USEPA 3050 B :1996/APHA 3111 B	ppm	9.57	0.08
7.	Chromium (as Cr)	USEPA 3050 B :1996/APHA 3111 B	ppm	5.44	0.14

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	

Sample Drawn By : Angad Munda  
Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umash Das Technical Manager
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Authorized Signatory  
Pollution & Environment  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand

Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 45001:2018



ISO 9001:2015



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
 Certified by :- An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042- S02
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/S/May-22/01
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-S-X02
Sampling Location	Bed Ash Drain Area			Sampling Source	Bottom Ash
Sample pkg. Condition	Sealed Pack in Zipper Bag			Sample Quantity	2.5 Kg Approx.
Meteorological Cond. of Field	W.C.- Clear			RH % - 30	Temp. - 38°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	09/05/2022

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results
1.	Iron (as Fe)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.73	18.92
2.	Zinc (as Zn)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.44	0.24
3.	Copper (as Cu)	USEPA 3050 B :1996/APHA 3111 B	ppm	10.18	BDL (MDL 0.01)
4.	Lead (as Pb)	USEPA 3050 B :1996/APHA 3111 B	ppm	2.82	BDL (MDL 0.02)
5.	Nickel (as Ni)	USEPA 3050 B :1996/APHA 3111 B	ppm	4.10	BDL (MDL 0.02)
6.	Cadmium (as Cd)	USEPA 3050 B :1996/APHA 3111 B	ppm	9.57	0.06
7.	Chromium (as Cr)	USEPA 3050 B :1996/APHA 3111 B	ppm	5.44	0.10

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	MDL : Minimum detection limit, BDL : Below detection limit.
Abbreviation	Laboratory is maintaining. Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Env. Condition of Lab	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
Specific contractual notes	This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	

Sample Drawn By : Angad Munda  
 Tested By : Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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Authorized Signatory  
 Pollution & Environment  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Technical Manager  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
 Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in

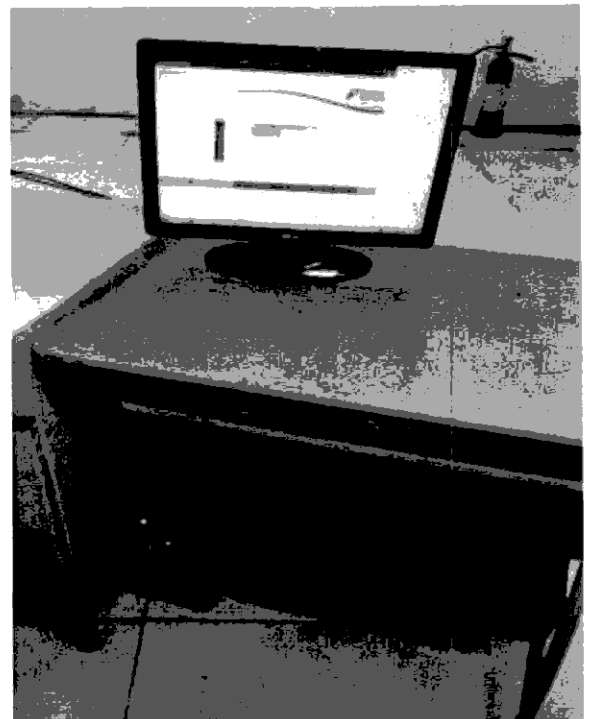
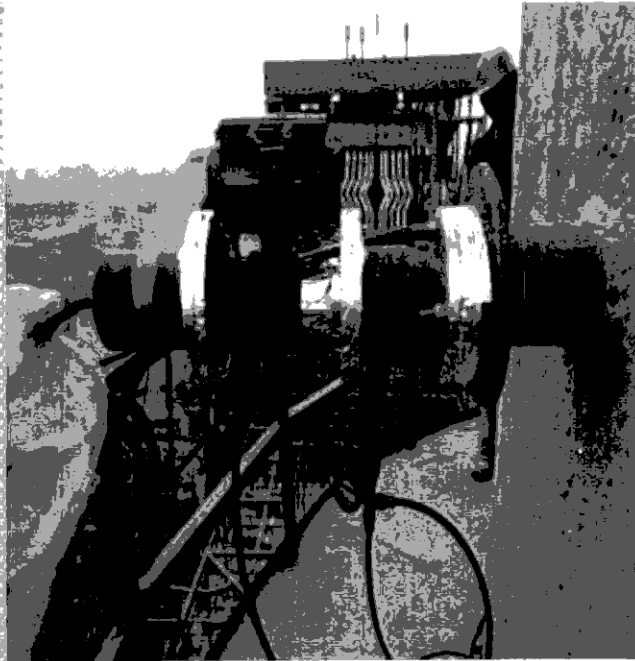


