(OK)

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN BENCH, KOLKATA

ORIGINAL APPLICATION NO. 204 OF 2024

(Earlier O.A. No. 954/2024/PB)

Binu Kumar Mahto Yuva Tiger, Purv Pratyashi, Ramgarh Vidhan Sabha .....Applicant(s)

Versus

State of Jharkhand and Others

.....Respondent(s)

COUNTER AFFIDAVIT ON BEHALF OF THE RESPONDENT NO.5

24 JAN 2025

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NOTARY * Govt. of West Bengal *
AMAL KUMAR DEY
NOTARY
Sealdah Court
Regn. No. 078 / 2022
Expiry 19.04.2027

24 JAN 2025

Sl. NO. 19

BEFORE THE NATIONAL GREEN TRIBUNAL

EASTERN BENCH, KOLKATA

ORIGINAL APPLICATION NO. 204 OF 2024

(Earlier O.A. No. 954/2024/PB)

Binu Kumar Mahto Yuva Tiger, Purv Pratyashi, Ramgarh Vidhan Sabha .....Applicant(s)

Versus

State of Jharkhand and Others

.....Respondent(s)

COUNTER AFFIDAVIT ON BEHALF OF THE RESPONDENT NO.5

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I, Giriraj Kumar Jhawar, Son of Shyam Sundar Jhawar, aged about 54 years, Resident of 9003 B Green View Heights, Bariatu, P.O.-RIMS& P.S. – Sadar, District – Ranchi, Jharkhand –834009, do hereby solemnly affirm and state as under:-

1. That I am the Director of Inland Power Limited (IPL)in the present O.A No. 204 of 2024and well acquainted with the facts and circumstances of the case and competent to swear this counter affidavit.
2. That I have gone through the contents of the counter affidavit and fully understood the same.
3. That the Original Application No. 954/2024/PB was registered by the New Delhi Bench of the NGT vide order dated 12.09.2024 on the basis of a letter dated 04.12.2023 submitted by one Mr. Binu Kumar Mahto Yuva Tiger(for brevity 'Yuva Tiger') resident of village Raipura, P.O. - Purabdih, P.S. - Gola, District - Ramgarh (Jharkhand) alleging that certain industrial proponent including the Respondent No. 5 (for brevity R.5) are emitting toxic gases, smoke, causing

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air pollution and health hazard to the local people apart from the allegation that some of Industries are at distance of 100-200 meters and these are in heavily populated areas.

Preliminary Submissions

A. Allegations levelled against the answering respondent are unfounded / unsubstantiated and without any homework. It is humbly submitted that the present O.A. is an absolute abuse of the process of law and without compliance of the statutory provision and rules framed thereunder.

B. The applicant has no Locus Standi to make complaint against the answering respondent.

C. There is conspicuous absence of the three pre-requisites of Section 14 to be eligible to invoke the jurisdiction of this Hon'ble Tribunal.

4. That it is humbly submitted that the applicant has miserably failed to prove his credential to be heard by the

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Hon'ble Tribunal and / or to raise dispute for settlement for lake of locus standi to the applicant.

5. That the instant O.A. has neither been initiated at the instance of a person satisfying the statutory pre-requisites nor it has been suo-moto initiated by the Hon'ble Tribunal under reported shocking damage to the environment and therefore, fit to be dropped.

6. That in the above premises, it is humbly submitted that the instant O.A. is bad in law and facts and is fit to be dismissed in limine.

7. That at the very outset it is humbly stated and submitted that allegation of emitting toxic gases causing air and health hazard is false, unfounded/baseless and raised with oblique motive for maligning IPL's reputation and hence disputed and denied.

8. That Yuva Tiger in his application dated 04.12.2023 did not claim to be either an accident victim or has suffered any injury but espousing the cause of others who according to him have suffered and thereby giving rise to disputes and/or

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seeking relief, compensation and restitution on their behalf, which is directly in teeth of the statutory provision.

9. That Yuva Tiger is resident of village Raipura which is neither the place of situate of R.5 nor adjoining village.

10. That Yuva Tiger has no locus standi to file such an unfounded complaint or a right to be heard by this Hon'ble Tribunal.

11. That this application does not reveal the date on which the cause of action for such dispute first arose.

12. That it is relevant to submit that in the case at hand, there is conspicuous absence of the three prerequisites of section 14 i.e., civil case; involvement of substantial question of the environment; implementation of the enactments in Schedule-I of the Act.

13. That further the application does not reveal the date of cause for such compensation or relief first arose and thereby hit by section 14 (3) and 15 (3) of the NGT Act, 2010 and as such this application is not maintainable in the eyes of law.

14. That as per the mandate of Section 18 r/w Rule 8(1) and form I & II, each application u/s 14 & 15 has to be made to the Tribunal in the prescribed form and contents. Further, locus standi of the person to make an application for grant of relief or compensation or settlement of dispute has been delineated in no ambiguous term which, inter-alia prescribes either of the following category: -

a) The person must have sustained the injury; or

b) The owner of the property claimed to have caused damage; or

c) Death has resulted from the environmental damage or any agent duly authorized by such person or owner of such property or any of the legal representative of the diseased, as the case may be; or

d) The Central / State Government or its instrumentality with the permission of the Tribunal.

15. That Section 18(2) of the National Green Tribunal (Practices and Procedure) Rules, 2011, specifies that the filing of an application for relief, compensation, or settlement of

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disputes before the Tribunal shall be made by a person who falls into any of the categories laid down in the Act, i.e., must have sustained injury; be aggrieved; be a legal representative of the deceased; or be an agent duly authorized (representative body or organization) by the aggrieved person. In the present case, the applicant does not fall into any of the above-mentioned categories and is, therefore, ineligible to file a complaint.

16. That before adverting to the allegations levelled against the answering respondent, it would be apt to refer to some of the admitted facts which are as follows: -

i. Respondent No. 5 (IPL) operates a 1X63 MW Coal-based Thermal Power Plant at Village Tonagatu, Tehsil Gola, District Ramgarh, Jharkhand, which commenced commercial operation on May 21, 2014.

ii. The process of generation of power involves procurement of coal, processing in the Coal Handling Plant, blending with washery rejects and processing of blended coal in the boiler unit for steam generation.

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iii. Emission of gases and/or pollutants is confined up to the stage of generation of steam and thereafter steam passes through the turbine to generate power that is the end product of the proponent unit thus ruling out any sort of toxic/ hazardous emission of solid/ liquid/ gaseous substance from the turbine.

iv. To ensure environmentally responsible and law-compliant management of emissions, the company, IPL operating the plant has implemented a comprehensive set of pollution control measures that cover every stage, from coal procurement to steam generation and boiler operation. Electrostatic Precipitators (ESP) are installed to effectively control particulate emissions, while an advanced Fly Ash Handling System efficiently collects fly ash in silos via pneumatic pipes, a significant portion of the fly ash is processed through a fully automated Fly Ash Brick Manufacturing Machine, providing a sustainable use for the byproduct and preventing its dispersal into the open air. The plant is equipped with a

NOTARY AMAL KUMAR DEY NOTARY Sealdah Court Regn. No. [illegible] 2022 Expiry [illegible] Govt. Of West Bengal

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95-meter stack, constructed in line with JSPCB and CPCB standards, ensuring the efficient dispersion of emissions. Additionally, a 26-acre green belt within the plant premises acts as a natural barrier, helping to reduce pollution and enhance air quality. To manage fugitive dust and control roadside emissions, a fixed water sprinkling system, along with truck-mounted water tankers equipped with sprinkling mechanisms, are deployed both inside and outside the plant area. The company's commitment to continuous compliance is further demonstrated through regular monitoring using Ambient Air Quality Monitoring (AAQM) systems and stack monitoring equipment, ensuring that emissions and air quality consistently remain within regulatory limits.

Documents including photographs and reports pertaining to pollution control measures, including water sprinkling systems, AAQM systems,

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stack structures, silos, ESPs, bag filters, Fly Ash Brick Manufacturing Plant are annexed herewith and marked as **Annexure- CA/1 (Series)**to this Counter Affidavit.

v. The disposal of 100% of our generated fly ash and the details of disposal report is submitted to JSPCB on quarterly basis and on monthly basis in the combined portal of the Government of India MoP/MoEF/CEA/CPCB named Ash Availability & Utilization Portal. A Fly Ash Audit for its utilization and disposal is also conducted by CPCB authorized auditor.

A copy of fly ash disposal report on quarterly basis and in monthly basis as well as fly ash audit report and its empanelment are annexed herewith and marked as

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Annexure-C/A-2 (Series) to this Counter Affidavit.

vi. The plant conducts comprehensive monitoring of groundwater and fly ash on a quarterly basis, with all analyses carried out by laboratories accredited by the Jharkhand State Pollution Control Board (JSPCB). The groundwater analysis reports consistently confirm that there is no adverse impact on water quality resulting from plant operations, reflecting the plant's commitment to environmental responsibility. Similarly, fly ash generated by the plant undergoes rigorous testing to evaluate its physical and chemical properties, ensuring that it meets all prescribed environmental standards for safe disposal and sustainable utilization in secondary applications such as construction materials.

Copy of reports of Ground Water analysis and fly ash analysis are annexed herewith and marked as **Annexure-CA-**

3(Series)to this Counter Affidavit.

vii. To further strengthen transparency and regulatory compliance, the plant has installed an advanced online monitoring system. This system provides real-time environmental data, which is directly transmitted to the servers of the JSPCB and the Central Pollution Control Board (CPCB). By combining regular laboratory analysis with cutting-edge monitoring technology, the plant demonstrates its proactive approach to environmental management and adherence to statutory norms.

Photographs of Online Monitoring system are annexed herewith and marked as **Annexure-C/A-4** to this Counter Affidavit.

viii. R.5, IPL operates the plant under the Regulations and guidelines of the Jharkhand Regulatory Commission, CERC, CEA and MOP. The plant incorporates an

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environment friendly system and adheres strictly to pollution control norms mandated by the Jharkhand State Pollution Control Board (JSPCB).

ix. IPL supplies 100% of its generated power to Jharkhand Bijli Vitran Nigam Limited (JBVNL) under a long-term Power Purchase Agreement (PPA), contributing to the state's commitment to provide 24x7 power supply to the people of Jharkhand.

x. It is further relevant to state and submit that Respondent No. 5 operates under valid CTO (Consent to Operate) granted by the competent authority vide order no. JSPCB/HO/RNC/CTO-17290597/2024/20Valid upto 31/12/2025.

A copy of order no. JSPCB/HO/RNC/CTO-17290597/2024/20 valid upto 31/12/2025 is annexed herewith and marked as **Annexure-C/A-5**to this Counter Affidavit.

24 JAN 2025

xi. The emissions of Particulate Matter, Sulphur Dioxide (SO2), Oxides of Nitrogen (NOx) and Mercury (Hg) are well within the norms as per the permissible limits of TPP standards.

Particulars	**Third Party Monitored Data**	**Permissible Limits (TPP Standards)**
Particulate Matter	32.6 mg/Nm³	50 mg/Nm³
Sulfur Dioxide (SO_2)	289.8 mg/Nm³	600 mg/Nm³
Oxides of Nitrogen (NOx)	71.8 mg/Nm³	300 mg/Nm³
Mercury (Hg)	Below Detectable Limit (BDL)	0.03 mg/Nm³

17. That from the facts mentioned hereinabove, it is deduced that Environment Laws / Norms / SOP(s) are being strictly adhered to by the answering respondent.

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18. That it is further relevant to submit that the answering respondent actively contributes to the welfare of local communities through initiatives such as health camps and the establishment of a health center.

A print out copy of PowerPoint presentation (PPT) of welfare activity is annexed herewith and marked as **Annexure-C/A-6**to this Counter Affidavit.

19. That from the above, it is evident that the instant application is bad in law and facts as well and therefore not maintainable. As a matter of fact, there is neither any dispute to be settled by this Hon'ble Tribunal nor there is any pending relief, compensation and restitution to be decided in favour of the applicant or against the Respondent No. 5.

20. That the answering respondent prays this Hon'ble Tribunal to decide the prelimary issue of maintainability of the

24 JAN 2025

instant application and the locus standi of Yuva Tiger to be considered as the applicant in this O.A in its present form.

21. That the answering respondent seeks gracious leave of this Hon'ble Tribunal to file detailed counter affidavit as and when required and directed to do so.

22. That in the given facts and circumstances, there is no merit in the O.A and it is fit to be dismissed at the threshold as against the answering respondent.

23. That I have gone through the contents of this counter affidavit and fully understood the same and states that the averments made therein are true to the best of my knowledge and information.

24. That this counter affidavit is being filed bonafide and in the interest of justice.

25. That the statements made in paragraphs 7, 14, 15 are true to my knowledge and those made in paragraphs 1 to 4, 8, 9, 11, 12, 13 & 16 to 18 are true to my

24 JAN 2025

information derived from the relevant records by this Hon'ble Tribunal.

26. That the annexures are the photo copies of their respective original.

27. Verified, signed and sworn this affidavit at the premises of 2nd on this the January day of January, 2025.

For INLAND POWER LTD.

Authorised Signatory/Director

Identified by me.
Manju Jaiswal
Advocate

24 JAN 2025

Solemnly Affirmed &
Declared Before Me
On Identification By.....