145001:2018

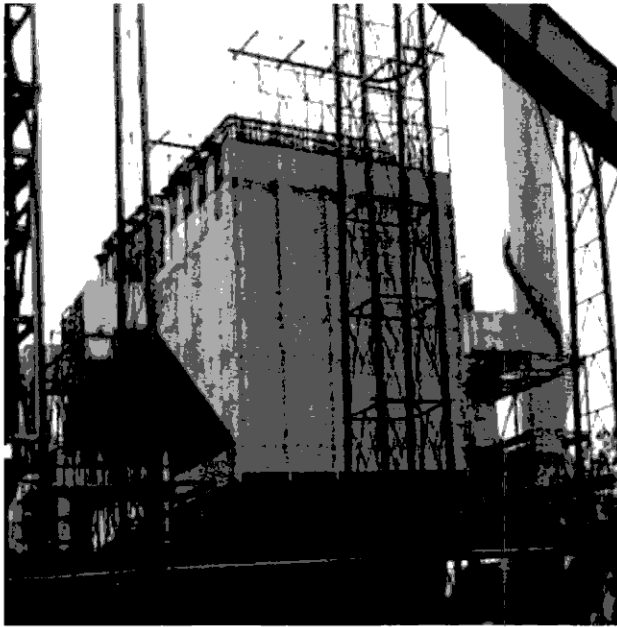


ISO 9001:2015

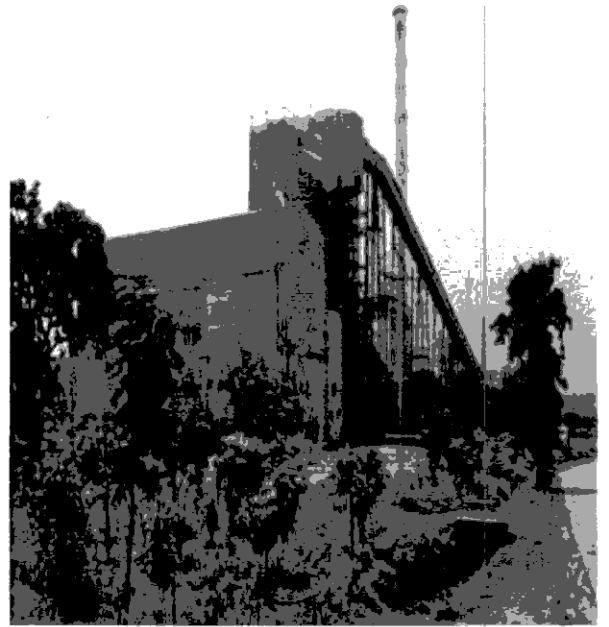
# Online Stack Monitoring Equipments



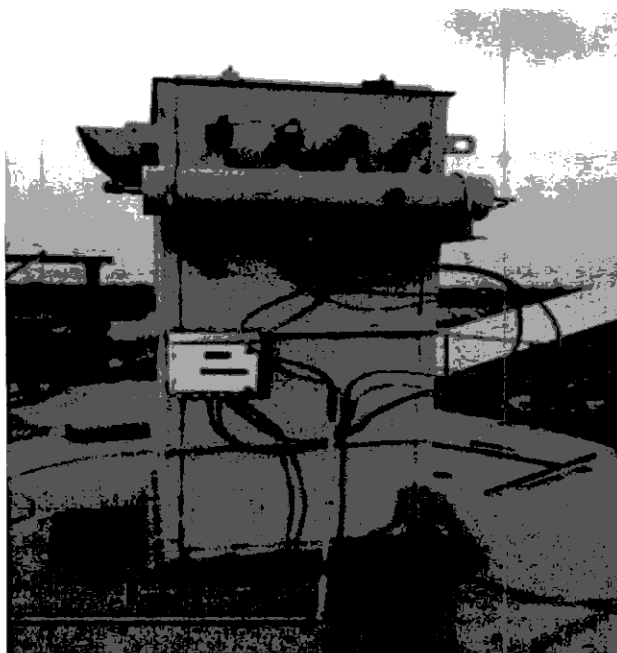
# Pollution Control Equipments



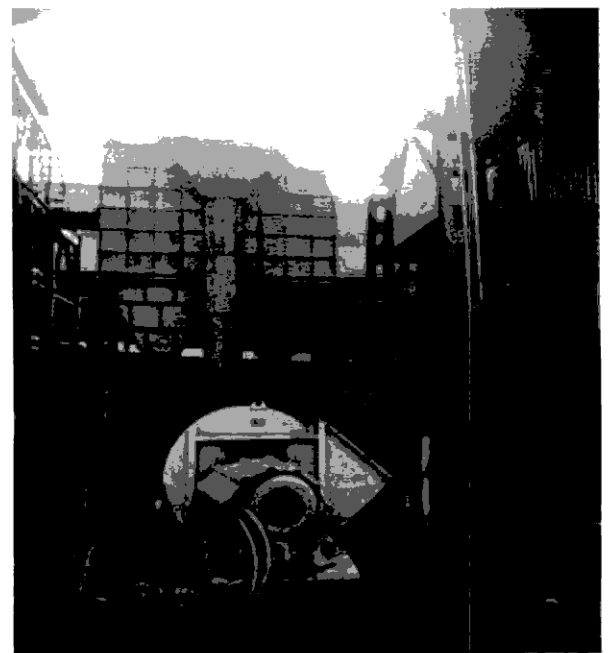
**ESP**



**CHMNEY**



**BAG FILLTER**



**BAG FILLTER**

# Water Tanker



## Water Tanker



## Plantation





# Inland Power

— Imagine. Integrate. Impact. —

Ref. No- IPL/JSPCB/2022-23/31

Dated- 15.04.2022

To,  
The Regional Officer  
Jharkhand State Pollution Control Board  
Hazaribag Regional Office

**Subject: Submission of details of Fly Ash Generation and Disposal for the Year 2021-22**

Dear Sir,

With reference to above, please find below month wise ash generation and Disposal detail from April to March of the FY 2021-22

**INLAND POWER LTD, GOLA DISTT- RAMGARH**

**Ash Generation & Disposal Report (2021-22)**

Month	Op Stock	Ash Generation	Ash Disposal				CI Stock
			Cement Manufacture Plant	Bricks Manufacture Plant	Road construction	Land Development	
Apr-21	5711	26938	6319	6500	0	677	19153
May-21	19153	26358	6813	2594	0	63	36041
Jun-21	36041	22352	10000	4009	0	0	44384
Jul-21	44384	23012	9000	4443	0	3458	50495
Aug-21	50495	26302	6415	6583	0	11761	52038
Sep-21	52038	26341	10306	4578	1065	17401	45028
Oct-21	45028	19810	10331	6907	4365	23775	19460
Nov-21	19460	22966	14395	4259	0	7814	15958
Dec-21	15958	26058	15160	5715	228	5313	15600
Jan-22	15600	25022	14883	6742	142	2073	16782
Feb-22	16782	22673	11824	7128	9546	6911	4046
Mar-22	4046	8301	275	4109	5506	521	1936
	5711	276133	115721	63567	20853	79768	1936

Thanking You  
For Inland Power Ltd

*Member Secretary, JSPCB Ranchi*

**Inland Power Ltd.**

Regd. Office:  
P-221/2 Strand Bank Road  
Kolkata - 700 001

Corporate Office:  
30, Chowringhee Road  
3rd Floor, Flat No-12  
Kolkata - 700 016  
t: +91 33 6136 6000

Plant Office:  
Inland Nagar, Village - Tonagatu,  
Gola Chauri Ramgarh Bypass  
Tonagatu - 829 110  
Jharkhand, India

Ranchi Office:  
C/218 Road No. 2, Ashok Nagar  
Ranchi - 834 002  
t: +91 651 2240532





# Pollution Control Equipments



**FLY ASH SILO**



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 4 5 F															
Discipline	Chemical	Group	Water		Sample Description		Ground Water										
Report Release Date	09 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW01												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/C/May-22/02												
Report issues to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection		By YBAEEL Team										
Sampling Location	Tonaghatu				Sample Code		220502-GW-X01										
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source		Ground Water										
Meteorological Cond. of Field	W.C.- Clear				Sample Quantity		3000 ml										
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		07/05/2022								

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.72	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	..	10	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	220.0	..
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.68	66.0	200-600
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	74.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	120.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Fluoride (as F <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	9.0	250-1000
9.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 F-C 23 <sup>rd</sup> edition 2017	mg/l	12.22	1.0	1.0-1.5
10.	Calcium (as Ca <sup>2+</sup> )	APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017	mg/l	11.33	3.87	45-No relaxation
11.	Magnesium (as Mg <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	4.19	22.4	75-200
12.	Sodium (as Na <sup>+</sup> )	APHA 3500 Mg B : 2017	mg/l	1.90	4.37	30-100
13.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	20.0	..
14.		APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	9.21	1.9	..

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumeri singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section in-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW01
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X01
Sampling Location	Tonaghatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 23	Temp. - 39°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	-	-	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	-	-	Agree.	Agreeable
3.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	-	BDL (MDL 0.003)	-
4.	Cyanide (as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	-	BDL (MDL 1.0)	0.05-No relaxation

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivan Kumar Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 3 9 F															
Discipline	Chemical	Group	Water	Sample Description		Residue & Contaminants in Water											
Report Release Date	09 <sup>th</sup> May, 2022			Report ID		YBAEEL-220428-124042-GW01											
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date		28.04.2022											
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.		YBAEEL/WA/LR/May-22/02											
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022			Mode of sample collection		By YBAEEL Team											
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code		220502-GW-X01											
Sampling Location	Tonagatu			Sampling Source		Ground Water											
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity		1000 ml											
Meteorological Cond. of Field	W.C.- Clear			RH % - 23		Temp. - 39°C											
Sample receipt Date	02/05/2022			Analysis Started on		02/05/2022					Analysis completed on		07/05/2022				

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.16	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.21	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivan Kumar Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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ISO 9001:2015  
ISO 45001:2018



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

### Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW01
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X01
Sampling Location	Tonagatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 23	Temp. - 39°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	-	BDL (MDL 0.02)	0.03-0.2

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shwani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-403:

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 4 F															
Discipline	Biological	Group	Water		Sample Description	Ground Water											
Report Release Date	06 <sup>th</sup> May, 2022				Report ID	YBAEEL-220428-124042-GW01											
W. Order/ JSPCB App. No.	Telephonic Order				Work Order Date	28.04.2022											
Type of Industry (if any)	Thermal Power Plant				Job code/ Ref. no.	YBAEEL/WA/L/M/May-22/01											
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022				Mode of sample collection	By YBAEEL Team											
Sampling Protocol	IS : 1622:1982, R - 2019				Sample Code	220502-GW-X01											
Sampling Location	Tonaghatu				Sampling Source	Ground Water											
Sample pkg. Condition	Sealed Pack in PP Bottle				Sample Quantity	250 ml											
Meteorological Cond. of Field	W.C.- Clear				RH % - 23												
Sample receipt Date	02/05/2022		Analysis Started on		03/05/2022	Analysis completed on		05/05/2022									

*****Test Results*****					
Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	<1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Specific contractual notes	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C). All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Madhuri Sinha (Lab Analyst)

<i>Mukesh Kumar</i>		<i>Umesh Das</i>	
Verified by	Mukesh Kumar	Issued by	Umesh Das
Section in-Charge		Technical Manager	

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-403

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 6 F															
Discipline	Chemical	Group	Water		Sample Description		Ground Water										
Report Release Date	09th May, 2022		Report ID		YBAEEL-220428-124042-GW02												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/C/May-22/02												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022		Mode of sample collection		By YBAEEL Team												
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003		Sample Code		220502-GW-X02												
Sampling Location	Bariyatu		Sampling Source		Ground Water												
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity		3000 ml												
Meteorological Cond. of Field	W.C. - Clear		RH % - 23		Temp. - 40°C												
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022												

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.85	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	-	< 5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	516.0	-
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.68	52.0	200-600
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	192.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	270.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	51.5	250-1000
9.	Fluoride (as F <sup>-</sup> )	APHA 4500 F-C 23rd edition 2017	mg/l	12.22	0.7	1.0-1.5
10.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 NO <sub>3</sub> - (B) 23rd edition 2017	mg/l	11.33	3.86	45-No relaxation
11.	Calcium (as Ca <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	4.19	55.2	75-200
12.	Magnesium (as Mg <sup>2+</sup> )	APHA 3500 Mg B : 2017	mg/l	1.90	13.12	30-100
13.	Sodium (as Na <sup>+</sup> )	APHA 3111 B 23rd edition 2017	mg/l	16.98	19.0	-
14.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23rd edition 2017	mg/l	9.21	2.0	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 1986:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh / Akash Khaikho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand

Ph : 09835-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW02
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X02
Sampling Location	Bariyatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 23	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Taste	IS 3025 (P-07):2002	-	-	Agree.	Agreeable
2.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	-	0.244	-
3.	Cyanide(as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	-	BDL (MDL 1.0)	0.05-No relaxation

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shiveni Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :-

NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018

Certified by :-



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 0 F															
Discipline	Chemical	Group	Water		Sample Description		Residue & Contaminants in Water										
Report Release Date	09th May, 2022		Report ID		YBAEEL-220428-124042-GW02												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/R/May-22/02												
Report issue to	M/s Inland Power Limited Tonagatu, Goia, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection				By YBAEEL Team								
Sampling Location	Bariyatu				Sample Code				220502-GW-X02								
Sample pkg. Condition	Sealed Pack In PP Bottle				Sampling Source				Ground Water								
Meteorological Cond. of Field	W.C.- Clear				Sample Quantity				1000 ml								
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		07/05/2022								

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.18	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.22	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shrivant Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section in-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW02
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X02
Sampling Location	Bariyatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 23	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	--	BDL (MDL 0.02)	0.03-0.2

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shwani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018

Certified by: -



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 5 F																
Discipline	Biological	Group	Water		Sample Description	Ground Water												
Report Release Date	06 <sup>th</sup> May, 2022				Report ID	YBAEEL-220428-124042-GW02												
W. Order/ JSPCB App. No.	Telephonic Order				Work Order Date	28.04.2022												
Type of Industry (If any)	Thermal Power Plant				Job code/ Ref. no.	YBAEEL/WA/L/M/May-22/01												
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																	
Sampling Date	30/04/2022				Mode of sample collection	By YBAEEL Team												
Sampling Protocol	IS : 1622:1982, R - 2019				Sample Code	220502-GW-X02												
Sampling Location	Bariyatu				Sampling Source	Ground Water												
Sample pkg. Condition	Sealed Pack in PP Bottla				Sample Quantity	250 ml												
Meteorological Cond. of Field	W.C.- Clear				RH % - 23	Temp. - 40°C												
Sample receipt Date	02/05/2022				Analysis Started on	03/05/2022				Analysis completed on	05/05/2022							

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit, <1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Madhuri Sinha (Lab Analyst)

Verified by Mukesh Kumar		Issued by Umesh Das	
Section in-Charge		Technical Manager	

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :-

NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018

Certified by :-



TC-403:

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 7 F															
Discipline	Chemical	Group	Water		Sample Description		Ground Water										
Report Release Date	09 <sup>th</sup> May, 2022				Report ID		YBAEEL-220428-124042-GW03										
W. Order/ JSPCB App. No.	Telephonic Order				Work Order Date		28.04.2022										
Type of Industry(if any)	Thermal Power Plant				Job code/ Ref. no.		YBAEEL/WA/L/C/May-22/02										
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection		By YBAEEL Team										
Sampling Location	Blyang				Sample Code		220502-GW-X03										
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source		Ground Water										
Meteorological Cond. of Field	W.C.- Clear				Sample Quantity		3000 ml										
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		07/05/2022								

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002				
2.	Colour	IS 3025 (P-04):1983	pH	1.77	6.51	6.5-8.5
3.	Conductivity	IS 3025 (P-14):2013	Hazen	--	5	5-15
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	µs/cm	1.90	802.0	--
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	3.68	134.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	1.35	324.0	200-600
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	2.85	412.0	500-2000
8.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
9.	Fluoride (as F <sup>-</sup> )	APHA 4500 F-C 23 <sup>rd</sup> edition 2017	mg/l	3.41	76.0	250-1000
10.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 NO <sub>3</sub> - (B) 23 <sup>rd</sup> edition 2017	mg/l	12.22	0.9	1.0-1.5
11.	Calcium (as Ca <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	11.33	3.87	45-No relaxation
12.	Magnesium (as Mg <sup>2+</sup> )	APHA 3500 Mg B : 2017	mg/l	4.19	79.2	75-200
13.	Sodium (as Na <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	1.90	30.61	30-100
14.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	18.6	--
				9.21	1.4	--

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda

Tested By - Shrivani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW03
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LC/May-22/02
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X03
Sampling Location	Biyang			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 23	Temp. - 38°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	-	-	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	-	-	Agree.	Agreeable
3.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	-	BDL (MDL 0.003)	..
4.	Cyanide(as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	-	BDL (MDL 1.0)	0.05-No relaxation

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shwani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 1 F																		
Discipline	Chemical	Group	Water				Sample Description				Residue & Contaminants in Water									
Report Release Date	09 <sup>th</sup> May, 2022				Report ID				YBAEEL-220428-124042-GW03											
W. Order/ JSPCB App. No.	Telephonic Order				Work Order Date				28.04.2022											
Type of Industry (if any)	Thermal Power Plant				Job code/ Ref. no.				YBAEEL/WA/LR/May-22/02											
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																			
Sampling Date	30/04/2022																			
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection				By YBAEEL Team											
Sampling Location	Biyang				Sample Code				220502-GW-X03											
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source				Ground Water											
Meteorological Cond. of Field	W.C. - Clear				Sample Quantity				1000 ml											
Sample receipt Date	02/05/2022				Analysis Started on				02/05/2022				Analysis completed on				07/05/2022			

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.17	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.22	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	-

*****End of Report*****	
Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shrivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory



Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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ISO 9001:2015



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW03
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/May-22/02
Report issue to	M/s Inland Power Limited. Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X03
Sampling Location	Biyang			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Meteorological Cond. of Field	W.C. - Clear			RH % - 23	Temp. - 38°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	..	BDL (MDL 0.02)	0.03-0.2

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-403

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 6 F															
Discipline	Biological	Group	Water		Sample Description	Ground Water											
Report Release Date	06 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW03												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/M/May-22/01												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022		Mode of sample collection		By YBAEEL Team												
Sampling Protocol	IS : 1622:1982, R - 2019		Sample Code		220502-GW-X03												
Sampling Location	Biyang		Sampling Source		Ground Water												
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity		250 ml												
Meteorological Cond. of Field	W.C.- Clear		RH % - 23		Temp. - 38°C												
Sample receipt Date	02/05/2022	Analysis Started on	03/05/2022	Analysis completed on	05/05/2022												

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit, <1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Madhuri Sinha (Lab Analyst)

Verified by Mukesh Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
Authorized Signatory Microbiology Section Yugantar Bharati Analytical & Environmental Engineering Laboratory		Technical Manager Yugantar Bharati Analytical & Environmental Engineering Laboratory	



Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 4 8 F															
Discipline	Chemical	Group	Water		Sample Description		Ground Water										
Report Release Date	09 <sup>th</sup> May, 2022				Report ID		YBAEEL-220428-124042-GW04										
W. Order/ JSPCB App. No.	Telephonic Order				Work Order Date		28.04.2022										
Type of Industry (if any)	Thermal Power Plant				Job code/ Ref. no.		YBAEEL/WA/L/C/May-22/02										
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection		By YBAEEL Team										
Sampling Location	Serengatu				Sample Code		220502-GW-X04										
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source		Ground Water										
Meteorological Cond. of Field	W.C.- Clear				Sample Quantity		3000 ml										
Sample receipt Date	02/05/2022	Analysis Started on		02/05/2022	Analysis completed on		07/05/2022										

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	7.06	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	-	< 5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.80	380.0	-
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.68	146.0	200-600
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	146.0	200-600
6.	Total dissolved solids	IS 3025 (P-15):2006	mg/l	2.85	204.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.84	BDL (MDL 0.07)	0.2-1
8.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	14.0	250-1000
9.	Fluoride (as F <sup>-</sup> )	APHA 4500 F-C 23 <sup>rd</sup> edition 2017	mg/l	12.22	1.0	1.0-1.5
10.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017	mg/l	11.33	2.48	45-No relaxation
11.	Calcium (as Ca <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	4.19	37.6	75-200
12.	Magnesium (as Mg <sup>2+</sup> )	APHA 3500 Mg B : 2017	mg/l	1.90	12.63	30-100
13.	Sodium (as Na <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	19.2	-
14.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	9.21	1.6	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivan Kumar Singh / Akash Khakho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur Dhanbad Hazaribag Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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ISO 9001:2015



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW04
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LC/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X04
Sampling Location	Serengatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 24	Temp. - 37°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	--	--	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	--	--	Agree.	Agreeable
3.	Phosphate (as PO <sub>4</sub> <sup>-</sup> )	IS 3025 (P-31):2003	mg/l	--	BDL (MDL 0.003)	--
4.	Cyanide(as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	--	BDL (MDL 1.0)	0.05-No relaxation

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh / Akash Khalikho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-403.