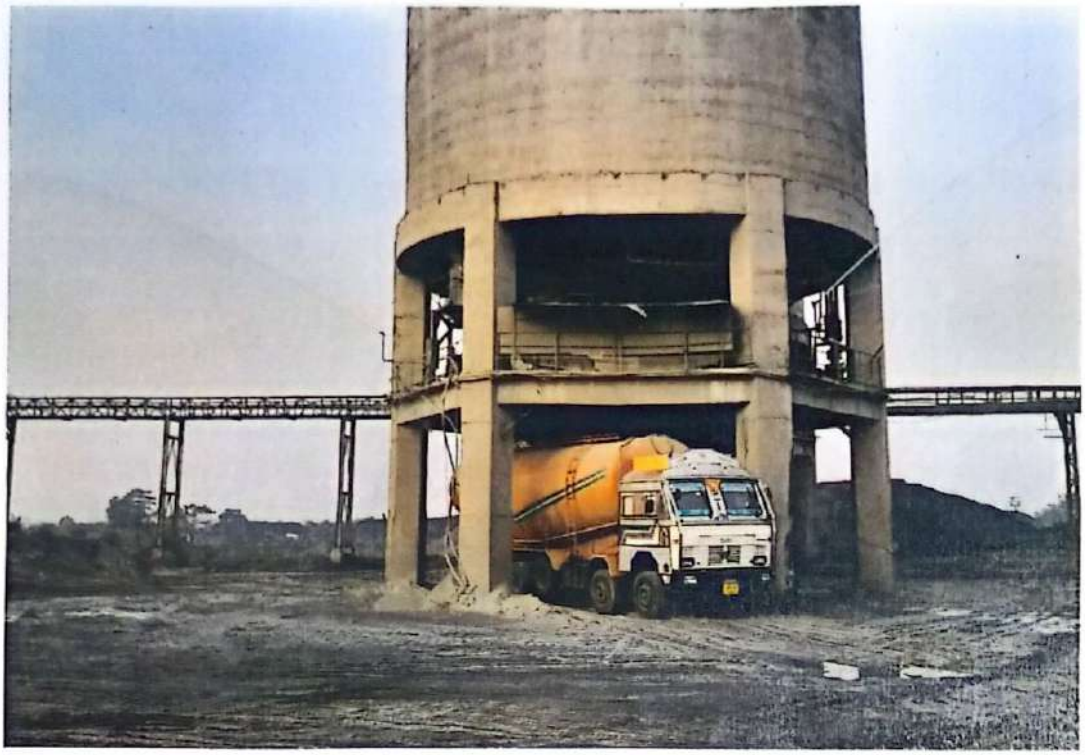
AMAL KUMAR DEY
NOTARY
Regn. No. 678 / 2022

24 JAN 2025

(21)

Annex – C1A-1 (Series)

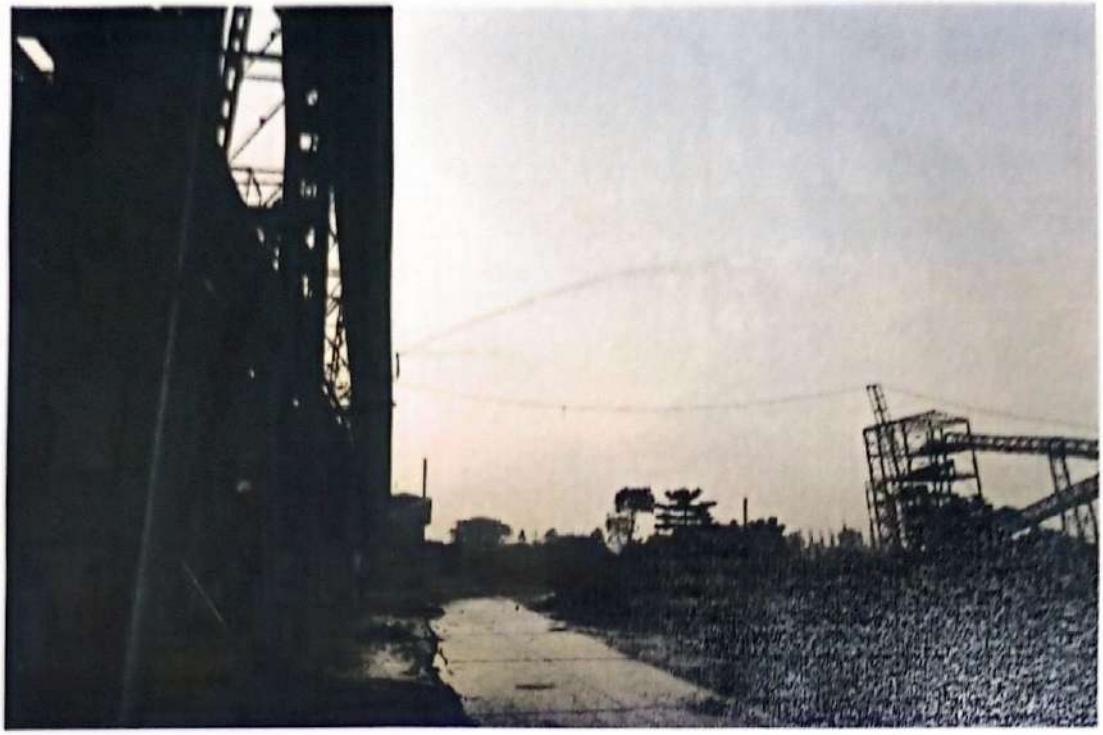
Sprinkling System Installed

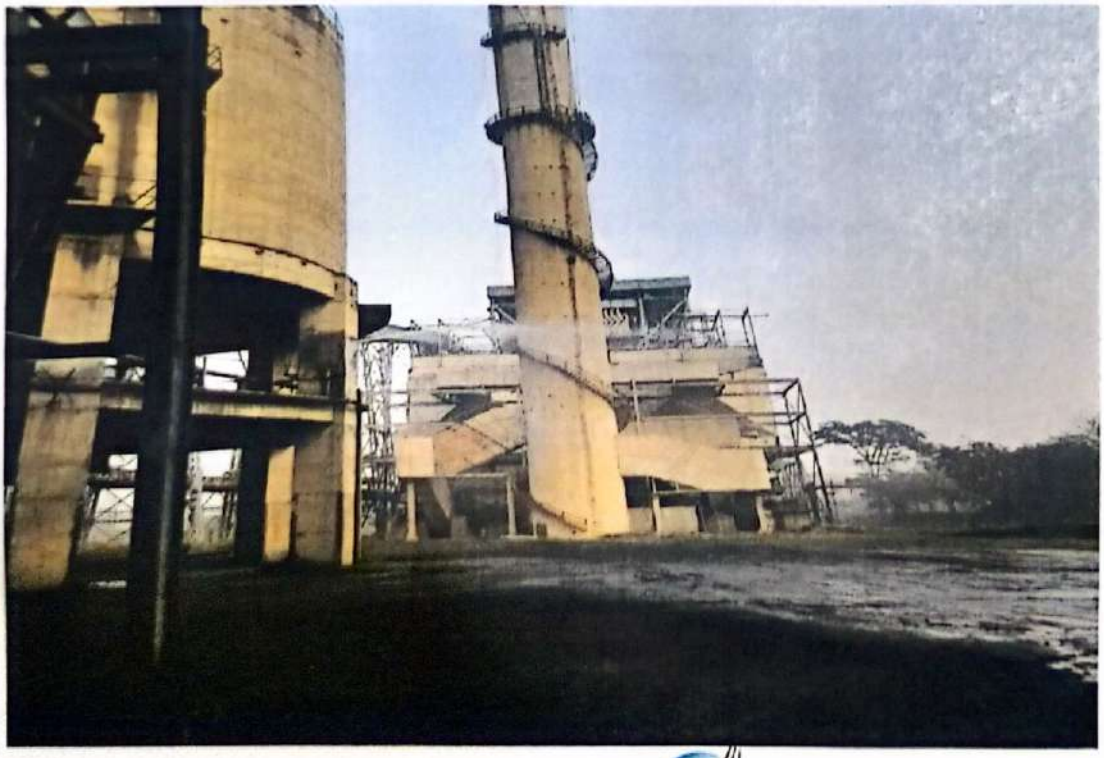


InlandPower LTD.

(22)

Sprinkling System Installed

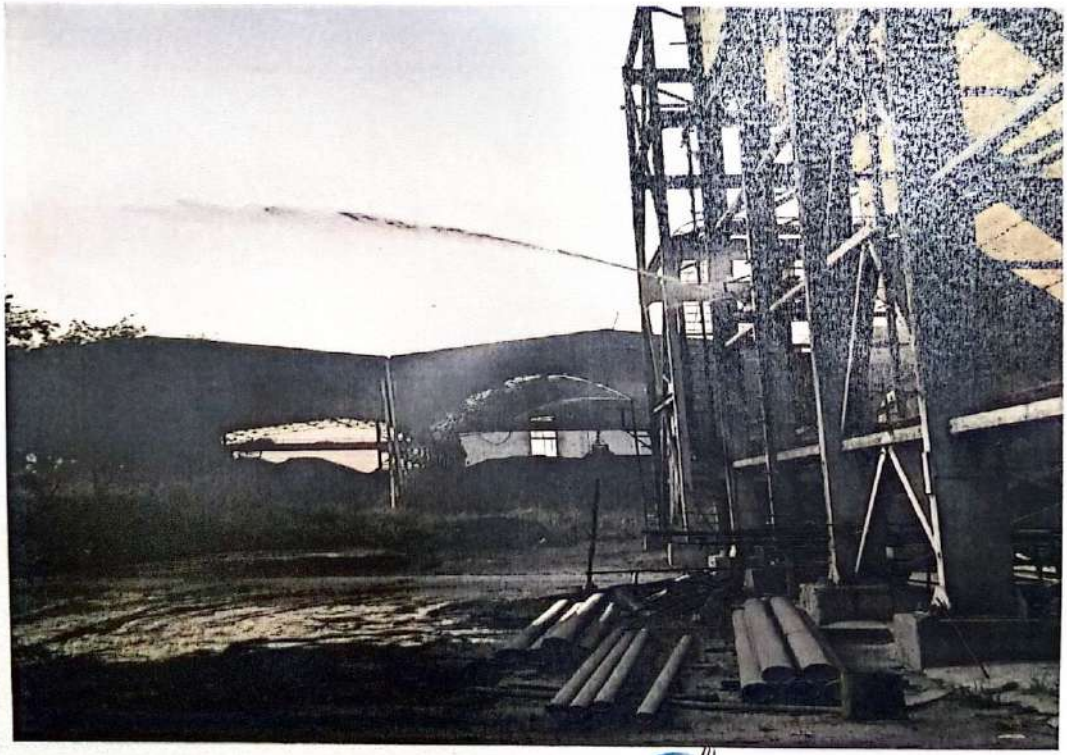




InlandPower LTD.

(23)

Sprinkling System Installed

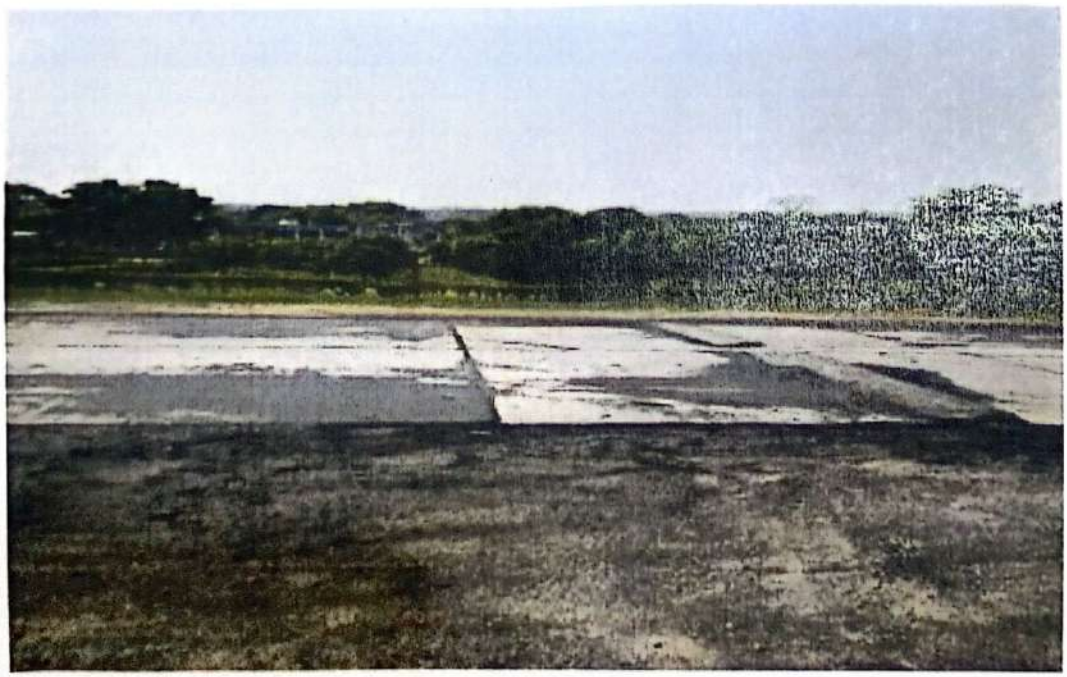


InlandPower LTD.

(24)

Water Tanker

Water Tanker



Plantation

InlandPower LTD.

25

Plantation

Plantation

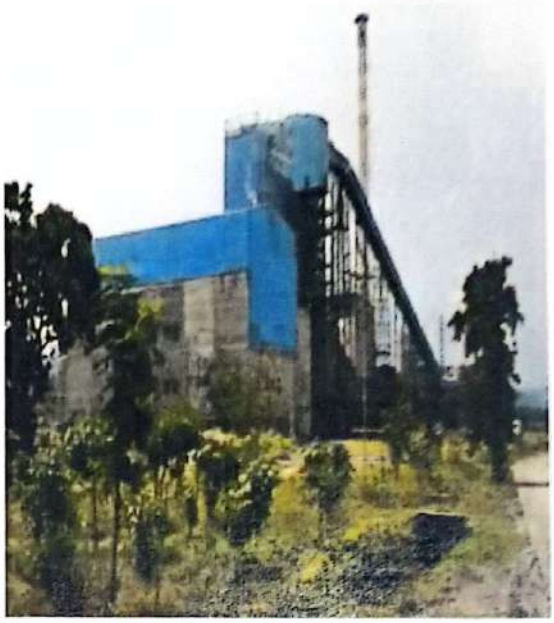
New Plantation

InlandPower LTD.

(26)

Pollution Control Equipments

ESP



CHMNEY

BAG FILLTER

BAG FILLTER

InlandPower LTD.

(27)

Pollution Control Equipments

BAG FILLTER

BAG FILLTER

BAG FILLTER

BAG FILLTER

InlandPower LTD.

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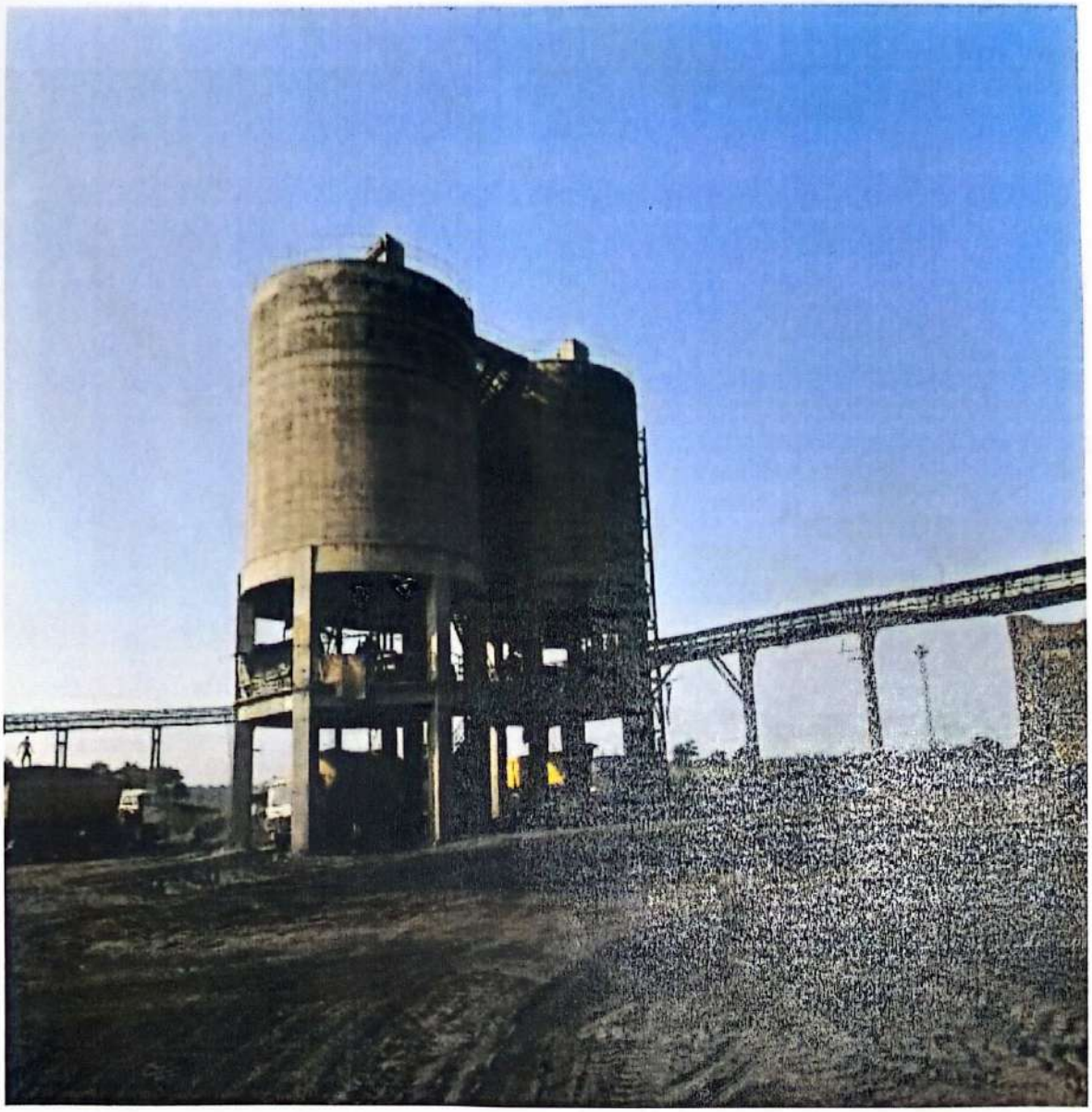
Pollution Control Equipments



FLY ASH SILO

InlandPower LTD.