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 4 2 F															
Discipline	Chemical	Group	Water		Sample Description		Residue & Contaminants in Water										
Report Release Date	09 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW04												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry/(If any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/R/May-22/02												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection		By YBAEEL Team										
Sampling Location	Serengatu				Sample Code		220502-GW-X04										
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source		Ground Water										
Meteorological Cond. of Field	W.C.- Clear				Sample Quantity		1000 ml										
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		07/05/2022								

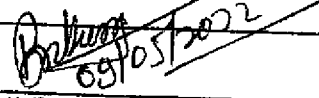
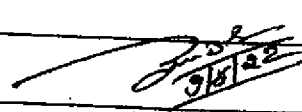
#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.18	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.20	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh (Lab Analyst)

 Verified by Brij Nandan Kumar Section In-Charge		 Issued by Umesh Das Technical Manager	
--	--	--	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &

Branch Office :- Jamshedpur      Dhanbad      Hazaribag      Pakur

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ISO 9001:2015



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

### Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW04
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LR/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X04
Sampling Location	Serengatu			Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 24	Temp. - 37°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	--	BDL (MDL 0.02)	0.03-0.2

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivanil Kumar Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



## Test Certificate

TC-4032

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 7 F															
Discipline	Biological	Group	Water		Sample Description	Ground Water											
Report Release Date	06 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW04												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/M/May-22/01												
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022		Mode of sample collection		By YBAEEL Team												
Sampling Protocol	IS : 1622:1982, R - 2019		Sample Code		220502-GW-X04												
Sampling Location	Serenghatu		Sampling Source		Ground Water												
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity		250 ml												
Meteorological Cond. of Field	W.C.- Clear		RH % - 24		Temp. - 37°C												
Sample receipt Date	02/05/2022	Analysis Started on	03/05/2022	Analysis completed on	05/05/2022												

*****Test Results*****					
Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	
3.	E coli	APHA 9221-F 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)	

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit, <1.8 / < 1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1986 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Madhuri Sinha (Lab Analyst)

Verified by	Mukesh Kumar	Issued by	Umesh Das
Section In-Charge		Technical Manager	

Authorized Signatory  
Microbiological Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 09835-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - ISO 9001:2015 & ISO 45001:2018



TC-403:

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 4 9 F															
Discipline	Chemical	Group	Water		Sample Description		Ground Water										
Report Release Date	09 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW05												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry(if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/C/May-22/02												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003		Mode of sample collection		By YBAEEL Team												
Sampling Location	Near Stack		Sample Code		220502-GW-X05												
Sample pkg. Condition	Sealed Pack in PP Bottle		Sampling Source		Ground Water (Drinking Water)												
Meteorological Cond. of Field	W.C.- Clear		Sample Quantity		3000 ml												
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022												

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.96	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	-	< 5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.90	376.0	-
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.66	132.0	200-600
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	162.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	200.0	500-2000
7.	Chlorine Residual	IS 3025 (P-26):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Fluoride (as F <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	12.5	250-1000
9.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 F-C 23 <sup>rd</sup> edition 2017	mg/l	12.22	0.8	1.0-1.5
10.	Calcium (as Ca <sup>2+</sup> )	APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017	mg/l	11.33	3.77	45-No relaxation
11.	Magnesium (as Mg <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	4.19	46.40	75-200
12.	Sodium (as Na <sup>+</sup> )	APHA 3500 Mg B : 2017	mg/l	1.90	11.17	30-100
13.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	18.0	-
14.		APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	9.21	1.6	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shilvani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office: - Jamshedpur Dhanbad Hazaribag Pakur

Main Office: Namkum Post Office, Sidrout, Ranchi - 834010, Jharkhand  
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ISO 9001:2015



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018

### Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW05
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X05
Sampling Location	Near Stack			Sampling Source	Ground Water (Drinking Water)
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 36	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	--	--	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	--	--	Agree.	Agreeable
3.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	--	0.170	--
4.	Cyanide(as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	--	BDL (MDL 1.0)	0.05-No relaxation

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
 Tested By - Shivanil Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
 Chemical Section  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Technical Manager  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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045001:2018



ISO 9001:2015



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-403

## Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 3 F																		
Discipline	Chemical	Group	Water		Sample Description		Residue & Contaminants in Water													
Report Release Date	09th May, 2022		Report ID		YBAEEL-220428-124042-GW05															
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022															
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/LR/May-22/02															
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																			
Sampling Date	30/04/2022																			
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection				By YBAEEL Team											
Sampling Location	Near Stack				Sample Code				220502-GW-X05											
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source				Ground Water (Drinking Water)											
Meteorological Cond. of Field	W.C. - Clear				Sample Quantity				1000 ml											
Sample receipt Date	02/05/2022				Analysis Started on				02/05/2022				Analysis completed on				07/05/2022			

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.15	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.19	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh (Lab Analyst)

 Verified by Brij Nandan Kumar Section In-Charge		 Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW05
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/R/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X05
Sampling Location	Near Stack			Sampling Source	Ground Water (Drinking Water)
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Metacological Cond. of Field	W.C.- Clear			RH % - 36	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

*****Test Results*****					
Sl	Parameter	Test Method	Units	MU %	Results
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	-	BDL (MDL 0.02)
					Limits
					0.03-0.2

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shivan Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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ISO 9001:2015



ISO 45001:2018



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-403

## Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 8 F															
Discipline	Biological	Group	Water	Sample Description		Ground Water											
Report Release Date	08 <sup>th</sup> May, 2022			Report ID		YBAEEL-220428-124042-GW05											
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date		28.04.2022											
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.		YBAEEL/WA/L/M/May-22/01											
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022			Mode of sample collection		By YBAEEL Team											
Sampling Protocol	IS : 1622:1982, R - 2019			Sample Code		220502-GW-X05											
Sampling Location	Near Stack			Sampling Source		Ground Water (Drinking Water)											
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity		250 ml											
Meteorological Cond. of Field	W.C.- Clear			RH % - 36		Temp. - 40°C											
Sample receipt Date	02/05/2022			Analysis Started on		03/05/2022				Analysis completed on		05/05/2022					

*****Test Results*****				
Sl	Parameter	Test Method	Units	Results
1.	Total coliform	APHA 9221B 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)
2.	Fecal coliform	APHA 9221E 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)
3.	E coli	APHA 9221-F 23 <sup>rd</sup> Edition 2017	MPN/100 ml	BDL (MDL 1.1)

Shall not to be  
Detectable in any  
100 ml sample

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	<1.8 / <1.1 MPN/100 ml denotes that the presence probability of bacteria is absent in the tested sample.
Specific contractual notes	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C). All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Madhuri Sinha (Lab Analyst)

 Verified by Mukesh Kumar Section In-Charge		 Issued by Umesh Das Technical Manager	
--	--	---	--

Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur      Dhanbad      Hazaribag      Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 5 0 F															
Discipline	Chemical	Group	Water													Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022		Report ID													YBAEEL-220428-124042-GW06	
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date													28.04.2022	
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.													YBAEEL/WA/L/CIMay-22/02	
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003																
Sampling Location	Near Canteen																
Sample pkg. Condition	Sealed Pack in PP Bottle																
Meteorological Cond. of Field	W.C. - Clear																
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022												

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	6.85	6.5-8.5
2.	Colour	IS 3025 (P-04):1983	Hazen	-	5	5-15
3.	Conductivity	IS 3025 (P-14):2013	µs/cm	1.80	380.0	-
4.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.88	132.0	200-600
5.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	160.0	200-600
6.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	216.0	500-2000
7.	Chlorine Residual	IS 3025 (P-28):2003	mg/l	30.64	BDL (MDL 0.07)	0.2-1
8.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	16.0	250-1000
9.	Fluoride (as F <sup>-</sup> )	APHA 4500 F-C 23 <sup>rd</sup> edition 2017	mg/l	12.22	0.6	1.0-1.5
10.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017	mg/l	11.33	3.74	45-No relaxation
11.	Calcium (as Ca <sup>2+</sup> )	IS 3025 (P-40): 2003	mg/l	4.19	46.4	75-200
12.	Magnesium (as Mg <sup>2+</sup> )	APHA 3500 Mg B : 2017	mg/l	1.90	11.17	30-100
13.	Sodium (as Na <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	16.0	-
14.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	9.21	2.0	-

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section in-Charge	Issued by Umesh Des Technical Manager
---	---

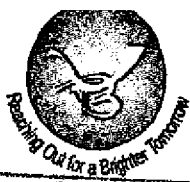
Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office : - Jamshedpur Dhanbad Hazaribag Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 09835-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in





# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW06
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Goia, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X06
Sampling Location	Near Canteen			Sampling Source	Ground Water (Drinking Water)
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C. - Clear			RH % - 36	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Odour	IS 3025 (P-05):2002	-	-	Agree.	Agreeable
2.	Taste	IS 3025 (P-07):2002	-	-	Agree.	Agreeable
3.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	-	0.160	-
4.	Cyanide (as CN <sup>-</sup> )	IS 3025 (P-27)	mg/l	-	BDL (MDL 1.0)	0.05-No relaxation

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By :- Angad Munda  
Tested By :- Shivani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

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Environmental Engineering Laboratory

Technical Manager  
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Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- ISO 9001:2015 & ISO 45001:2018



TC-403

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 4 4 F															
Discipline	Chemical	Group	Water		Sample Description		Residue & Contaminants in Water										
Report Release Date	09 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-GW06												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/R/May-22/02												
Report issue to	M/s Inland Power Limited Tonagatu, Gofa, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection	By YBAEEL Team											
Sampling Location	Near Canteen				Sample Code	220502-GW-X06											
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source	Ground Water (Drinking Water)											
Meteorological Cond. of Field	W.C. - Clear				Sample Quantity	1000 ml											
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		07/05/2022								

#### \*\*\*\*\*Test Results\*\*\*\*\*

Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Arsenic (as As)	APHA 3114 B 23 <sup>rd</sup> edition 2017	mg/l	10.34	BDL (MDL 0.003)	0.01-No relaxation
2.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	0.05-1.5
3.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.14	1.0-No relaxation
4.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	15.35	0.20	5-15
6.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	0.003-No relaxation
7.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.05-No relaxation
8.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	0.02-No relaxation
9.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 186:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shvanti Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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ISO 9001:2015



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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Certified by :- An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	09 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-GW06
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LR/May-22/02
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-GW-X06
Sampling Location	Near Canteen			Sampling Source	Ground Water (Drinking Water)
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	1000 ml
Meteorological Cond. of Field	W.C.- Clear			RH % - 36	Temp. - 40°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	07/05/2022

*****Test Results*****					
Sl	Parameter	Test Method	Units	MU %	Results
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	--	BDL (MDL 0.02)
					Limits
					0.03-0.2

\*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	IS 10500: 2021
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 198:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits

Sample Drawn By - Angad Munda  
Tested By - Shiveni Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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ISO 45001:2018



ISO 9001:2015



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-403

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 3 3 F															
Discipline	Chemical	Group	Water		Sample Description	Surface Water											
Report Release Date	06 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-SW01												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/LC/May-22/01												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	02/05/2022		Mode of sample collection		By YBAEEL Team												
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003		Sample Code		220502-SW-X01												
Sampling Location	Near Cooling Tower		Sampling Source		Surface Water (Effluent)												
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity		3000 ml												
Meteorological Cond. of Field	W.C. - Clear		RH % - 23		Temp. - 42°C												
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	06/05/2022												

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	pH value	IS 3025 (P-11):2002	pH	1.77	7.98	--
2.	Total Alkalinity (as CaCO <sub>3</sub> )	IS 3025 (P-23):2003	mg/l	3.68	90.0	--
3.	Total Hardness (as CaCO <sub>3</sub> )	IS 3025 (P-21):2009	mg/l	1.35	110.0	--
4.	Oxygen (dissolved)	IS 3025 (P-38):2003	mg/l	6.5	6.7	--
5.	Total dissolved solids	IS 3025 (P-16):2006	mg/l	2.85	184.0	--
6.	Total suspended solids	IS 3025 (P-17):2012	mg/l	5.7	BDL (MDL 10.0)	--
7.	Oil and grease	IS 3025 (P-39):2003	mg/l	8.79	4.2	--
8.	BOD	IS 3025 (P-44):2009	mg/l	11.04	1.4	--
9.	COD	IS 3025 (P-58):2006	mg/l	8.75	28.0	--
10.	Chloride (as Cl <sup>-</sup> )	IS 3025 (P-32):2003	mg/l	3.41	28.5	--
11.	Nitrate (as NO <sub>3</sub> <sup>-</sup> )	APHA 4500 NO <sub>3</sub> <sup>-</sup> (B) 23 <sup>rd</sup> edition 2017	mg/l	11.33	0.38	--
12.	Sulphate (as SO <sub>4</sub> <sup>2-</sup> )	IS 3025 (P-24):2003	mg/l	5.42	16.2	--
13.	Sodium (as Na <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	16.98	12.0	--
14.	Potassium (as K <sup>+</sup> )	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	9.21	1.0	--

*****End of Report*****	
Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh / Akash Khalkho (Lab Analyst)

 Verified by Brij Nandan Kumar Section In-Charge		 Issued by Umesh Das Technical Manager	
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Authorized Signatory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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Certified by: - An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Surface Water
Report Release Date	06 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-SW01
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry (if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/C/May-22/01
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	02/05/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003			Sample Code	220502-SW-X01
Sampling Location	Near Cooling Tower			Sampling Source	Surface Water (Effluent)
Sample pkg. Condition	Sealed Pack in PP Bottle			Sample Quantity	3000 ml
Meteorological Cond. of Field	W.C. - Clear			RH % - 23	Temp. - 42°C
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	06/05/2022

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Nitrogen Ammonia	IS 3025 (P-34):1988	mg/l	--	BDL (MDL 0.1)	--
2.	Phosphate (as PO <sub>4</sub> <sup>3-</sup> )	IS 3025 (P-31):2003	mg/l	--	0.246	5
*****End of Report*****						

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By - Anand Munda  
Tested By - Shwani Kumari Singh / Akash Khalkho (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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ISO 9001:2015 & ISO 45001:2018



TC-403

## Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 7 3 4 F															
Discipline	Chemical	Group	Water		Sample Description		Residue & Contaminants in Water										
Report Release Date	06 <sup>th</sup> May, 2022		Report ID		YBAEEL-220428-124042-SW01												
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date		28.04.2022												
Type of Industry (if any)	Thermal Power Plant		Job code/ Ref. no.		YBAEEL/WA/L/R/May-22/01												
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																
Sampling Date	30/04/2022																
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003				Mode of sample collection				By YBAEEL Team								
Sampling Location	Near Cooling Tower				Sample Code				220502-SW-X01								
Sample pkg. Condition	Sealed Pack in PP Bottle				Sampling Source				Surface Water (Effluent)								
Meteorological Cond. of Field	W.C. - Clear				Sample Quantity				1000 ml								
Sample receipt Date	02/05/2022		Analysis Started on		02/05/2022		Analysis completed on		08/05/2022								

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Copper (as Cu)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	11.11	BDL (MDL 0.01)	--
2.	Iron (as Fe)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	2.34	0.25	--
3.	Lead (as Pb)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	10.64	BDL (MDL 0.02)	--
4.	Cadmium (as Cd)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	5.0	BDL (MDL 0.02)	--
5.	Chromium (as Cr)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	12.53	BDL (MDL 0.02)	0.2
6.	Nickel (as Ni)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	13.72	BDL (MDL 0.02)	--
7.	Cobalt (Co)	APHA 3111 B 23 <sup>rd</sup> edition 2017	mg/l	28.33	BDL (MDL 0.03)	--

*****End of Report*****	
Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
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Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Shwani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
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Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
Certified by :- An ISO 9001:2015 & ISO 45001:2018

## Test Certificate

Discipline	Chemical	Group	Water	Sample Description	Residue & Contaminants in Water
Report Release Date	06 <sup>th</sup> May, 2022	Report ID	YBAEEL-220428-124042-SW01		
W. Order/ JSPCB App. No.	Telephonic Order	Work Order Date	28.04.2022		
Type of Industry (if any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/WA/L/R/May-22/01		
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	30/04/2022	Mode of sample collection	By YBAEEL Team		
Sampling Protocol	IS : 3025 (Part-1) 1987, R-2003	Sample Code	220502-SW-X01		
Sampling Location	Near Cooling Tower	Sampling Source	Surface Water (Effluent)		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	1000 ml		
Meteorological Cond. of Field	W.C.- Clear	RH % - 23	Temp. - 42°C		
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Analysis completed on	06/05/2022

*****Test Results*****						
Sl	Parameter	Test Method	Units	MU %	Results	Limits
1.	Aluminium (as Al)	IS 3025 (P-55):2003	mg/l	--	BDL (MDL 0.02)	--
*****End of Report*****						

Limit is specified as	
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining. Temperature $27 \pm 2^\circ\text{C}$ and Relative Humidity $65 \pm 5\%$ in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 15 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	

Sample Drawn By - Angad Munda  
Tested By - Shivani Kumari Singh (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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Authorised Laboratory  
Chemical Section  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