(29)

Fly ash brick making plant

InlandPower LTD.

(30)

Steam Curing Chamber for Fly ash brick

InlandPower LTD.

(31) Annex - C/A - 1 (Series)

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018
TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 6 F	
Discipline: Chemical	Group: Atmospheric Pollution	Sample Description	Ambient Air Quality (Core Zone)
Report Release Date	28th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/C/A/Dec.-24/26
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		
Sampling Period	19/12/2024 – 20/12/2024	Mode of sample collection	By YBAEEL Team
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	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°29'07.56"N, 85°39'22.18"E	
	C. Near TG Building	23°28'59.29"N, 85°39'23.55"E	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46	Temp. - 25°C; W.D.– East-West
Sample receipt Date	21/12/2024	Analysis Started on: 21/12/2024	Analysis completed on: 28/12/2024

******Test Results ******

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	--
Particulate matter (PM_{10})	IS:5182 (P-23) 2006, RA 2022	µg/m³	89.2	93.6	86.4	100
Particulate matter ($PM_{2.5}$)	IS:5182 (P-24) 2019	µg/m³	44.2	48.3	45.4	60
Sulphure Dioxide (SO_2)	IS:5182 (P-2/Sec1) 2023	µg/m³	14.6	15.5	12.8	80
Nitrogen Dioxide (NO_2)	IS:5182 (P-6) 2006 RA 2022	µg/m³	37.4	34.5	32.6	80

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 limits.

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

Verified & Issued by 28/12/24
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospharic Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(32)

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description	Ambient Air Quality (Core Zone)
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/A/Dec.-24/26
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Period		19/12/2024 – 20/12/2024		Mode of sample collection	By YBAEEL Team
Sampling Plan		YBAEEL/SP/252-2024	Sampling Method	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°29'07.56"N, 85°39'22.18"E	
		C. Near TG Building		23°28'59.29"N, 85°39'23.55"E	
Meteorological Cond. of Field		W.C.– Clear	RH % - 46	Temp. - 25°C	W.D.– East-West
Sample receipt Date		21/12/2024	Analysis Started on 21/12/2024	Analysis completed on	28/12/2024

******Test Results******

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m³	BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	4

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 3361:1966 (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 sample 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 limits.

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(33)

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL Accredited Testing Laboratory Vide Certificate No. TC -12989
Registered by :- Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 7 F	
Discipline: Chemical	Group: Atmospheric Pollution	Sample Description	Ambient Air Quality (Buffer Zone)
Report Release Date	28th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(if any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/C/A/Dec.-24/26
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		
Sampling Period	20/12/2024 – 21/12/2024	Mode of sample collection	By YBAEEL Team
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)
Sampling Locations	A. Serenghatu		23°29'05.57"N, 85°40'17.73"E
	B. Biyang		23°29'52.49"N, 85°38'59.72"E
	C. Bariyatu		23°29'47.02"N, 85°40'13.06"E
Meteorological Cond. of Field	W.C.– Clear; RH % - 49	Temp. - 26°C	W.D.– NE-SW
Sample receipt Date	21/12/2024	Analysis Started on: 21/12/2024	Analysis completed on: 28/12/2024

******Test Results ******

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Particulate matter (PM_{10})	IS:5182 (P-23) 2006, RA 2022	µg/m³	72.4	76.8	75.2	100
Particulate matter ($PM_{2.5}$)	IS:5182 (P-24) 2019	µg/m³	23.5	27.3	25.6	60
Sulphure Dioxide (SO_2)	IS:5182 (P-2/Sec1) 2023	µg/m³	5.8	8.5	7.3	80
Nitrogen Dioxide (NO_2)	IS:5182 (P-6) 2006 RA 2022	µg/m³	19.2	21.6	20.1	80

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
	[illegible]
Remarks	Samples comply with prescribed limits.

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Atmospharic Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(34)

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	**Chemical**	**Group**	**Atmospheric Pollution**	**Sample Description**	**Ambient Air Quality (Buffer Zone)**
Report Release Date		**28th December, 2024**		**Report ID**	**YBAEEL-2412-29**
W. Order/ JSPCB App. No.		**Via – E-mail**		**Work Order Date**	**17.12.2024**
Type of Industry(If any)		**Thermal Power Plant**		**Job code/ Ref. no.**	**YBAEEL/C/A/D$_{WC}$-24/26**
Report Issue to		**M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.**			
Sampling Period		**20/12/2024 – 21/12/2024**		**Mode of sample collection**	**By YBAEEL Team**
Sampling Plan		**YBAEEL/SP/252-2024**	**Sampling Method**	**IS:5182 and CPCB Air Manual Volume-1(NAAQM/36/2012-13)**	
Sampling Locations		**A. Serenghatu**		**23°29'05.57"N, 85°40'17.73"E**	
		B. Biyang		**23°29'52.49"N, 85°38'59.72"E**	
		C. Bariyatu		**23°29'47.02"N, 85°40'13.06"E**	
Meteorological Cond. of Field		**W.C.– Clear**	**RH % - 49**	**Temp. - 26°C**	**W.D.– NE-SW**
Sample receipt Date		**21/12/2024**	**Analysis Started on**	**21/12/2024**	**Analysis completed on** **28/12/2024**

********Test Results ********

Parameters	Test Methods	Units	Sampling Location			Limits
			Site A	Site B	Site C	
Carbon Monoxide (CO)	SOP No. YBAEEL/SOP/AIR/01	mg/m³	BDL (MDL 1.8)	BDL (MDL 1.8)	BDL (MDL 1.8)	4

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 55 ± 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 limits.**

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospharic Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(35)

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 8 F			
Discipline: Chemical	Group: Atmospheric Pollution	Sample Description: Ambient Noise			
Report Release Date: 28th December, 2024		Report ID: YBAEEL-2412-29			
W. Order/ JSPCB App. No.: Via – E-mail		Work Order Date: 17.12.2024			
Type of Industry(If any): Thermal Power Plant		Job code/ Ref. no.: YBAEEL/C/A/Dec.-24/26			
Report Issue to: M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Period: 19/12/2024 – 21/12/2024		Mode of sample collection: By YBAEEL Team			
Sampling Plan: YBAEEL/SP/252-2024		Sampling Method: IS 9989:1981 (RA 2020)			
Meteorological Cond. of Field: W.C.– Clear		RH % - 46		Temp. - 25°C	
Sample receipt Date: 21/12/2024	Analysis Started on: 21/12/2024		Analysis completed on: 28/12/2024		

******Test Results ******

Sl.	Locations	Parameters	Units	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)	58.6	43.8	Day – 75 Night – 70
2.	Near Weight Bridge	Leq	dB (A)	63.7	49.5	
3.	Near T G Building	Leq	dB (A)	64.8	51.2	
4.	Near Cooling Tower	Leq	dB (A)	69.6	64.2	
5.	Near Hostel	Leq	dB (A)	50.2	38.4	

- 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.
- Mixed categories of areas may be declared as one of the four above mentioned categories by the competent authority.
- dB(A) Leq denotes the time weighted average of the level of sound in decibels on scale(A) which is relatable to human hearing

	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	BDL- Below detection limit
Env. Condition of Lab	Air conditioned maintaining Temperature 27 ± 2°C and Relative Humidity 55 ± 5% in all testing areas as per IS 196:1966 (R)
Specific contractual notes	All values are expressed in dB 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 – Akash Khalkho (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(36)

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

URL(Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 9 F		
Discipline / Chemical	Group / Atmospheric Pollution	Sample Description	Stationary Source Emission
Report Release Date	28th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(if any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/C/A/Dec.-24/26
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		
Sampling Period	20/12/2024	Mode of sample collection	By YBAEEL Team
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	IS: 11255 & CPCB Guideline (Lats/80/2013-14)
Meteorological Cond. of Field	W.C.– Clear	RH % - 47	Temp. – 25°C
Sample receipt Date	21/12/2024	Analysis Started on 21/12/2024	Analysis completed on 28/12/2024

General Information

As observed while sampling		As reported by customer	
Location	Sampling port hole	Type of fuel Used	Coal
Platform	Permanent	Quantity of Fuel Used	60 MT/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	59 MW
Sampling port	Available	Height of Stack from ground level	95.0 m
Stack Identification	Single	Inner Diameter of Stack	3.0 m
Height of port hole from Ground level	48.0 m	Pollution Controlling Device (if any)	ESP
Running Oven during sampling (if any)	N/A	Total No. of Oven (if any)	N/A
Stack gas Temperature (k)	429.0		
Stack gas Velocity (m/s)	19.29		
Volumetric Flow Rate (Nm^3/hr)	320984.35		

Emission Rate based on Calculation of Volumetric Flow rate

1.	Particulate Matter (PM)	Kg/hr	10.5
2.	Sulphure Dioxide (SO_2)	Kg/hr	93.0
3.	Oxide of Nitrogen (as NO_x)	Kg/hr	23.0

******Test Results ******

Sl	Parameters	Test Method	Units	Results	Limits
1.	Particulate Matter (PM)	IS 11255 (Part 1)2009, RA 2019	mg/Nm^3	32.6	50
2.	Sulphure Dioxide (SO_2)	IS 11255 (Part 2)2009, RA 2019	mg/Nm^3	289.8	600
3.	Oxide of Nitrogen (as NO_x)	IS 11255 (Part 7)2005, RA 2022	mg/Nm^3	71.8	450
4.	Carbon Monoxide (CO)	IS 13270:1992:2009, RA 2019	%	BDL (MDL 0.2)	--

Limit is specified as	Environmental (Protection) Rule – 1986.
Abbreviation	MDL- Minimum detection limit, BDL- Below detection limit
Env. Condition of Lab	Laboratory is maintained 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 report 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 limits.

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospheric Pollution
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

(37)

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Atmospheric Pollution	Sample Description		Stationary Source Emission	
Report Release Date		28th December, 2024		Report ID		YBAEEL-2412-29	
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date		17.12.2024	
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.		YBAEEL/C/A/Dec.-24/26	
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Period		20/12/2024		Mode of sample collection		By YBAEEL Team	
Sampling Plan		YBAEEL/SP/252-2024		Sampling Method		IS: 11255 & CPCB Guideline (Lats/80/2013-14)	
Meteorological Cond. of Field		W.C.– Clear		RH % - 47		Temp. – 25ºC	
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on		28/12/2024

General Information

As observed while sampling		As reported by customer	
Location	Sampling port hole	Type of fuel Used	Coal
Platform	Permanent	Quantity of Fuel Used	60 MT/Hr.
Stack Description (Shape & Material)	Circular / RCC	Total production Capacity	59 MW
Sampling port	Available	Height of Stack from ground level	95.0 m
Stack Identification	Single	Inner Diameter of Stack	3.0 m
Height of port hole from Ground level	48.0 m	Pollution Controlling Device (if any)	ESP
Running Oven during sampling (if any)	N/A	Total No. of Oven (if any)	N/A
Stack gas Temperature (k)	429.0		
Stack gas Velocity (m/s)	19.29		
Volumetric Flow Rate (Nm^3/hr)	320994.35		

******Test Results ******

Sl	Parameters	Test Method	Units	Results	Limits
1.	Mercury (as Hg)	Lat's/80/2013-14	mg/Nm^3	BDL (MDL 0.003)	0.03

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 report 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 limits.

Sample Drawn By – Angad Munda
Tested By – Akash Khalkho (Lab Analyst)

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Atmospharic Pollution
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

(38) Annex-C/A-2 (Series)

Inland Power

— Imagine. Integrate. Impact.—

Ref. No. IPL/JSPCB/2024-25/110 Date: 05.07.2024

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

Sub.: Submission of Fly Ash Generation and Disposal for First Quarter of the FY 2024-25 of Inland Power Limited

Dear Sir,
With reference to the above, please find below month wise Ash generation and Disposal details for first quarter (April, 2024 to June 2024) of the FY 2024-25. It is to submit here that we are also uploading the Ash generation and Disposal reports on https://coalash.cpcb.gov.in/ by 5th of the every next month as per CPCB letter no. IPC-II/TPP/CP-11/76/2022/4030-4056 dated 13.09.2023 and RO, JSPCB letter no. 141 dated 31.01.2024.

INLAND POWER LTD, GOLA DISTT- RAMGARH

Ash Generation & Disposal Report (2024-25)

Month	Op Stock	Ash Generation	Ash Disposal					Cl Stock
			IPL Brick Plant	Cement Manufacture Plant	Bricks Manufacture Plant	Land Development	Road Project	
April-24	2792.16	28969	2775.47	5755.36	2162.23	0	13233.55	7834.55
May-24	7834.55	24654	5866.03	2587.39	2062.87	0	15795.88	6176.38
June-24	6176.38	25879	4923.45	7776.31	2088.71	0	13529.25	3737.66

Thanking You
For Inland Power Ltd.

S.N. Sinha
DGM (Coml)

Copy to: Member Secretary, JSPCB, Ranchi

JHARKHAND STATE POLLUTION CONTROL BOARD JSPCB RANCHI

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

Corpc
30, Ch
3rd Fl
Kolkat
t : +91

Tonagatu,
ypass

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

CIN : U51909WB1993PLC059205

W : inlandpower.in | E : info@inlandpower.in

(39)

InlandPower

Shailendra Sinha <shailendra.sinha@inlandpower.in>

Fly Ash Generation and disposal report for July 2024 to September 2024 of IPL

1 message

Shailendra Sinha <shailendra.sinha@inlandpower.in> Mon, Nov 25, 2024 at 4:02 PM
To: jspcb_hazaribagh@rediffmail.com

Dear sir,
Please find the document for fly ash generation and disposal report of Inland Power Limited.
--
Regards,
S.N.Sinha
DGM(Coml)
Inland Power Ltd
Mob- 9771468863

Fly Ash Generation & Disposal for July 2024 to September 2024.pdf
232K

(40)

Inland Power

— Imagine. Integrate. Impact.—

Ref. No. IPL/JSPCB/2024-25/30 Date: 25.11.2024

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

Sub.: Submission of Fly Ash Generation and Disposal for Second Quarter of the FY 2024-25 of Inland Power Limited

Dear Sir,
With reference to the above, please find below month wise Ash generation and Disposal details for second quarter (July, 2024 to September, 2024) of the FY 2024-25. It is to submit here that we are also uploading the Ash generation and Disposal reports on https://coalash.cpcb.gov.in/ by 5th of the every next month as per CPCB letter no. IPC-II/TPP/CP-11/76/2022/4030-4056 dated 13.09.2023 and RO, JSPCB letter no. 141 dated 31.01.2024.