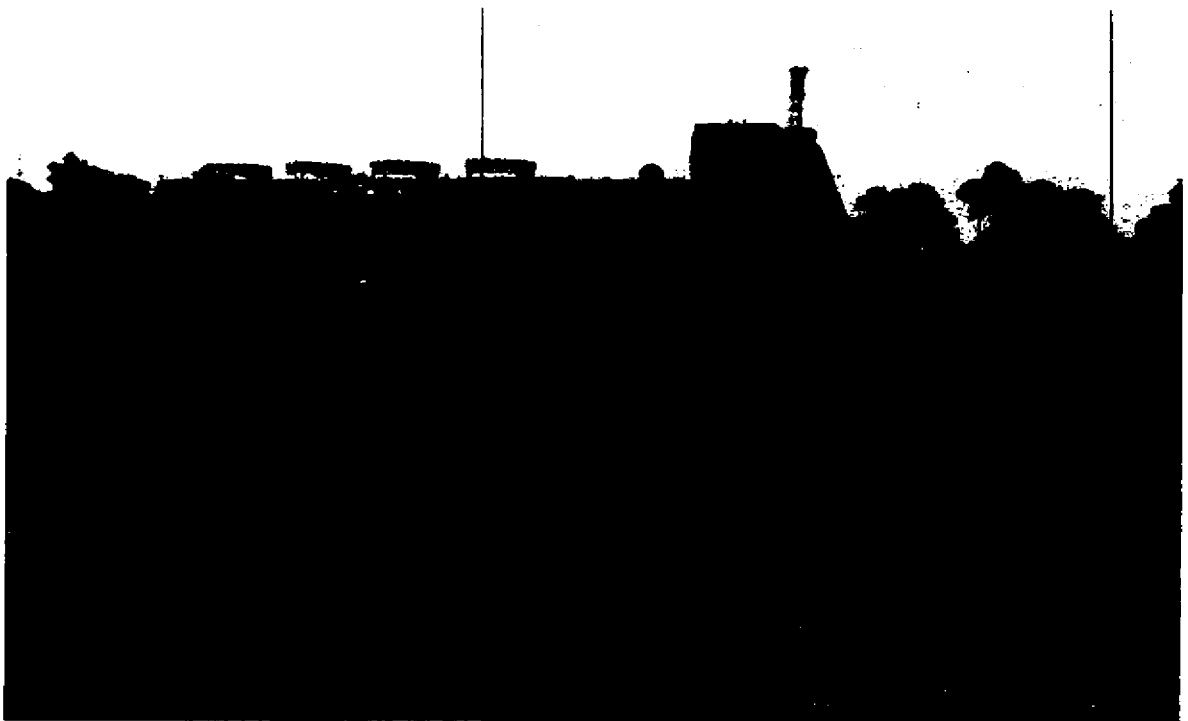
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# Plantation



## Plantation



## New Plantation

# Plantations

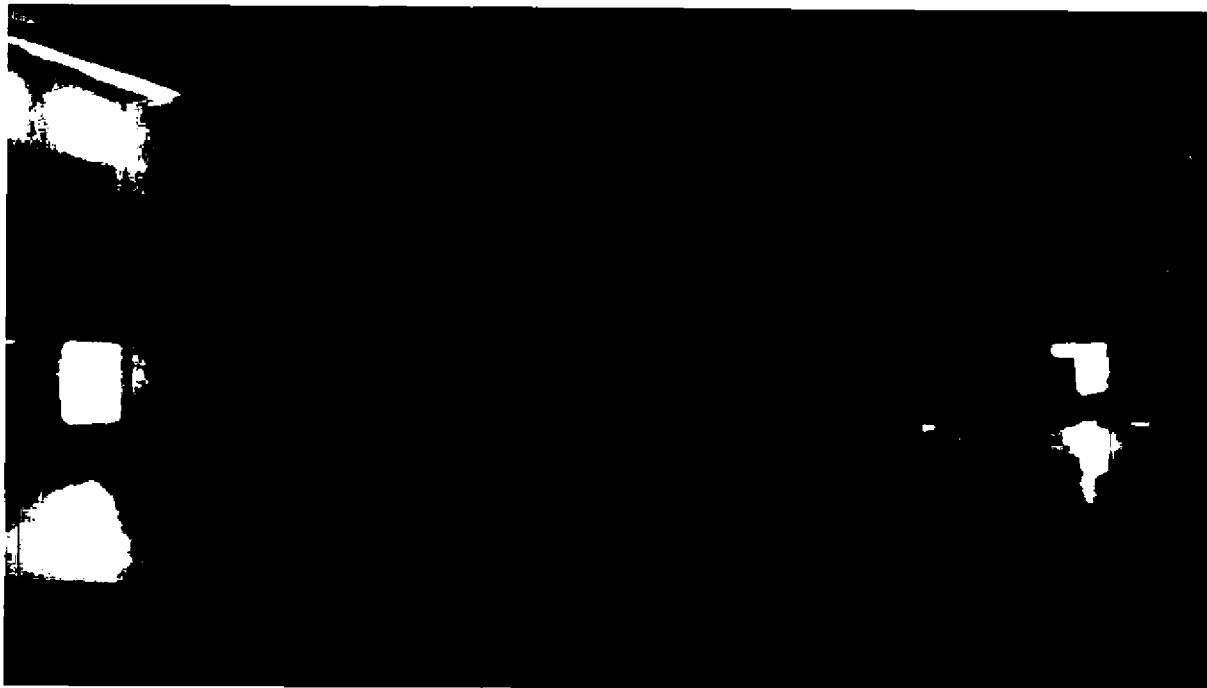


**Plantation**



**Plantation**

# Turbine Enclosure



**Inland Power LTD.**



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 2 9 F																
Discipline	Chemical	Group	Atmospheric Pollution				Sample Description				Ambient Air Quality (Core Zone)							
Report Release Date	06 <sup>th</sup> May, 2022		Report ID				YBAEEL-220428-124042-A01											
W. Order/ JSPCB App. No.	Telephonic Order		Work Order Date				28.04.2022											
Type of Industry(if any)	Thermal Power Plant		Job code/ Ref. no.				YBAEEL/WA/LJA/May-22/01											
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																	
Sampling Period	29/04/2022 - 30/04/2022				Mode of sample collection				By YBAEEL Team									
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																	
Sampling Locations	A. Near Main Gate				23°28'59.74"N, 85°39'38.39"E													
	B. Near Weight Bridge				23°29'57.99"N, 85°39'22.10"E													
	C. Near T G Building				23°28'59.23"N, 85°39'23.57"E													
Meteorological Cond. of Field	W.C.- Clear				RH % - 38				Temp. - 34°C				W.D.- East - West					
Sample receipt Date	02/05/2022		Analysis Started on				02/05/2022		Analysis completed on				06/05/2022					

#### \*\*\*\*\*Test Results\*\*\*\*\*

Parameters	Test Methods	Units	MU %	Sampling Location			Limits
				Site A	Site B	Site C	
Particulate matter (PM <sub>10</sub> )	IS:5182 (P-23) 2006, RA 2017	µg/m <sup>3</sup>	2.68	87.4	90.4	85.2	100
Particulate matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	2.60	49.3	52.4	48.4	60
Sulphure Dioxide (SO <sub>2</sub> )	IS:5182 (P-2) 2001 RA 2017	µg/m <sup>3</sup>	7.84	25.0	21.7	19.0	80
Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-8) 2006 RA 2017	µg/m <sup>3</sup>	4.17	53.7	50.3	45.3	80

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit,
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1968 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
	This report, in full or in part, shall not be used for advertising or as evidence in any court of law.
	This report cannot be reproduced, except when in full, without the written permission of the CEO.
	The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.
	The liability of the laboratory is limited to the invoiced amount.
Remarks	All disputes are subjected to the Ranchi Jurisdiction.
	Samples comply with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Anil Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
Ph : 09835-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



ISO 9001:2015  
ISO 45001:2018



# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
 Certified by: - An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Core Zone)
Report Release Date	06 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-A01
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/A/May-22/01
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Period	29/04/2022 – 30/04/2022		Mode of sample collection	By YBAEEL Team	
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)				
Sampling Locations	A. Near Main Gate			23°28'59.74"N, 85°39'38.39"E	
	B. Near Weight Bridge			23°29'57.99"N, 85°39'22.10"E	
	C. Near T G Building			23°28'59.23"N, 85°39'23.57"E	
Meteorological Cond. of Field	W.C.– Clear		RH % - 38	Temp. - 34°C	W.D.– East - West
Sample receipt Date	02/05/2022	Analysis Started on		02/05/2022	Analysis completed on 06/05/2022

#### \*\*\*\*\*Test Results\*\*\*\*\*

Parameters	Test Methods	Units	MU %	Sampling Location			Limits
				Site A	Site B	Site C	
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m <sup>3</sup>	-	BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	-

#### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit. BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Samples comply with prescribed limit.