INLAND POWER LTD, GOLA DISTT- RAMGARH

Ash Generation & Disposal (in tones) Report (2024-25)

Month	Op Stock	Ash Generation	Ash Disposal					Cl Stock
			IPL Brick Plant	Cement Manufacture Plant	Bricks Manufacture Plant	Land Development	Road Project	
July-24	3737.66	24674	5611.33	5300.51	1241.76	0	9444.20	6813.86
Aug-24	6813.86	28292	5422.48	6625.01	770.31	0	12462.60	9825.43
Sept.-24	9825.43	23986	4679.08	8311.25	2211.24	0	16373.33	2236.53

Thanking You
For Inland Power Ltd.

S.N. Sinha
DGM (Coml)

JHARKHAND STATE POLLUTION CONTROL BOARD * RANCHI * 25/11/2024

Copy to: 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 Charu Ramgarh Bypass
Tonagatu - 829 110
Jharkhand, India

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

CIN : U51909WB1993PLC059205

W : inlandpower.in | E : info@inlandpower.in

(41)

Inland Power

— Imagine. Integrate. Impact. —

Ref. No. IPL/JSPCB/2024-25/317

Date: 07.01.2025

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

Sub.: Submission of Fly Ash Generation and Disposal for Third Quarter of the FY 2024-25 of Inland Power Limited

Dear Sir,
With reference to the above, please find below month wise Ash generation and Disposal details for Third quarter (October, 2024 to December, 2024) of the FY 2024-25. It is to submit here that we are also uploading the Ash generation and Disposal reports on https://coalash.cpcb.gov.in/ by 5th of the every next month as per CPCB letter no. IPC-II/TPP/CP-11/76/2022/4030-4056 dated 13.09.2023 and RO, JSPCB letter no. 141 dated 31.01.2024.

INLAND POWER LTD, GOLA DISTT- RAMGARH

Ash Generation & Disposal (in tones) Report (2024-25)

Month	Op Stock	Ash Generation	Ash Disposal					Cl Stock
			IPL Brick Plant	Cement Manufacture Plant	Bricks Manufacture Plant	Land Development	Road Project	
Oct.-24	2236.53	16954	4866.48	5806.19	0	0	7237	1281.22
Nov.-24	1281.22	23815	3729.51	12228.61	1660	0	5262	2216.45
Dec.-24	2216.45	19411	5028.51	8929.31	2584.17	0	354.11	4731.35

Thanking You
For Inland Power Ltd.

S.N. Sinha
DGM (Coml)

JHARKHAND STATE POLLUTION ... RANCHI
07/01/2025

Copy to: Member Secretary, JSPCB, Ranchi

EJ371559745IN IVR:... SP ASHOK NAGAR SO RANCHI ... Counter No:1,10/01/2025,11:... To:THE REGIONAL OFFICER,J S P C B PIN:825301, Hazaribagh HO From:INLAND POWE,C/216 ASHOK NAGA Wt:25gms Amt:41.30,Taxes:3?,Amt.Paid:41.00(Cash) <Track on www.indiapost.gov.in> <Dial 18002666868> <Wear Masks, Stay Safe>

GOVERNMENT OF INDIA
MoP/MoEF/CEA/CPCB

Ash Availability & Utilization Portal

248001 (Type-1)
Change Password (/Account/ModifyProfile?useddn=700&userid=248001)
Log off

Filter Data

01-04-2023 | 31-03-2024 | (•) Plant Wise ( ) State Wise ( ) Company Wise | Get Data | 31-03-2024

View Monthly Ash Generation and Utilization (Plant: Inland Power Limited)

Export Data | ← Back

Actions	S.No.	Project ID	Name of Plant	Power Utility	State	Installed Capacity (MW)	Coal Consumed (Lakh Metric Tonnes)	Ash Content (%)	Water Consumed (Lakh Metric Tonnes)	Fly Ash Generation (LMT)	Bottom Ash Generation (LMT)	Total Ash Generation (LMT)	Fly Ash Utilization (LMT)	Bottom Ash Utilization (LMT)	Pond Ash Utilization (LMT)	Total Ash Utilization (LMT)	Target % Ash Utilization	Actual % Ash Utilization	In Making of Ash based Brick/Blocks /Tiles etc. (LMT)	In Manufacture of cement (LMT)
	1	248001	Inland Power Limited	Inland Power Limited	Jharkhand	63.00	4.51	60.15	0.00	1.91	0.80	2.71	1.78	0.66	0.35	2.79		102.46	0.71	1.00
					Grand Total	**63.00**	**4.51**	**-**	**0.00**	**1.91**	**0.80**	**2.71**	**1.78**	**0.66**	**0.35**	**2.79**	**102.46**	**102.46**	**0.71**	**1.00**

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GOVERNMENT OF INDIA
MoP/MoEF/CEA/CPCB

Ash Availability & Utilization Portal

248001 (Type-1)
Change Password (/Account/ModifyProfile?useridn=700&userid=248001)
Log off

Filter Data

01-04-2024 | 06-01-2025 | (•) Plant Wise ( ) State Wise ( ) Company Wise | Get Data | 06-01-2025

View Monthly Ash Generation and Utilization (Plant: Inland Power Limited)

Export Data | ← Back

Actions	S.No.	Project ID	Name of Plant	Power Utility	State	Installed Capacity (MW)	Coal Consumed (Lakh Metric Tonnes)	Ash Content (%)	Water Consumed (Lakh Metric Tonnes)	Fly Ash Generation (LMT)	Bottom Ash Generation (LMT)	Total Ash Generation (LMT)	Fly Ash Utilization (LMT)	Bottom Ash Utilization (LMT)	Pond Ash Utilization (LMT)	Total Ash Utilization (LMT)	Target % Ash Utilization	Actual % Ash Utilization	In Making of based/Brick/Blocks /Tiles etc. (LMT)	In Manufacture of cement (LMT)
	1	248001	Inland Power Limited	Inland Power Limited	Jharkhand	63.00	3.73	58.14	0.00	1.69	0.48	2.17	1.50	0.44	0.20	2.15		99.10	0.59	0.63
					Grand Total	**63.00**	**3.73**	**-**	**0.00**	**1.69**	**0.48**	**2.17**	**1.50**	**0.44**	**0.20**	**2.15**	**99.10**	**99.10**	**0.59**	**0.63**

43

(44) Annex- C/A-2 (Series)

Audit Report

On

Annual Compliance Audit of Fly Ash Utilization and Disposal of M/s Inland Power Limited, Ramgarh for the Financial Year 2023-24

Submitted To

Central Pollution Control Board, New Delhi

Submitted By

Prof. Rabi Narayan Behera

National Institute of Technology Rourkela, Odisha

September 2024

(45)

To

The Member Secretary
Central Pollution Control Board, New Delhi
Parivesh Bhawan, East Arjun Nagar
New Delhi-110032

Sub.: Annual Compliance Audit of Fly Ash Utilization and Disposal of M/s Inland Power Limited, Ramgarh for the Financial Year 2023-24

Dear Madam/Sir,
Enclosed herewith please find a copy of the ***Annual Compliance Audit of Fly Ash Utilization and Disposal of M/s Inland Power Limited, Ramgarh for the Financial Year 2023-24.***

The main objective of this audit was to ascertain the utilization and disposal of coal ash (both fly ash and bottom ash) of M/s Inland Power Limited, Ramgarh for the Financial Year 2023-24 as per ash utilization notification nos. 5481(E) dated December 31, 2021 and 6169(E) dated December 30, 2022.
M/s Inland Power Limited, Ramgarh approached National Institute of Technology Rourkela as per Central Pollution Control Board (CPCB) Office Memorandum dated March 06, 2023 to carry out the compliance audit of fly ash utilisation and disposal for their Unit for the financial year 2023-2024 and NIT Rourkela accepted it.
On the basis of the audit findings, it is found that utilisation of ash generated during April 01, 2023 to March 31, 2024 is **277908.29 MT (98.97 %)** and there is legacy ash of amount 2793.71 MT as per ash utilization notification nos. 5481(E) dated December 31, 2021 and 6169(E) dated December 30, 2022.

I would like to thank and acknowledge the cooperation and assistance extended by the Executive of M/s Inland Power Limited, Ramgarh particularly Mr Binnu Kumar, Environment Manager during the Plant visit for audit work.
Yours Sincerely,

14.09.2024

Dr. Rabi Narayan Behera

Dr. R. N. Behera
Associate Professor
Department of Civil Engineering
National Institute of Technology
Rourkela (Odisha)

Copy to:

1. The Member Secretary, Jharkhand State Pollution Control Board, Township Administration Building, HEC Complex, Dhurwa, Ranchi-834004, Jharkhand
2. The Director of M/s Inland Power Limited, Inland Nagar, Village: Tonagatu, Gola-Charu Ramgarh Bypass, Dist.: Ramgarh, Jharkahnd-829 110

Ash Compliance Report (for the period April 01, 2023 – March 31, 2024) of M/s Inland Power Limited, Ramgarh, Jharkhand

Sl. No.	Details	Observation	Reference/Remarks
1	Name of Power Plant	M/s Inland Power Limited	As per CTO obtained from JSPCB, Attached as Enclosure-1
2	Name of the company	M/s Inland Power Limited	
3	District	Ramgarh	
4	State	Jharkhand	
5	Postal address for communication:	Inland Nagar, Village: Tonagatu, Gola-Charu Ramgarh Bypass, Dist.: Ramgarh, Jharkahnd-829 110	
6	E-mail:	info@inlandpower.in	Mr. Giriraj Kumar Jhawar, Director
7	Power Plant installed capacity (MW):	63 MW	Refer Enclosure-1
8	Plant Load Factor (PLF)	72.45 %	As per Coal ash generation and utilisation report, Attached as Enclosure-2
9	No. of units generated (MWh):	400622.79	
10	Total area under power plant (ha): (including area under ash ponds)	32.33 No Ash Pond. However, in case of emergency, ash in excess of Silos capacity can be stored near In-house Brick Plant	As per Plant layout, Attached as Enclosure- 3 As per EIA & EMP report, Attached as Enclosure-9
11	Quantity of coal consumption during reporting period (Metric tons per Annum):	Coal: 119089 MT Washery Reject: 331843 MT	Refer Enclosure-2
12	Average ash content in percentage (per cent):	60.15	Refer Enclosure-2 and Proximate Analyses Report, Attached as Enclosure-5
13	Quantity of current ash generation during reporting period (Metric Tons per Annum):	271243	Refer Enclosure-2 and Fly ash generation and disposal for FY 2023-24 submitted to JSPCB.
	Fly ash (Metric Tons per Annum):	189870.1	
	Bottom ash (Metric Tons per Annum):	81372.9	

46

Sl. No.	Details	Observation	Reference/Remarks
			Attached as Enclosure-4
14	Capacity of dry fly ash storage silo(s) (Metric Tons):	1200 m^3× 2 (Fly Ash RCC Silo) ≈ 2400 MT 800 m^3× 1 (Bed Ash RCC Silo) ≈ 800 MT	As per photos of Silos, Attached as Enclosure-6 Assuming ash density as 1.0 MT/m^3
15	Details of utilisation of current ash generated during reporting period		
	(a) Total quantity of current ash utilised (MTPA) during reporting period:	268449.29 MT	Refer Enclosure-2 and Enclosure-4
	(b) Quantity of fly ash utilised (MTPA):	180411.0	
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels)	58053.12	
	(ii) Cement manufacturing:	102948.18	
	(iii) Ready mix concrete:	0	
	(iv) Ash and Geo-polymer based construction material:	0	
	(v) Manufacturing of sintered or cold bonded ash aggregate:	0	
	(vi) Construction of roads, road and fly over embankment:	19409.7	
	(vii) Construction of dams:	0	
	(viii) Filling up of low lying area:	0	
	(ix) Filling of mine voids:	0	
	(x) Use in overburden dumps:	0	
	(xi) Agriculture:	0	
	(xii) Construction of shoreline protection structures in coastal districts:	0	
	(xiii) Export of ash to other countries:	0	
	(xiv) Others (please specify):	0	
	(c) Quantity of bottom ash utilised (MTPA)	88038.29	

(47)

Sl. No.	Details	Observation	Reference/Remarks
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):	0	
	(ii) Cement manufacturing:	0	
	(iii) Ready mix concrete:	0	
	(iv) Ash and Geo-polymer based construction material:	0	
	(v) Manufacturing of sintered or cold bonded ash aggregate:	0	
	(vi) Construction of roads, road and fly over embankment:	87769.09	
	(vii) Construction of dams:	0	
	(viii) Filing up of low lying area:	269.2	
	(ix) Filling of mine voids:	0	
	(x) Use in overburden dumps:	0	
	(xi) Agriculture:	0	
	(xii) Construction of shoreline protection structures in coastal districts:	0	
	(xiii) Export of ash to other countries:	0	
	(xiv) Others (please specify):	0	
	Total quantity of current ash unutilised (MTPA) during reporting period:	2793.71	
16	Percentage of utilisation of current ash generated during reporting period (per cent):	98.97 %	Refer Enclosure-2
17	Details of disposal of ash in ponds		
	(a) Total quantity of ash disposed in ash ponds (Metric Tons) as on 31st March 2023 (excluding reporting period):	N/A	
	(b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):	N/A	

Sl. No.	Details	Observation	Reference/Remarks
	(c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m^3):	N/A	Refer Enclosure-4 and observation during Plant visit
	(d) Total number of ash ponds:	No Ash Pond	
	(i) Active:	N/A	
	(ii) Exhausted (yet to be reclaimed):	N/A	
	(iii) Reclaimed:	N/A	
	(e) Total area under ash ponds (ha):	N/A	
18	Individual ash pond details		
	Ash pond-1, 2 etc. (please provide below mentioned details separately, if number of ash ponds is more than one)	No Ash Pond	Refer Enclosure-4 and observation during Plant visit
	(a) Status: Under construction or Active or Exhausted or Reclaimed	N/A	
	(b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY):	N/A	
	(c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY) (Not applicable for active ash ponds)	N/A	
	(d) area (hectares):	N/A	
	(e) dyke height (m):	N/A	
	(f) volume (m^3):	N/A	
	(g) quantity of ash disposal as on 31st March 2024 (Metric Tons):	N/A	
	(h) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):	N/A	
	(i) expected life of ash pond (number of years and months):	N/A	
	(j) Coordinates (Lat and Long):	N/A	

Sl. No.	Details	Observation	Reference/Remarks
	(please specify minimum 4 coordinates)		
	(k) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining	N/A	
	(l) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	N/A	
	(m) Ratio of ash: water in slurry mix (1:__):	N/A	
	(n) Ash water recycling system (AWRS) installed and functioning: Yes or No	N/A	
	(o) Quantity of waste water from ash pond discharged into land or water body (m^3)	N/A	
	(p) Last date when the dyke stability study was conducted and name of the organisation who conducted the study:	N/A	
	(q) Last date when the audit was conducted and name of the organisation who conducted the audit:	The Annual Ash Compliance Audit was conducted by Prof. R N Behera of NIT Rourkela for the financial year 2022-23 and the audit report was submitted to CPCB & JSPCB on 2nd September 2024	Audit Report for FY 2022-23, Attached as Enclosure-7
19	Quantity of legacy ash utilised (MTPA):	9459	
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):	9459	
	(ii) Cement manufacturing:	0	Refer Enclosure-2, Enclosure-4 and Enclosure-7
	(iii) Ready mix concrete:	0	
	(iv) Ash and Geo-polymer based construction material:	0	
	(v) Manufacturing of sintered or cold bonded ash aggregate:	0	
	(vi) Construction of roads, road and flyover	0	

Sl. No.	Details	Observation	Reference/Remarks
	embankment:		
	(vii) Construction of dams:	0	
	(viii) Filling up of low lying area:	0	
	(ix) Filling of mine voids:	0	
	(x) Use in overburden dumps:	0	
	(xi) Agriculture:	0	
	(xii) Construction of shoreline protection structures in coastal districts:	0	
	(xiii) Export of ash to other countries:	0	
	(xiv) Others (please specify)	0	

20	Summary			
	Details	Quantity generated (MTPA)	Quantity utilised (MTPA) and (per cent)	Balance quantity (MTPA)
	Current ash during reporting period (01.04.2023-31.03.2024)	271243 MT	268449.29 MT (98.97 %)	2793.71 MT
	Legacy ash	9459	9459	0
	Total	280702	277908.29 MT	2793.71 MT
21	Any other information Soft copy of the annual compliance report, and shape files or power plant and ash ponds may be e-mailed to: moefcc-coalash@gov.in	Some selected photographs during the site visit are attached as Enclosure-8 along with the other Enclosures as mentioned above.		
22	Auditor details			
	Name	Dr. Rabi Narayan Behera		
	Designation	Associate Professor		
	Address	Department of Civil Engineering, Geotechnical Engineering Division, National Institute of Technology Rourkela, Rourkela-769008, Odisha		
	Email	beherarabin@nitrkl.ac.in, mbehera82@gmail.com		
	Telephone	0661 246 2348		
	Mob. No.	78731 00435		
	Date of Plant Visit	July 06, 2024		

(5)

Sl. No.	Details	Observation	Reference/Remarks
23	Signature of Auditor	14.09.2024 Dr. Rabi Narayan Behera Associate Professor Department of Civil Engineering Geotechnical Engineering Division National Institute of Technology Rourkela Dr. R. N. Behera Associate Professor Department of Civil Engineering National Institute of Technology Rourkela (Odisha)	

N/A: Not Applicable

FY: Financial Year

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References

- Ministry of Environment, Forest and Climate Change Notification: S.O. 5481(E) dated 31st December 2021
- Ministry of Environment, Forest and Climate Change Notification: S.O. 6169(E) dated 30th December 2022
- Central Pollution Control Board (CPCB) Office Memorandum vide reference no. IPC-II/TPP/CP-II/76/20222/1257 dated 06th March 2023
- Central Pollution Control Board (CPCB) Office Memorandum vide reference no. IPC-II/TPP/CP-II/76/2022/285 dated 17th July 2023

(54)

Enclosure-1

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-17290597/2024/20 Dated : 2024-01-06

Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2023-10-27 of INLAND POWER LIMITED, Occupier Name :GIRIRAJ KUMAR JHAWAR for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981..

2. **Documents Relied Upon:**

(a) The content of Environmental Clearance from MoEF, New Delhi vide Ref. No. J-13012/115/2008-IA.II(T) dated 20.12.2011.

(b) The content of Consent to Establish (CTE), Ref No. N-85 dated 22.09.2010, JSPCB, Ranchi.

(c) The content of Consent to operate (CTO) vide Ref. No. JSPCB/HO/RNC/CTO-3476021/2019/69, dated 09.01.2019 for the production of (a) Power Plant-1X63 MW, (b) Fly Ash Bricks-252055 nos./day, valid upto 31.12.2023 JSPCB, Ranchi.

(d) The content of affidavit submitted regarding installation of online system for remote calibration.

(e) The content of direction of CPCB in the matter of installation of remote calibration.

(f) The content of Inspection Report (I/R), Ref No. 1579 dated 04.12.2023 of RO, RO-cum-Lab, Hazaribagh.

(g) The content of authorization under HoWM Rules'2016 vide ref. no. JSPCB/HO/RNC/HWM-7270813/2021/49, dated 20.09.2021, valid for the period upto 31.12.2023.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -TONAGTU, BIYANG , P S -GOLA , District -RAMGARH , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To
Before Expansion	2255, 2261, 2267,2274 etc. Kha ta NO. :84, 87, 88,91, 92, 100	79.88 Acre	352 Crore	(a) Power Plant-1X63 MW, (b) Fly Ash Bricks-252055 nos./day	31/12/2025

Enclosure-2

Coal ash generation and utilization in various sectors by M/s Inland Power Limited, Ramgarh for FY 2023-24

Power Generation (MWh), PLF, Coal Consumption, Ash Genration & Ash Content										Utilization of Coal Ash in various Sectors							
Month	Coal (MT)	Washery Reject (MT)	Total (MT)	Ash (%)	Ash Generation (MT)	Fly Ash (MT)	Bottom Ash (MT)	PLF (%)	No of Units (MWh)	Balance Ash (MT)	Cement Plant (MT)	Inhouse Brick Plant (MT)	Out Side Brick Paints (MT)	Road Construction (MT)	Land Development (MT)	Total Quantity of Ash Utilization (MT)	% Utilization
Apr-23	6287.66	28643.77	34931.43	59.51	20788	14551.6	6236.4	71.07	32236.46	9459	8251.80	3070.32	4469.43	7731	0	23522.57	77.77*
May-23	6154.23	34873.98	41028.21	59.52	24422	17095.4	7326.6	81.23	38075.38		9733.76	2997.34	4591.06	6813	0	24134.96	98.82
Jun-23	4427.33	39846.00	44273.33	58.53	25914	18139.8	7774.2	87.87	39856.58		11113.67	3790.97	3422.22	1533	269.20	20129.43	77.68
Jul-23	8810.00	35239.99	44049.99	59.52	26218	18352.6	7865.4	83.84	39298.91		11114.38	3348.90	2832.40	20478	0	37773.49	144.07
Aug-23	9490.60	28471.82	37962.42	59.52	22594	15815.8	6778.2	70.24	32920.58		9966.11	4487.71	917.41	0	0	15371.23	68.03
Sep-23	12231.65	28540.53	40772.18	59.52	24268	16987.6	7280.4	78.15	35450.12		7515.48	4281.75	902.49	16443	0	29142.31	120.09
Oct-23	10750.55	27644.27	38394.82	64.49	24762	16838.16	7923.84	71.35	33441.7		4827.04	2379.69	0.00	12246	0	19452.58	78.56
Nov-23	9015.79	16743.61	25759.40	64.49	16612	11296.16	5315.84	49.77	22575.05		3422.78	2798.45	0.00	15110	0	21330.94	128.41
Dec-23	0.00	0.00	0.00	0.00	0	0	0	0	0		0.00	3412.22	0.00	0	0	3412.22	100.00
Jan-24	16032.83	32551.51	48584.34	59.71	29011	20307.7	8703.3	89.57	41984.97		10999.45	4190.67	0.00	12298	0	27488.46	94.75
Feb-24	22154.70	22154.69	44309.39	59.52	26374	19516.76	6857.24	95.03	41670.68		13733.45	3893.92	3550.93	5916	0	27093.99	102.73
Mar-24	13734.01	37132.70	50866.71	59.53	30280	22104.4	8175.6	91.28	43112.36		12270.26	3554.78	4619.46	8611.61		29056.11	95.96
FY 2023-24	119089	331843	450932	60.15	271243	189870.1	81372.9	72.45	400622.79	2793.71	102948.18	42206.72	25305.40	107178.79	269.20	277908.29	98.97

9459 MT: Balance Ash in Slios and near In-house Brick Plant as on 31st March 2023

2793.71 MT: Balance Ash in Silos as on 31st March 2024

*: % of Coal ash utilization for the month of April 2023 is calculated considering balance ash of amount 9459 MT and current ash of amount 20788 MT

INLAND POWER LTD. RANCHI

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(56)

Enclosure-3

Enclosure-4

Inland Power

— Imagine. Integrate. Impact.—

57

Ref. No. IPL/JSPCB/2024-25/14

Date: 12.04.2024

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

Sub.: Submission of details of Fly Ash Generation and Disposal for the Year 2023-24

Dear Sir,
With reference to the above, please find below month wise Ash generation and Disposal details of the FY 2023-24. It is to submit here that we are also uploading the Ash generation and Disposal reports on https://coalash.cpcb.gov.in/ by 5th of the every next month as per CPCB letter no. IPC-II/TPP/CP-11/76/2022/4030-4056 dated 13.09.2023 and RO, JSPCB letter no. 141 dated 31.01.2024.

INLAND POWER LTD, GOLA DISTT- RAMGARH

Ash Generation & Disposal Report (2023-24)

Month	Op Stock	Ash Generation	Ash Disposal					Cl Stock
			IPL Brick Plant	Cement Manufacture Plant	Bricks Manufacture Plant	Land Development	Road Project	
Apr-22	9457.45	20788	3070.32	8251.80	4469	0	7731.02	6722.88
May-22	6722.88	24422	2997.34	9733.76	4591.06	0	6812.80	7009.92
Jun-22	7009.92	25914	3790.97	11113.67	3422.22	269.20	1533.37	12794.49
Jul-22	12794.49	26218	3348.90	11114.38	2832.40	0.00	20477.81	1239.00
Aug-22	1239.00	22594	4487.71	9966.11	917.41	0.00	0.00	8461.77
Sep-22	8461.77	24268	4281.75	7515.48	902.49	0.00	16442.59	3587.46
Oct-22	3587.46	24762	2379.69	4827.04	0	0	12245.85	8896.88
Nov-22	8896.88	16612	2798.45	3422.78	0	0	15109.71	4177.94
Dec-22	4177.94	0*	3412.22	0	0	0	0	765.72
Jan-23	765.72	29011	4190.67	10999.45	0	0	12298.34	2288.26
Feb-23	2288.26	26374	3893.92	13733	3551	0	5915.69	1568.27
Mar-23	1568.27	30280	3554.78	12270.26	4619.46		8611.61	2792.16
	9457	271243	42206.72	102948.18	25305.40	269.20	107178.79	2792.16

Thanking You
For Inland Power Ltd.

S.N. Sinha
DGM (Coml)

Received
13/4/24

Copy to: Member Secretary, JSPCB, Ranchi

STATE POLLUTION CONTROL BOARD ★ JHARKHAND ★ RANCHI ★ JSPCB

Inland Power Ltd.

Regd. Office :
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 Charu Ramgarh Bypass
Tonagatu - 829 110
Jharkhand, India

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

CIN : U51909WB1993PLC059205

W : inlandpower.in | E : info@inlandpower.in

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Enclosure-5

TC-11973

Test Report No : GCEPL/DHN/LAB/6005/2023-24 **Issue Date: 11/08/2023**
ULR No. : TC119732300000081F

Test Report

Sample Describe by Customer as : COAL
Customer Name : M/S. INLAND POWER LTD.
Customer Address : RANCHI
Sample Mark : MONNET REJECT COAL – 13/43
Sample Condition : SEALED
Sampling Date : 04/08/23
Sampling by : CUSTOMER
Sampling Method Uses : N A
Sample Received Date : 08/08/2023 **Registration Date** : 08/08/2023
Test Start Date : 08/08/2023 **Test End Date** : 11/08/2023

Sl No	Test Parameter	Method Used		Result (with units)
1	TOTAL MOISTURE (TM)	IS:1350 (PART-1)-1984,RA 2019		9.73 %
2	ASH	IS:1350 (PART-1)-1984,RA 2019		51.89 %
3	MOISTURE (IM)	IS:1350 (PART-1)-1984,RA 2019		6.51 %
4	VOLATILE MATTER (VM)	IS:1350 (PART-1)-1984,RA 2019		19.09 %
5	FIXED CARBON (FC)	IS:1350 (PART-1)-1984,RA 2019		22.51 %
6	GCV	ASTM D5865 - 2019	adb	2641 kcal/kg
			arb	2550 kcal/kg

- This is to report that the sample submitted to our Dhanbad Laboratory for analysis as described above.
- Analysis reported on ADB basis.
- Sample NOT drawn by Geocoal Engineering private Ltd.
- Remaining portion of sample after testing (if any) will be retained for max 15 days only.
- Result relates only to the item tested.

GEOCOAL ENGINEERING PVT. LTD. NABL ACCREDITED

Prepared by

Mahendra Mahto
Reviewed by

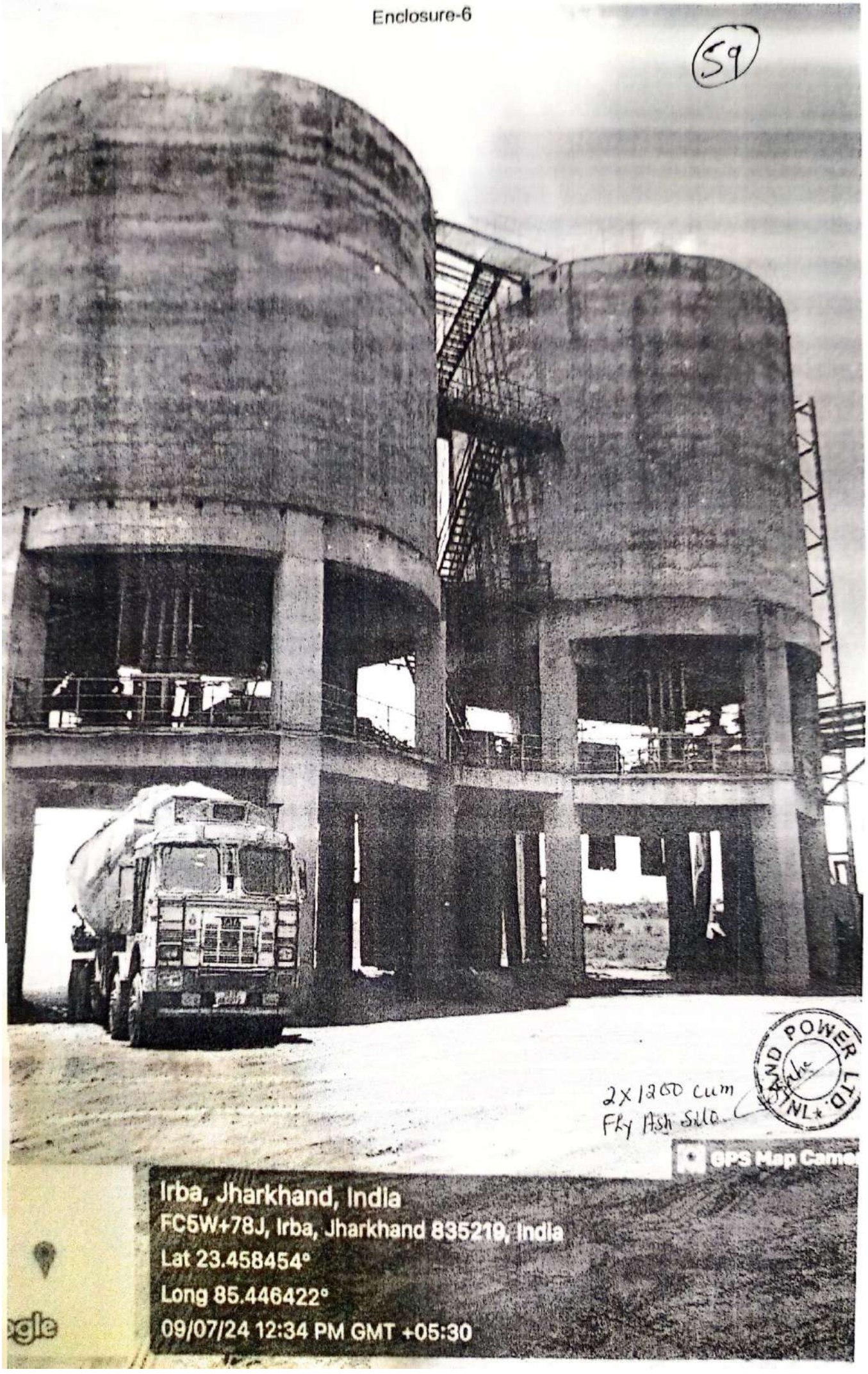
Authorized Signatory

Page 1 of 1

End of Report

GEOCOAL ENGINEERING PRIVATE LIMITED
Janki Complex, Bara Jamua, Barwadda, Dhanbad-826004, JHARKHAND (INDIA)
Mobile No. (O) +91 7360073897, 7979834082
Email – geocoalindia@gmail.com , gceepl@geocoal.in
Website - www.geocoal.in