Sample Drawn By - Angad Munda  
 Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
 Atmospheric Pollution  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Technical Manager  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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ISO 9001:2015



ISO 45001:2018



# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

## Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 3 2 F																																																												
Discipline	Chemical	Group	Atmospheric Pollution										Sample Description						Ambient Air Quality (Buffer Zone)																																											
Report Release Date	06 <sup>th</sup> May, 2022										Report ID										YBAEEL-220428-124042-A02																																									
W. Order/ JSPCB App. No.	Telephonic Order										Work Order Date										28.04.2022																																									
Type of Industry (if any)	Thermal Power Plant										Job code/ Ref. no.										YBAEEL/WA/LA/May-22/01																																									
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																																																													
Sampling Period	30/04/2022 - 01/05/2022													Mode of sample collection													By YBAEEL Team																																			
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)																																																													
Sampling Locations	A. Serenghatu													23°29'25.99"N, 85°40'30.15"E																																																
	B. Biyang													23°30'0.99"N, 85°39'4.99"E																																																
	C. Baryatu													23°29'47.77"N, 85°40'17.24"E																																																
Meteorological Cond. of Field	W.C.- Clear													RH % - 24													Temp. - 37°C										W.D.- East - West																									
Sample receipt Date	02/05/2022													Analysis Started on													02/05/2022													Analysis completed on													06/05/2022									

### \*\*\*\*\*Test Results\*\*\*\*\*

Parameters	Test Methods	Units	MU %	Sampling Location			Limits
				Site A	Site B	Site C	
Particulate matter (PM <sub>10</sub> )	IS:5182 (P-23) 2006, RA 2017	µg/m <sup>3</sup>	2.68	80.2	79.6	74.1	100
Particulate matter (PM <sub>2.5</sub> )	IS:5182 (P-24) 2019	µg/m <sup>3</sup>	2.60	45.8	42.4	44.2	60
Sulphure Dioxide (SO <sub>2</sub> )	IS:5182 (P-2) 2001 RA 2017	µg/m <sup>3</sup>	7.84	16.2	17.3	18.4	80
Nitrogen Dioxide (NO <sub>2</sub> )	IS:5182 (P-6) 2006 RA 2017	µg/m <sup>3</sup>	4.17	38.0	40.0	36.0	80

### \*\*\*\*\*End of Report\*\*\*\*\*

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Samples comply with prescribed limit.

Sample Drawn By ~ Angad Munda  
Tested By ~ Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umesh Das Technical Manager	
---	--	---	--

Authorized Signatory  
Atmospheric Pollution  
Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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ISO 9001:2015  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - Jharkhand State Pollution Control Board (JSPCB)  
Certified by: - An ISO 9001:2015 & ISO 45001:2018



## Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Buffer Zone)
Report Release Date	06 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-A02
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/L/A/May-22/01
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Period	30/04/2022 – 01/05/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)				
Sampling Locations	A. Serenghatu			23°29'25.98"N, 85°40'30.15"E	
	B. Biyang			23°30'0.99"N, 85°39'4.99"E	
	C. Bariyatu			23°29'47.77"N, 85°40'17.24"E	
Meteorological Cond. of Field	W.C.– Clear		RH % - 24	Temp. - 37°C	W.D.– East - West
Sample receipt Date	02/05/2022	Analysis Started on		02/05/2022	Analysis completed on
					06/05/2022

*****Test Results*****							
Parameters	Test Methods	Units	MU %	Sampling Location			Limits
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m³	~	Site A	Site B	Site C	
				BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	
*****End of Report*****							

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility.
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	The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise.
Remarks	The liability of the laboratory is limited to the invoiced amount.
	All disputes are subjected to the Ranchi Jurisdiction.
	Samples comply with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

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Technical Manager  
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Branch Office :- Jamshedpur | Dhanbad | Hazaribag | Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



TC-4032

### Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 3 0 F																																											
Discipline	Chemical	Group	Atmospheric Pollution									Sample Description									Ambient Noise																								
Report Release Date	06 <sup>th</sup> May, 2022																		Report ID									YBAEEL-220428-124042-N01																	
W. Order / JSPCB App. No.	Telephonic Order																		Work Order Date									28.04.2022																	
Type of Industry (If any)	Thermal Power Plant																		Job code/ Ref. no.									YBAEEL/WA/LIA/May-22/01																	
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																																												
Sampling Period	29/04/2022 - 30/04/2022																		Mode of sample collection									By YBAEEL Team																	
Sampling Protocol	IS 9989:1981 (RA 2020)																		Meteorological Cond. of Field									W.C. - Clear																	
Sample receipt Date	02/05/2022									Analysis Started on									02/05/2022									Analysis completed on									06/05/2022								
*****Test Results*****																																													

Sl	Locations	Parameters	Units	MU %	Day Time (6.00 a.m. to 10.00 p.m.)	Night Time (10.00 p.m. to 6.00 a.m.)	Limits
1.	Near Main Gate	Leq	dB (A)	3.32	54.8	48.9	Day - 75 Night - 70
2.	Near Weight Bridge	Leq	dB (A)	3.32	61.1	48.6	
3.	Near T G Building	Leq	dB (A)	3.32	64.5	62.6	
4.	Near Cooling Tower	Leq	dB (A)	3.32	64.7	64.6	
5.	Near Hostel	Leq	dB (A)	3.32	61.3	43.3	

\*\*\*\*\*End of Report\*\*\*\*\*

<ul style="list-style-type: none"> <li>Silence zone is an area comprising not less than 100 meters around hospitals, educational institutions, courts, religious places or any other area which is declared as such by the competent authority.</li> <li>Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.</li> <li>dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relative to human hearing.</li> </ul>	Area		Unit	Day Time	Night time
	A	Industrial Area	dB (A)	75.0	70.0
	B	Commercial Area	dB (A)	65.0	55.0
	C	Residential Area	dB (A)	55.0	45.0
	D	Silence Zone	dB (A)	50.0	40.0

Limit is specified as	Noise pollution (Regulation & Control) Rules, 2000.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility. This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Samples comply with prescribed limit.

Sample Drawn By - Angad Munda  
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
---	---

Authorized Signatory  
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Yugantar Bharati Analytical &  
Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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# YUGANTAR BHARATI ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by: - NABL accredited testing laboratory vide certificate Number TC-4032  
Jharkhand State Pollution Control Board (JSPCB)  
ISO 9001:2015 & ISO 45001:2018



## Test Certificate

ULR (Unique Lab Report) No.		T C 4 0 3 2 2 2 0 0 0 0 0 7 3 1 F																
Discipline	Chemical	Group	Atmospheric Pollution										Sample Description					
Report Release Date	06 <sup>th</sup> May, 2022												Stationary Source Emission					
W. Order/ JSPCB App. No.	Telephonic Order												Report ID					
Type of Industry (if any)	Thermal Power Plant												Work Order Date					
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.												Job code/ Ref. no.					
Sampling Period	30/04/2022												By YBAEEL Team					
Sampling Protocol	IS: 11255 & CPCB Guideline (Lata/80/2013-14)												Temp. - 34°C					
Meteorological Cond. of Field	W.C. - Clear												RH % - 40					
Sample receipt Date	02/05/2022		Analysis Started on										02/05/2022					
												Analysis completed on						
												06/05/2022						

As observed while sampling		General Information		As reported by customer	
Location	Platform	Sampling port hole	Type of fuel Used	Quantity of Fuel Used (During Sampling)	Coal
Stack Description (Shape & Material)	Permanent	Circular / RCC	Total production Capacity	59 MW	
Sampling port	Available	Single	Height of Stack from ground level	95.0 m	
Stack Identification	48.0 m	Running Oven during sampling (if any)	Inner Diameter of Stack	3.0 m	
Height of port hole from Ground level	N/A	Pollution Controlling Device (if any)	Total No. of Oven (if any)	ESP	
				N/A	

*****Test Results*****					N/A	
Sl	Parameters	Test Method	Units	MU %	Results	Limits
1.	Stack gas Temperature	IS 11255 (Part 3)2008	k	--	427.0	-
2.	Stack gas Velocity	IS 11255 (Part 3)2008	m/s	--	22.08	-
3.	Volumetric Flow Rate	IS 11255 (Part 3)2008	Nm³/hr	--	378536.7	-
3.	Particulate Matter (PM)	IS 11255 (Part 1)2009	mg/Nm³	2.12	48.0	50
4.	Sulphure Dioxide (SO₂)	IS 11255 (Part 2)2009	mg/Nm³	3.06	165.7	600
5.	Oxide of Nitrogen (as NOₓ)	IS 11255 (Part 7)2005 RA 2012	mg/Nm³	2.70	69.2	450
7.	Carbon Monoxide (CO)	IS 13270:1992 (RA 2009)	%	--	BDL (MDL 0.2)	-
Emission Rate						
1.	Particulate Matter (PM)					

Emission Rate			
1.	Particulate Matter (PM)	IS 11255 (Part 1)2009	kg/hr.
2.	Sulphure Dioxide (SO <sub>2</sub> )	IS 11255 (Part 2)2009	kg/hr.
3.	Oxide of Nitrogen (as NO <sub>x</sub> )	IS 11255 (Part 7)2005 RA 2012	kg/hr.
			26.19

Limit is specified as		Environmental (Protection) Rule - 1986.
Abbreviation		MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab		Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes		All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks		Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge		Issued by Umash Das Technical Manager	
---	--	---	--

Authorized Signatory  
Atmospheric Pollution  
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Environmental Engineering Laboratory

Technical Manager  
Yugantar Bharati Analytical &  
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Branch Office : - Jamshedpur | Dhanbad | Hazaribag | Pakur

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# YUGANTAR BHARATI

## ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- Jharkhand State Pollution Control Board (JSPCB)  
 Certified by :- An ISO 9001:2015 & ISO 45001:2018