Enclosure-6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Fly Ash Silo
GPS Map Camera
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FC5W+78J, Irba, Jharkhand 835219, India
Lat 23.458454°
Long 85.446422°
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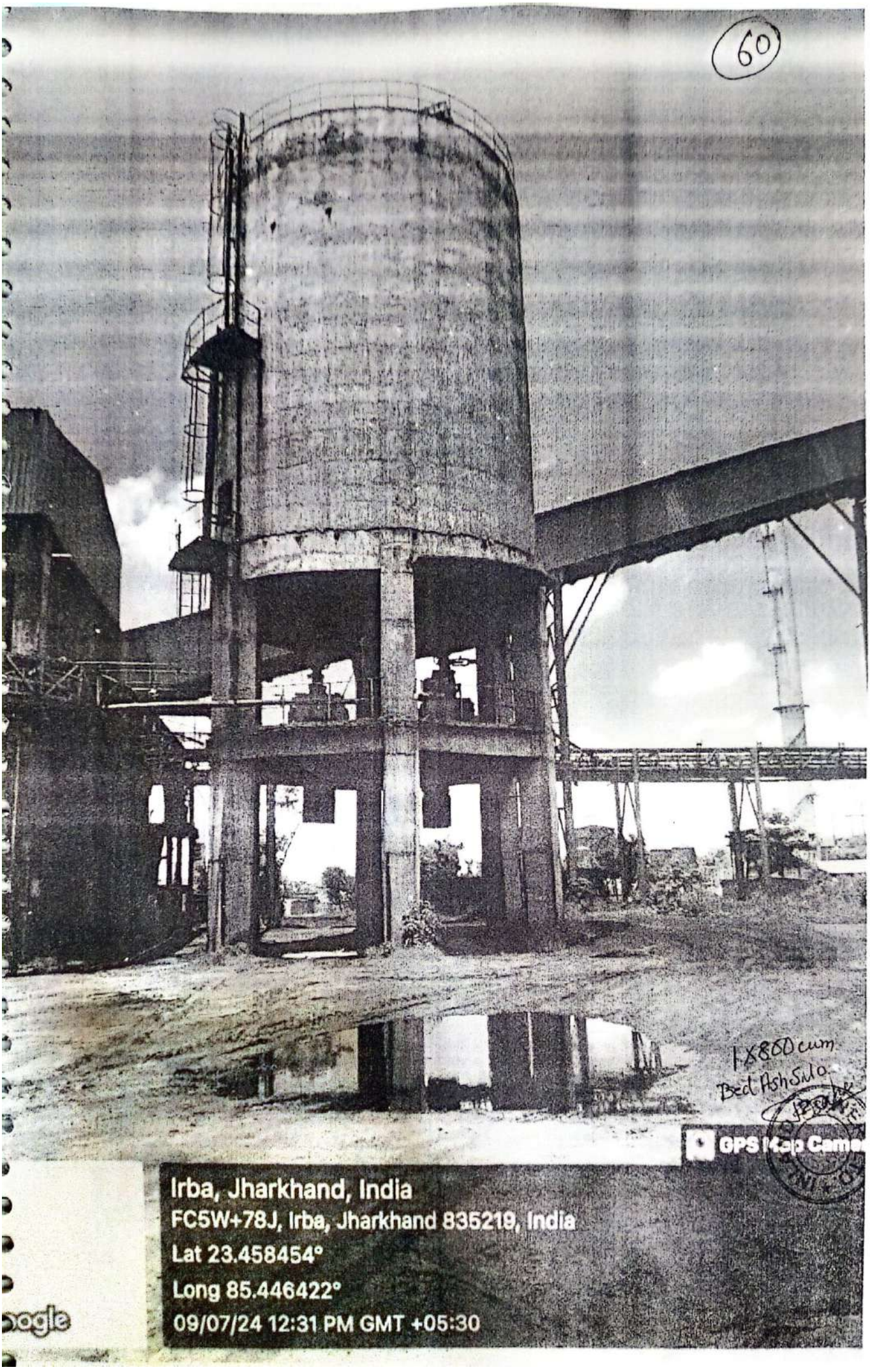
60
1x800 cum
Bed Ash Silo
GPS Map Camera
Irba, Jharkhand, India
FC5W+78J, Irba, Jharkhand 835219, India
Lat 23.458454°
Long 85.446422°
09/07/24 12:31 PM GMT +05:30
Google

Ash Compliance Report (for the period April 01, 2022 – March 31, 2023) of M/s Inland Power Limited, Ramgarh, Jharkhand

Sl. No.	Details	Observation	Reference/Remarks
1	Name of Power Plant	M/s Inland Power Limited	As per CTO obtained from JSPCB, Attached as Enclosure-1
2.	Name of the company	M/s Inland Power Limited	
3	District	Ramgarh	
4	State	Jharkhand	
5	Postal address for communication:	Inland Nagar, Village: Tonagatu, Gola-Charu Ramgarh Bypass, Dist.: Ramgarh, Jharkahnd-829 110	
6	E-mail:	info@inlandpower.in	Mr. Giriraj Kumar Jhawar, Director
7	Power Plant installed capacity (MW):	63 MW	Refer Enclosure-1
8	Plant Load Factor (PLF)	76.63 %	As per Coal ash generation and utilisation report, Attached as Enclosure-2
9	No. of units generated (MWh):	422739.1	
10	Total area under power plant (ha): (including area under ash ponds)	32.33 No Ash Pond. However, in case of emergency, ash in excess of Silos capacity can be stored near In-house Brick Plant	As per Plant layout, Attached as Enclosure-3 As per EIA & EMP report, Attached as Enclosure-9
11	Quantity of coal consumption during reporting period (Metric tons per Annum):	Coal: 179959 MT Washery Reject: 292036 MT	Refer Enclosure-2
12	Average ash content in percentage (per cent):	61.9	Refer Enclosure-2 and Proximate Analyses Report, Attached as Enclosure-5
13	Quantity of current ash generation during reporting period (Metric Tons per Annum):	292175	Refer Enclosure-2 and Fly ash generation and disposal for FY 2022-23 submitted to JSPCB.
	Fly ash (Metric Tons per Annum):	204522.5	
	Bottom ash (Metric Tons per Annum):	87652.5	

Sl. No.	Details	Observation	Reference/Remarks
			Attached as Enclosure-4
14	Capacity of dry fly ash storage silo(s) (Metric Tons):	1200 m^3× 2 (Fly Ash RCC Silo) ≈ 2400 MT 800 m^3× 1 (Bed Ash RCC Silo) ≈ 800 MT	As per photos of Silos, Attached as Enclosure-6 Assuming ash density as 1.0 MT/m^3
15	Details of utilisation of current ash generated during reporting period		
	(a) Total quantity of current ash utilised (MTPA) during reporting period:	282716	Refer Enclosure-2
	(b) Quantity of fly ash utilised (MTPA):	202587.5	
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels)	79885	
	(ii) Cement manufacturing:	95716	
	(iii) Ready mix concrete:	0	
	(iv) Ash and Geo-polymer based construction material:	0	
	(v) Manufacturing of sintered or cold bonded ash aggregate:	0	
	(vi) Construction of roads, road and fly over embankment:	26986.5	
	(vii) Construction of dams:	0	
	(viii) Filling up of low lying area:	0	
	(ix) Filling of mine voids:	0	
	(x) Use in overburden dumps:	0	
	(xi) Agriculture:	0	
	(xii) Construction of shoreline protection structures in coastal districts:	0	
	(xiii) Export of ash to other countries:	0	
	(xiv) Others (please specify):	0	
	(c) Quantity of bottom ash utilised (MTPA)	80128.5	

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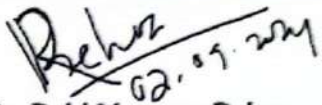
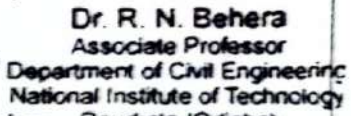
Sl. No.	Details	Observation	Reference/Remarks
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):	0	
	(ii) Cement manufacturing:	0	
	(iii) Ready mix concrete:	0	
	(iv) Ash and Geo-polymer based construction material:	0	
	(v) Manufacturing of sintered or cold bonded ash aggregate:	0	
	(vi) Construction of roads, road and fly over embankment:	62166.5	
	(vii) Construction of dams:	0	
	(viii) Filing up of low lying area:	17962	
	(ix) Filling of mine voids:	0	
	(x) Use in overburden dumps:	0	
	(xi) Agriculture:	0	
	(xii) Construction of shoreline protection structures in coastal districts:	0	
	(xiii) Export of ash to other countries:	0	
	(xiv) Others (please specify):	0	
	Total quantity of current ash unutilised (MTPA) during reporting period:	9459	
16	Percentage of utilisation of current ash generated during reporting period (per cent):	96.76%	Refer Enclosure-2
17	Details of disposal of ash in ponds		
	(a) Total quantity of ash disposed in ash ponds (Metric Tons) as on 31st March 2022 (excluding reporting period):	N/A	
	(b) Quantity of ash disposed in ash pond(s) during reporting period (Metric Tons):	N/A	

Sl. No.	Details	Observation	Reference/Remarks
	(c) Total quantity of water consumption for slurry discharge into ash ponds during reporting period (m^3):	N/A	Refer Enclosure-4 and observation during Plant visit
	(d) Total number of ash ponds:	No Ash Pond	
	(i) Active:	N/A	
	(ii) Exhausted (yet to be reclaimed):	N/A	
	(iii) Reclaimed:	N/A	
	(e) Total area under ash ponds (ha):	N/A	
18	Individual ash pond details		
	Ash pond-1, 2 etc. (please provide below mentioned details separately, if number of ash ponds is more than one)	No Ash Pond	Refer Enclosure-4 and observation during Plant visit
	(a) Status: Under construction or Active or Exhausted or Reclaimed	N/A	
	(b) Date of start of ash disposal in ash pond (DD/MM/YYYY or MMYYYY):	N/A	
	(c) Date of stoppage of ash disposal in ash pond after completing its capacity (DD/MM/YYYY or MM/YYYY) (Not applicable for active ash ponds)	N/A	
	(d) area (hectares):	N/A	
	(e) dyke height (m):	N/A	
	(f) volume (m^3):	N/A	
	(g) quantity of ash disposal as on 31st March 2023 (Metric Tons):	N/A	
	(h) available volume in percentage (per cent) and quantity of ash can be further disposed (Metric Tons):	N/A	
	(i) expected life of ash pond (number of years and months):	N/A	
	(j) Coordinates (Lat and Long):	N/A	

Sl. No.	Details	Observation	Reference/Remarks
	(please specify minimum 4 coordinates)		
	(k) type of lining carried in ash pond: HDPE lining or LDPE lining or clay lining or No lining	N/A	
	(l) mode of disposal: Dry disposal or wet slurry (in case of wet slurry please specify whether HCSD or MCSD or LCSD)	N/A	
	(m) Ratio of ash: water in slurry mix (1:__):	N/A	
	(n) Ash water recycling system (AWRS) installed and functioning: Yes or No	N/A	
	(o) Quantity of waste water from ash pond discharged into land or water body (m^3)	N/A	
	(p) Last date when the dyke stability study was conducted and name of the organisation who conducted the study:	N/A	
	(q) Last date when the audit was conducted and name of the organisation who conducted the audit:	Not yet done	
19	Quantity of legacy ash utilised (MTPA):	1935	Refer Enclosure-2, Enclosure-4 and Ash generation and disposal report for FY 2021-22 submitted to JSPCB, Attached as Enclosure-7
	(i) Fly ash based products (bricks or blocks or tiles or fibre cement sheets or pipes or boards or panels):	1935	
	(ii) Cement manufacturing:		
	(iii) Ready mix concrete:		
	(iv) Ash and Geo-polymer based construction material:		
	(v) Manufacturing of sintered or cold bonded ash aggregate:		
	(vi) Construction of roads, road and flyover embankment:		
	(vii) Construction of dams:		

Sl. No.	Details	Observation		Reference/Remarks
	(viii) Filling up of low lying area:			
	(ix) Filling of mine voids:			
	(x) Use in overburden dumps:			
	(xi) Agriculture:			
	(xii) Construction of shoreline protection structures in coastal districts:			
	(xiii) Export of ash to other countries:			
	(xiv) Others (please specify)			
20	Summary			
	Details	Quantity generated (MTPA)	Quantity utilised (MTPA) and (per cent)	Balance quantity (MTPA)
	Current ash during reporting period (01.04.2022-31.03.2023)	292175 MT	282716 MT (96.76 %)	9459 MT
	Legacy ash	1935	1935	Nil
	Total	294110	284651 MT	9459 MT
21	Any other information Soft copy of the annual compliance report, and shape files or power plant and ash ponds may be e-mailed to: moefcc-coalash@gov.in	Some selected photographs during the site visit are attached as Enclosure-8 along with the other Enclosures as mentioned above.		
22	Auditor details			
	Name	Dr. Rabi Narayan Behera		
	Designation	Associate Professor		
	Address	Department of Civil Engineering, Geotechnical Engineering Division, National Institute of Technology Rourkela, Rourkela-769008, Odisha		
	Email	beherarabin@nitrkl.ac.in, rnbehera82@gmail.com		
	Telephone	0661 246 2348		
	Mob. No.	78731 00435		
	Date of Plant Visit	July 06, 2024		

Sl. No.	Details	Observation	Reference/Remarks
23	Signature of Auditor	 02.09.2024 Dr. Rabi Narayan Behera Associate Professor Department of Civil Engineering Geotechnical Engineering Division National Institute of Technology Rourkela	 Dr. R. N. Behera Associate Professor Department of Civil Engineering National Institute of Technology Rourkela (Odisha)

N/A: Not Applicable

FY: Financial Year

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References

- Ministry of Environment, Forest and Climate Change Notification: S.O. 5481(E) dated 31st December 2021
- Ministry of Environment, Forest and Climate Change Notification: S.O. 6169(E) dated 30th December 2022
- Central Pollution Control Board (CPCB) Office Memorandum vide reference no. IPC-II/TPP/CP-II/76/20222/1257 dated 06th March 2023
- Central Pollution Control Board (CPCB) Office Memorandum vide reference no. IPC-II/TPP/CP-II/76/2022/285 dated 17th July 2023

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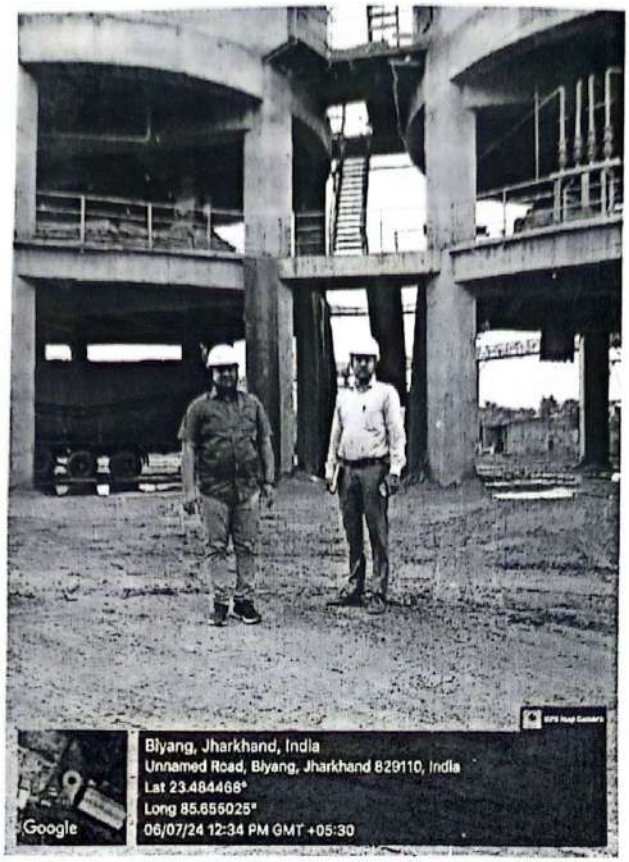
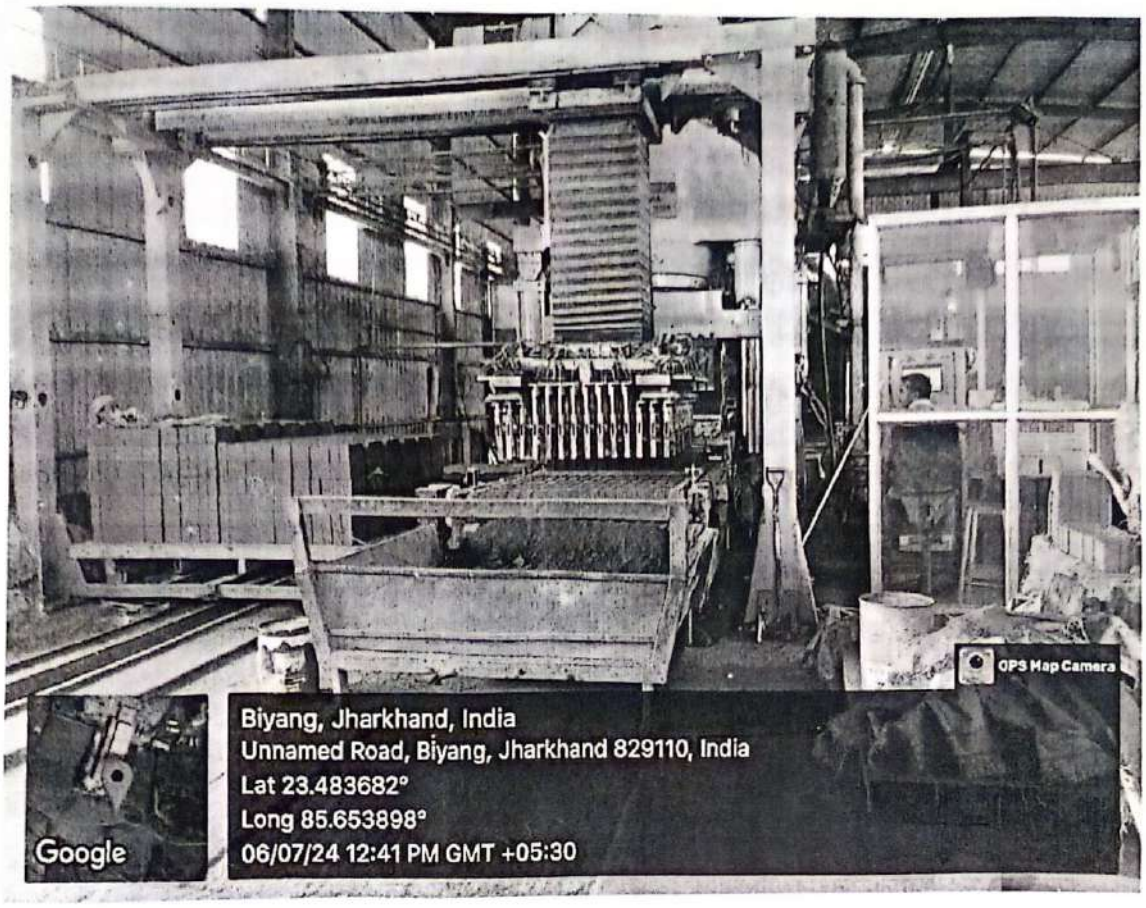
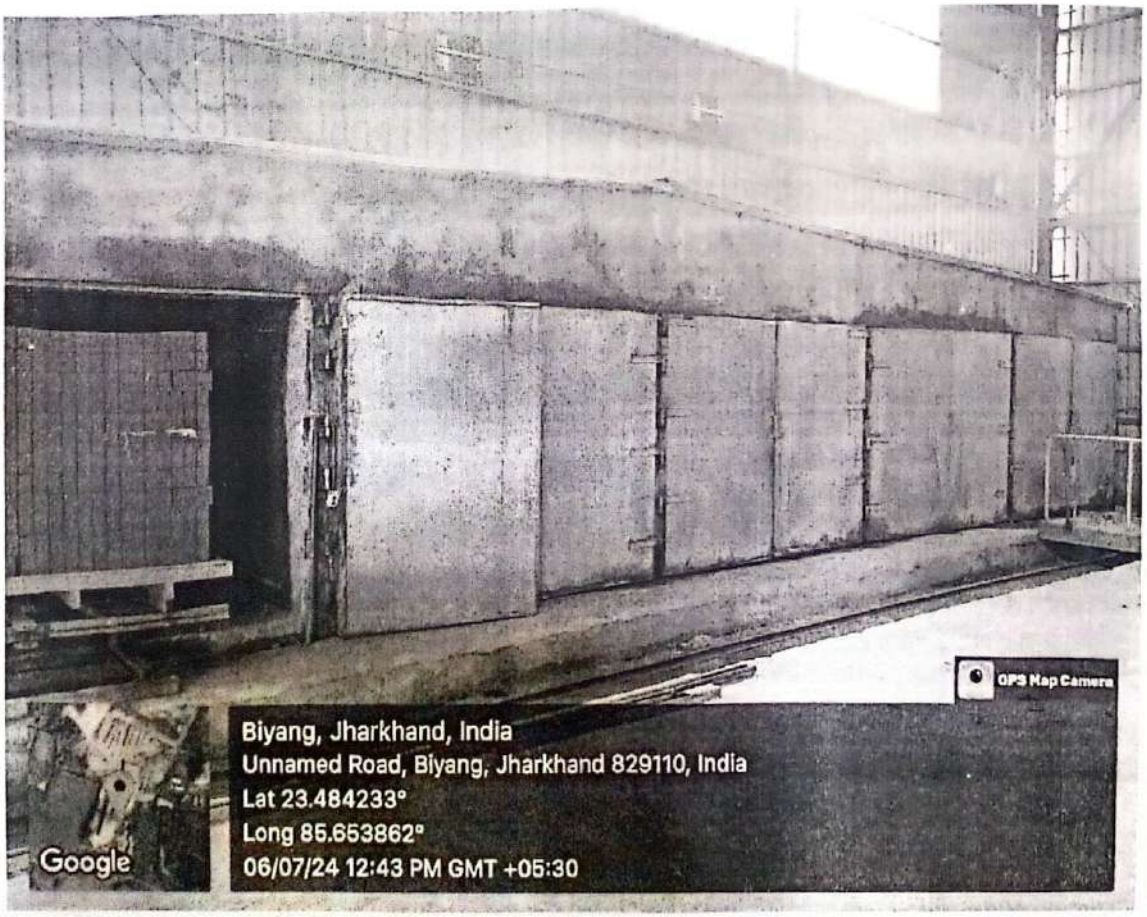
Enclosure-8

Some Selected Photographs during Plant visit



(70)


GPS Map Camera
Biyang, Jharkhand, India
Unnamed Road, Biyang, Jharkhand 829110, India
Lat 23.483682°
Long 85.653898°
06/07/24 12:41 PM GMT +05:30
Google


GPS Map Camera
Biyang, Jharkhand, India
Unnamed Road, Biyang, Jharkhand 829110, India
Lat 23.484233°
Long 85.653862°
06/07/24 12:43 PM GMT +05:30
Google

Air pollution control systems

- Point Source Emission Control :

  Air Pollution Control Device – ESP

  Designed Maximum dust emission – 50 mg/Nm^3

  Stack height - 95 mtrs

- Fugitive Dust Emission Control:

  Fly ash handling – All the ash handling system will be a closed system with pneumatic conveying to silos.

  Silos – To be provided with dust extraction system with bag filters

  Coal handling yard – Water spraying system will be provided in coal yard to suppress the coal dust. Crushers and Bunkers will be provided with ventilation system and Bag Filters.

- Green Belt – Green belt will be developed around the plant premises. 33.8% of the Land will be developed into greenery and green belt.

ASH Handling & Feasibility of Power Plant without Ash Pond

Both the stages of power plant would generate about 5 lacks tonnes of fly ash annually. These are the major ways that we would utilize our fly ash/ bottom ash.

1) Usage in In-house Brick Plant – Upto 1.65 Lac tonnes are supposed to be consumed by making 92 million bricks.
2) Supply to Cement Manufacturing Company – Upto 3.1 Lacks tonnes will be supplied to Cement manufacturing companies.
3) Supply to Road Development and Block Development Project - Bottom Ash upto 25000 Tonne.
4) In case of Emergency the conditioned fly ash would be used to fill the abandoned opencast mines of CCL at Dhori Area. We have applied and will receive the permission soon. In case of difficulty in evacuating the said fly ash outside plant compound, conditioned fly ash can be stored at In house brick plant area up to 7 days requirement.

For supply to In-house brick plant, road development and dumping in the open cast mines, ash would be conditioned and then used. Whereas for supply to cement plants dry fly ash would be evacuated into flyash capsules through vaccum.

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केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT FOREST & CLIMATE CHANGE GOVT OF INDIA

IPC-II/TPP/CP-11/76/2022/ 285

July 17, 2023

OFFICE MEMORANDUM

Sub: Updated list of authorized auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Notification No. 5481(E) dated 31.12.2021.

Central Pollution Control Board (CPCB) issued the list of authorised auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies vide O.M. No. IPC-II/TPP/CP-11/76/2022/1252 dated 06.03.2023 as per Para E(5) of the Ash Notification No. S.O. 5481(E) dated 31.12.2021 issued by the Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of India (amended by notification dated 30.12.2022) regarding ash utilisation from coal or lignite based thermal power plants.

CPCB received nominations of additional experts from some IITs / NITs after issuance of the aforesaid O.M. dated 06.03.2023. Considering this, CPCB again invited nominations of any additional / left out interested experts from all IITs, NITs and CSIR for authorization by CPCB as auditors.

The additional nominated experts from the aforesaid organizations/institutes which are found to be fulfilling the eligibility criteria are also being authorized as auditors to undertake the annual compliance audit of the thermal power plant. Accordingly, the updated list of authorized auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Para E(5) of the Ash Notification is attached, which shall be read with O.M. No. IPC-II/TPP/CP-11/76/2022/1252 dated 06.03.2023 (copy enclosed).

(Prashant Gargava)
Member Secretary

'परिवेश भवन' पर्वी अर्जुन नगर, दिल्ली–110032
Parivesh Bhawan, East Arjun Nagar, Delhi-110032
दूरभाष/Tel : 43102030, 22305792, वेबसाईट/Website : www.cpcb.nic.in

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To,

Divisional Head - IT, CPCB : For updating the document on webpage "Fly Ash Management and Utilization" for information of SPCBs and TPPs.

Copy to:

1. The Additional Secretary (HSM Division),
   Ministry of Environment, Forest and Climate Change,
   Indira Paryavaran Bhawan, Jor Bagh Road,
   New Delhi - 110 003

2. The Additional Secretary (Thermal),
   Ministry of Power,
   Shram Shakti Bhawan,
   Rafi Marg, New Delhi

3. PA to CCB

केन्द्रीय प्रदूषण नियंत्रण बोर्ड
CENTRAL POLLUTION CONTROL BOARD
पर्यावरण, वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार
MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE GOVT. OF INDIA

IPC-II/TPP/CP-11/76/2022/-1257

March 06, 2023

OFFICE MEMORANDUM

Sub: Authorization of auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plantsandthe user agenciesas per Ash Utilization Notification No.5481(E) dated 31.12.2021.

Ministry of Environment, Forest and Climate Change (MoEF&CC), Government of Indiahas issued NotificationNo. S.O. 5481(E) dated 31.12.2021regarding ash utilisation from coal or lignite based thermal power plants which has been amended by notification dated 30.12.2022. The permitted areas of ash utilizations are mentioned in Para A (1)&(2), the permitted storage conditions in operational and un-operational ash ponds are mentioned in Para A (6)&(8), and the requirement of submitting annual implementation report to CPCB, concerned SPCB/PCC, CEA and concerned IRO of MoEF&CC by 30th April, with information in the prescribed Annexure, is mentioned in Para E(2) of the Notification.

Further, as per ParaE(5) of the notification, *"the compliance audit for ash disposal by the thermal power plants and the user agency shall be conducted by auditors, authorized by Central Pollution Control Board (CPCB) and audit report shall be submitted to Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) by 30th November every year. Central Pollution Control Board (CPCB) and concerned State Pollution Control Board (SPCB) or Pollution Control Committee (PCC) shall initiate action against non-compliant thermal power plants within fifteen days of receipt of audit report".*

CPCB invited nominations of experts from Council of Scientific & Industrial Research (CSIR), Indian Institutes of Technology (IITs) and National Institutes of Technology (NITs)for authorization of auditors to undertake the compliance audit of the thermal power plant as per Para E(5) of the notification. The nominated experts from the aforesaid organizations/institutes which are found to be fulfilling the eligibilitycriteria as per list attached (Annexure-I) are authorized as auditors to undertake the annual compliance audit of the thermal power plantas per Para E(5) of the notification.

Thermal power plants shall approach authorized auditors through concerned organization/institute for undertaking the audit as per Para E(5) of the notification. Scope of Work to carry out the auditas per Para E(5) of the notification is attached. The auditor shall submit the audit report directly to CPCB and SPCB/PCC.

(Prashant Gargava)
Member Secretary

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To,

Divisional Head - IT, CPCB : For uploading on webpage "Fly Ash Management and Utilization" for information of SPCBs and TPPs.

Copy to:

1. The Additional Secretary (HSM Division),
   Ministry of Environment, Forest and Climate Change,
   Indira Paryavaran Bhawan, Jor Bagh Road,
   New Delhi - 110 003

2. The Additional Secretary (Thermal),
   Ministry of Power,
   Shram Shakti Bhawan,
   Rafi Marg, New Delhi

3. PA to CCB

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Scope of Work to carry out the audit as per Para E(5) of the Ash Notification 31.12.2021

1. Verification of ash generation data pertaining to the financial year based on inspection of records of coal receipt/consumption and average ash content in coal and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure.

2. Verification of fly ash and bottom ash utilization data pertaining to the financial year based on inspection of records of ash supplied to the user agencies covered under permitted uses/avenues, and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure

3. Verification of net ash disposal into ash ponds data pertaining to the financial year (i.e. difference of ash generation and ash utilization, as above), and comparison of this data with the information provided by the power plant in the annual implementation report / prescribed Annexure.