### Test Certificate

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Stationary Source Emission
Report Release Date	06 <sup>th</sup> May, 2022			Report ID	YBAEEL-220428-124042-S1
W. Order/ JSPCB App. No.	Telephonic Order			Work Order Date	28.04.2022
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/WA/LIA/May-22/01
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Period	30/04/2022			Mode of sample collection	By YBAEEL Team
Sampling Protocol	IS: 11255 & CPCB Guideline (Lats/80/2013-14)				
Meteorological Cond. of Field	W.C.- Clear			RH % - 40	
Sample receipt Date	02/05/2022	Analysis Started on	02/05/2022	Temp.- 34°C	
				Analysis completed on	06/05/2022
As observed in		General Information			

As observed while sampling			General Information	
Location	Platform	Sampling port hole	Type of fuel Used	As reported by customer
Stack Description (Shape & Material)	Permanent	Circular / RCC	Quantity of Fuel Used (During Sampling)	Coal
Sampling port	Available		Total production Capacity	60 MT/Hr.
Stack Identification	Single		Height of Stack from ground level	59 MW
Height of port hole from Ground level	48.0 m		Inner Diameter of Stack	95.0 m
Running Oven during sampling (if any)	N/A		Pollution Controlling Device (if any)	3.0 m
			Total No. of Oven (if any)	ESP
				N/A

*****Test Results*****					
Sl	Parameters	Test Method	Units	MU %	Results
1.	Mercury (as Hg)	Lat's/80/2013-14	mg/Nm <sup>3</sup>	-	BDL (MDL 0.003)
					0.03
*****End of Report*****					

Limit is specified as	Environmental (Protection) Rule - 1986.
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C).
Specific contractual notes	All values are expressed in as unit and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility This report, in full or in part, shall not be used for advertising or as evidence in any court of law. This report cannot be reproduced, except when in full, without the written permission of the CEO. The samples collected shall be destroyed after 7 days from the date of issue of the certificate unless specified otherwise. The liability of the laboratory is limited to the invoiced amount. All disputes are subjected to the Ranchi Jurisdiction.
Remarks	Sample complies with prescribed limits.

Sample Drawn By - Angad Munda  
 Tested By - Amit Kumar Sinha (Lab Analyst)

Verified by Brij Nandan Kumar Section In-Charge	Issued by Umesh Das Technical Manager
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Authorized Signatory  
 Atmospheric Pollution  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Technical Manager  
 Yugantar Bharati Analytical &  
 Environmental Engineering Laboratory

Branch Office :- Jamshedpur

Dhanbad

Hazaribag

Pakur

Main Office : Namkum Post Office, Sidroul, Ranchi - 834010, Jharkhand  
 Ph : 098351-97960, 098357-86677, Email - ybaeel@gmail.com, Web - https://ybaeel.in



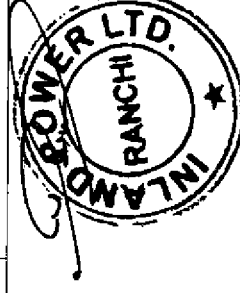
045001:2018



ISO 9001:2015

**DETAIL STATEMENT OF EXPENSES OF INLAND POWER LIMITED FROM 01.04.2018 TO 31.03.2022 UNDER CSR**

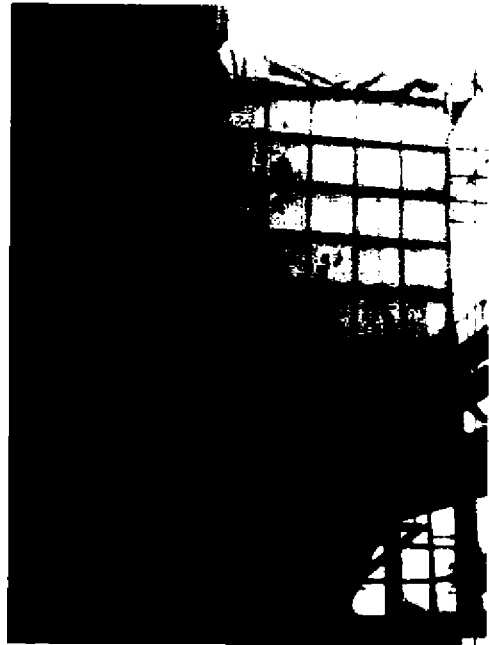
Sl. No.	PARTICULARS	FY 2018-19 (In Rs.)	FY 2019-20 (In Rs.)	FY 2020-21 (In Rs.)	FY 2021-22 (In Rs.)	REMARKS
1.	Rural Education Programme	3,44,822	2,58,894	1,04,472	1,99,680	Through which we are providing teaching facility in Bamni School.
2.	Rural Health Care Hygiene & Sanitation Programme	9,96,178	6,29,593	11,02,657	9,18,975	Through which we are providing regular free & proper Health Check up Camp with medicines, Pathological test facilities in surrounding
3.	Road & Other Repairing Work	983528	761665	1003563	727513	Through which we spent the amount for road repairing work.
4.	Drinking Water & Irrigation Programme	428290	854784	289484	624699	Through which we provide free drinking water in surrounding villages at the time of summer & provided bore well in surrounding
5.	Vocational Training (Like ITI etc.)	21933	-	31500	44500	Through which we are providing ITI training to local shortlisted candidates.
6.	Socio-Philanthropic Activity	911997	606401	1139209	1092803	Through which we provide a financial support to local villagers towards funeral, marriage & other ceremony. To repair & construction of Mandir/ Karbirstan/ local Holy Places as per the need. Making of bathroom.
<b>Grand Total Amount in Rs.</b>					<b>3608170</b>	



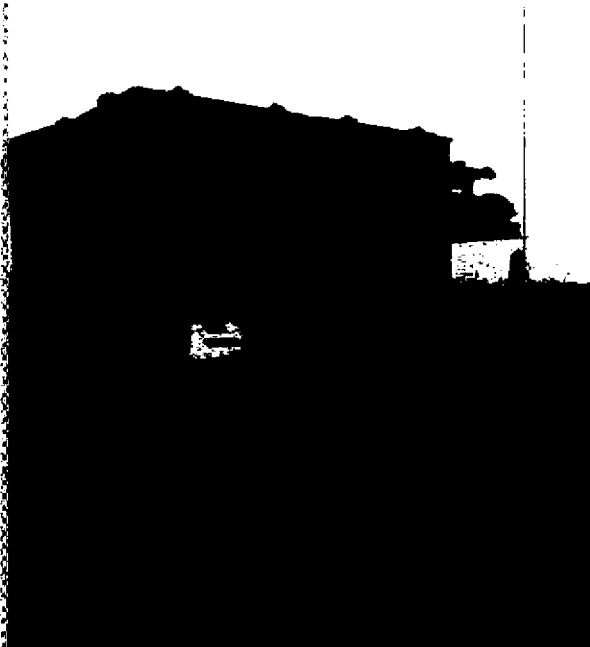
# Pollution Control Equipments



**BAG FILLTER**



**BAG FILLTER**



**BAG FILLTER**



**BAG FILLTER**



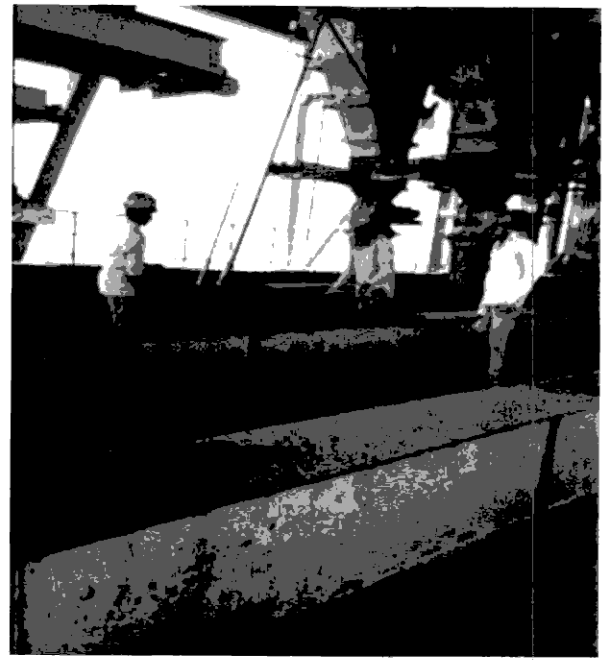
**Inland Power LTD.**

# Diesel Tank



**Inland Power LTD.**

# Safety Equipments





# Health(Medical)



**Health Centre**



**Ambulance**



InlandPower LTD.

# Drinking Water Facilities Bahmni Village



**Inland Power**

## **SUPPLY OF DRINKING WATER**

### **BAMHANI AND BARIYATU VILLAGES**

In order to supply fresh drinking water to Bamhani village Inland Power Ltd. has constructed a water tank, laid a long line of HDPE pipe and a platform with six numbers of outlet taps for drinking water and washing clothes and utensils.



The 650 meter long 2.5" (OD) HDPE pipe line has been laid from IPL labourers' colony to water tank area in Bamhani. A water tank tower has been constructed for holding the 5000 litres water tanks.

# Fly ash brick making plant