4. Assessment of total ash storage in operational and un-operational ash ponds and available storage capacity for further disposal at the end of financial year based on details and drawings of ash ponds provided by the power plant and ground verification of the information provided, and comparison of the storage and available storage capacity with the information provided by the power plant in the annual implementation report / prescribed Annexure.

5. Assessment of ash slurry disposal and ash water re-circulation system used during the financial year, in respect ratio of water in the ash disposed to ash ponds, water used for ash slurry disposal to ash ponds, ash water recycled through AWRS, and ash water discharged into environment, based on inspection of records provided by the power plant and ground verification, including the condition of surrounding environment in respect of ash released or breached, and comparison of the ground situation with the information provided by the power plant in the annual implementation report / prescribed Annexure.

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Annexure-I

Updated list of authorised auditors to undertake the compliance audit for ash disposal by the coal and lignite based thermal power plants and the user agencies as per Ash Utilization Notification No. 5481(E) dated 31.12.2021

Sl. No.	Name	DOB	Designation	Organization/ Institute	Department
1	P.S Ambily	09-05-1979	Principal Scientist & Head	CSIR-SERC Chennai	Advanced Materials Laboratory
2	S. Bhaskar	10-10-1969	Chief Scientist	CSIR-SERC Chennai	Advanced Materials Laboratory
3	T. Hemalatha	24-11-1976	Principal Scientist	CSIR-SERC Chennai	Special and Multifunctional Structures Laboratory
4	Rajesh Roshan Dash	30-06-1977	Professor	IIT Bhubaneswar	School of Infrastructure
5	B. Hanumantha Rao	01-05-1979	Associate Professor	IIT Bhubaneswar	School of Infrastructure
6	Prabhat Kumar Singh Dikshit	15-08-1971	Professor & Head	IIT-BHU Varanasi	Civil Engineering
7	Arun Prasad	10-10-1964	Professor	IIT-BHU Varanasi	Civil Engineering
8	Anurag Ohri	07-08-1977	Associate Professor	IIT-BHU Varanasi	Civil Engineering
9	Suresh Kumar	01-11-1976	Assistant Professor	IIT-BHU Varanasi	Civil Engineering
10	Supriya Mohanty	01-01-1988	Assistant Professor	IIT-BHU Varanasi	Civil Engineering
11	Suprakash Gupta	01-01-1969	Professor & Head	IIT-BHU Varanasi	Mining Engineering
12	Sanjay Kumar Sharma	05-01-1966	Professor	IIT-BHU Varanasi	Mining Engineering
13	Rajesh Rai	03-10-1978	Associate Professor	IIT-BHU Varanasi	Mining Engineering
14	Amrendra Kumar	15-05-1976	Associate Professor	IIT-BHU Varanasi	Mining Engineering
15	G.S.P. Singh	23-11-1971	Associate Professor	IIT-BHU Varanasi	Mining Engineering
16	Tarun Verma	05-02-1983	Assistant Professor	IIT-BHU Varanasi	Mining Engineering
17	Ashish Juneja	15-07-1971	Professor	IIT Bombay	Civil Engineering
18	D. N. Singh	28-06-1965	Professor	IIT Bombay	Civil Engineering
19	Anil Kumar Dikshit	01-01-1964	Professor	IIT Bombay	Environmental Science and Engineering
20	Shailesh R. Gandhi	19-08-1955	Visiting Professor	IIT Gandhinagar	Civil Engineering
21	Amit Balasaheb Shelke	23-07-1984	Associate Professor	IIT-Guwahati	Civil Engineering
22	D. P. Mishra	09-06-1975	Associate Professor & Head	IIT-ISM Dhanbad	Mining Engineering
23	Sarat Kumar Das	24-06-1968	Professor	IIT-ISM Dhanbad	Civil Engineering
24	K. V. Harish	28-11-1981	Assistant Professor	IIT-Kanpur	Civil Engineering
25	Brajesh Kumar Dubey	18-09-1974	Professor	IIT Kharagpur	Civil Engineering
26	Kranthi Kumar Kuna	06-08-1988	Assistant Professor	IIT Kharagpur	Civil Engineering
27	Aditya Kumar Patra	11-06-1970	Associate Professor	IIT Kharagpur	Mining Engineering
28	Basanta Kumar Prusty	31-07-1973	Associate Professor	IIT Kharagpur	Mining Engineering
29	Rajnish Sharma	11-06-1980	Associate Professor	IIT Mandi	Civil and Environmental Engineering
30	Deepak Swami	23-06-1984	Associate Professor	IIT Mandi	Civil and Environmental Engineering
31	Dericks P Shukla	02-01-1982	Associate Professor	IIT Mandi	Civil and Environmental Engineering
32	Subrata Hait	25-10-1980	Associate Professor	IIT-Patna	Civil and Environmental Engineering
33	Vaibhav Singhal	21-01-1983	Associate Professor and Head	IIT-Patna	Civil and Environmental Engineering
34	Amarnath Hegde	07-04-1984	Assistant Professor	IIT-Patna	Civil and Environmental Engineering
35	Bhanu Prakash Vellanki	06-01-1985	Associate Professor	IIT Roorkee	Civil Engineering
36	A. A. Kazmi	27-03-1972	Professor	IIT Roorkee	Civil Engineering

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37	Sudipta Sarkar	22-07-1972	Associate Professor	IIT Roorkee	Civil Engineering
38	Naveen James	25-08-1984	Assistant Professor	IIT Ropar	Civil Engineering
39	Suresh Jain	12-07-1975	Professor	IIT Tirupati	Civil and Environmental Engineering
40	Rakesh Chandra Vaishya	10-05-1962	Professor	NIT Allahabad	Civil Engineering
41	Ram Pal Singh	01-03-1962	Professor	NIT Allahabad	Civil Engineering
42	Rakesh Kumar	24-02-1967	Professor	NIT Allahabad	Civil Engineering
43	Kumar Venkatesh	07-07-1972	Associate Professor	NIT Allahabad	Civil Engineering
44	Nekram Rawal	07-09-1977	Associate Professor	NIT Allahabad	Civil Engineering
45	Shalinee Shukla	25-04-1978	Associate Professor	NIT Allahabad	Civil Engineering
46	Vishwajeet Pratap Singh	15-07-1983	Assistant Professor	NIT Allahabad	Civil Engineering
47	Anupam Rawat	14-11-1986	Assistant Professor	NIT Allahabad	Civil Engineering
48	S. Chandrakaran	11-02-1959	Professor (HAG)	NIT Calicut	Civil Engineering
49	Santosh G Thampi	18-03-1963	Professor (HAG) & Head	NIT Calicut	Civil Engineering
50	Kodi Ranga Swamy	04-06-1973	Associate Professor	NIT Calicut	Civil Engineering
51	George K. Varghese	17-09-1975	Associate Professor	NIT Calicut	Civil Engineering
52	Sathish Kumar D	30-01-1979	Associate Professor	NIT Calicut	Civil Engineering
53	Ajay Kumar	05-06-1978	HOD and Associate Professor	NIT Delhi	Civil Engineering
54	Dr. Kapil Kumar	21-04-1981	Assistant Professor	NIT Delhi	Civil Engineering
55	Mahender Choudhary	04-01-1976	Professor & Head	NIT Jaipur	Civil Engineering
56	Sudhir Kumar	05-02-1968	Professor	NIT Jaipur	Civil Engineering
57	Mahesh Kumar Jat	15-12-1972	Professor	NIT Jaipur	Civil Engineering
58	Amit Kumar	15-07-1981	Assistant Professor	NIT Jaipur	Civil Engineering
59	Mangesh V. Madurwar	20-07-1982	Associate Professor	NIT Nagpur	Civil Engineering
60	Swapnil P. Wanjari	25-07-1975	Assistant Professor	NIT Nagpur	Civil Engineering
61	C. R. Patra	21-02-1962	Professor	NIT Rourkela	Civil Engineering
62	Suresh Prasad Singh	08-05-1964	Professor	NIT Rourkela	Civil Engineering
63	Rabi Narayan Behera	03-06-1982	Assistant Professor	NIT Rourkela	Civil Engineering
64	Amit Kumar Gorai	01-01-1977	Associate Professor & Head	NIT Rourkela	Mining Engineering
65	Manoj Kumar Mishra	29-09-1962	Professor	NIT Rourkela	Mining Engineering
66	Upendra Kumar	02-02-1972	Professor	NIT Silchar	Civil Engineering
67	Aruna Mangalpady	17-05-1971	Associate Professor & Head	NIT Surahtkal	Mining Engineering
68	Arun Kumar Thalla	29-07-1978	Associate Professor	NIT Surahtkal	Civil Engineering
69	T. Palanisamy	17-05-1977	Assistant Professor	NIT Surahtkal	Civil Engineering
70	Shashank Bhatra	25-11-1991	Assistant Professor	NIT Uttarakhand	Civil Engineering
71	Bibhash Kumar	25-10-1992	Assistant Professor	NIT Uttarakhand	Civil Engineering
72	Shashi Narayan	13-12-1989	Assistant Professor	NIT Uttarakhand	Civil Engineering
73	Amarbeep	13-08-1985	Assistant Professor	NIT Uttarakhand	Civil Engineering
74	M. Chandra Sekhar	28-11-1963	Professor	NIT Warangal	Civil/Environmental Engineering
75	P. Hari Prasad Reddy	19-06-1980	Associate Professor	NIT Warangal	Civil/Environmental Engineering
76	P. V. Rao	06-05-1978	Associate Professor	NIT Warangal	Civil/Environmental Engineering
77	Ajey Patel	07-11-1977	Associate Professor	NIT Warangal	Civil/Environmental Engineering

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by / Registered by / Certified by | NABL Accreditated Testing Laboratory Vide Certificate No. TC-12989 Jharkhand State Pollution Control Board (JSPCB) ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC1298924000014 09F				
Discipline: Chemical	Group: Water	Sample Description: Ground Water			
Report Release Date: 28th December, 2024		Report ID: YBAEEL-2412-29			
W. Order/ JSPCB App. No.: Via – E-mail		Work Order Date: 17.12.2024			
Type of Industry(if any): Thermal Power Plant		Job code/ Ref. no.: YBAEEL/C/W/Dec.-24/10			
Report Issue to: M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Date: 20/12/2024	Mode of sample collection: By YBAEEL Team		Sample Code: 241221-GW-05		
Sampling Plan: YBAEEL/SP/252-2024		Sample Method: IS : 17614 (Part-1): 2021			
Sampling Location: IPL Main Gate		Sampling Source: Ground Water			
Sample pkg. Condition: Sealed Pack in PP Bottle		Sample Quantity: 3000 ml			
Meteorological Cond. of Field: W.C.– Clear		RH % - 46		Temp. – 25°C	
Sample receipt Date: 21/12/2024	Analysis Started on: 21/12/2024		Analysis completed on: 28/12/2024		

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	7.12 at 26.0°C	6.5-8.5
2.	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3.	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	5	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	439.0 at 26.1°C	--
6.	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	138.0	200-600
7.	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	204.6	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	262.0	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	26.0	250-1000
11.	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.47	1.0-1.5
12.	Nitrate (as NO_3- N)	APHA 4500 NO_3- (B) 24th edition 2023 (UV Screening Method)	mg/l	4.44	45-No relaxation
13.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	41.24	75-200
14.	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	24.66	30-100
15.	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	24.0	--
16.	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	5.0	--

Limit is specified as	IS 10500:2012, RA 2018
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 at 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 sample 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 limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Labcratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.				TC	1	2	9	8	9	2	4	0	0	0	0	0	1	4	1	0	F		
Discipline	Chemical	Group	Residue & Contaminants In Water							Sample Description	Ground Water												
Report Release Date		28th December, 2024								Report ID	YBAEEL-2412-29												
W. Order/ JSPCB App. No.		Via – E-mail								Work Order Date	17.12.2024												
Type of Industry(If any)		Thermal Power Plant								Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09												
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																					
Sampling Date		20/12/2024	Mode of sample collection			By YBAEEL Team				Sample Code	241221-GW-05												
Sampling Plan		YBAEEL/SP/252-2024				Sample Method				IS : 17614 (Part-1): 2021													
Sampling Location		IPL Main Gate				Sampling Source				Ground Water													
Sample pkg. Condition		Sealed Pack in PP Bottle				Sample Quantity				3000 ml													
Meteorological Cond. of Field		W.C.– Clear				RH % - 46				Temp. – 25°C													
Sample receipt Date		21/12/2024	Analysis Started on			21/12/2024				Analysis completed on	28/12/2024												

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.18	1.0-No relaxation
3	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.13	5-15
6	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 55 ± 5% in all testing areas as per IS 196:1966 (C
Specific contractual notes	All values are expressed in SI 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 LIT
	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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date	28th December, 2024			Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail			Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/10
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-05
Sampling Plan	YBAEEL/SP/252-2024	Sample Method	IS : 17614 (Part-1): 2021		
Sampling Location	IPL Main Gate	Sampling Source	Ground Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	3000 ml		
Meteorological Cond. of Field	W.C.– Clear	RH % - 46	Temp. – 25°C		
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500:2012, RA 2018
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 [illegible] written permission of the CEO
	The samples received 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 – Pinky Kumari (Lab Analyst)

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-05
Sampling Plan		YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021
Sampling Location		IPL Main Gate	Sampling Source		Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle	Sample Quantity		3000 ml
Meteorological Cond. of Field		W.C.– Clear	RH % - 46		Temp. – 25ºC
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	0.03-0.2

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit
Env. Condition of Lab	Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)
Specific contractual notes	All tests are expressed in SI 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 report shall not be reproduced, except when in full, without the written permission of the CEC
	Test samples received 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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC1298924000001369F		
Discipline	Biological	Group: Water	Sample Description	Ground Water
Report Release Date		24th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail	Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant	Job code/ Ref. no.	YBAEEL/MW/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-05
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method		ISO – 19458	
Sampling Location	IPL Main Gate	Sampling Source		Ground Water	
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity		250 ml	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46		Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	23/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 24th Edition 2023 (Multiple Tube Fermentation Technique)	MPN/100 ml	BDL (MDL 1.8)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 24th Edition 2023 (Thermotolercut (Fecal) Coliform Procedure)	MPN/100 ml	BDL (MDL 1.8)	
3.	E coli	APHA 9221-F 24th Edition 2023 (Escherichia Coli Procedure using Flourogenic Substrate)	MPN/100 ml	BDL (MDL 1.8)	

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 [illegible], 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 sample [illegible] 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)

24-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory

Authorized Signatory
Microbiological Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by :- NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by :- Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 0 7 F					
Discipline	Chemical	Group	Water	Sample Description		Ground Water	
Report Release Date		28th December, 2024		Report ID		YBAEEL-2412-29	
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date		17.12.2024	
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.		YBAEEL/C/W/Dec.-24/10	
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team		Sample Code	241221-GW-04
Sampling Plan		YBAEEL/SP/252-2024		Sample Method		IS : 17614 (Part-1): 2021	
Sampling Location		Tonagatu		Sampling Source		Ground Water	
Sample pkg. Condition		Sealed Pack in PP Bottle		Sample Quantity		3000 ml	
Meteorological Cond. of Field		W.C.– Clear		RH % - 46		Temp. – 25°C	
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024	

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.78 at 28.9°C	6.5-8.5
2.	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3.	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	10	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	232.0 at 28.9°C	--
6.	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	82.0	200-600
7.	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	88.0	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	136.0	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	16.0	250-1000
11.	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.66	1.0-1.5
12.	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	4.12	45-No relaxation
13.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	24.52	75-200
14.	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	6.48	30-100
15.	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	15.0	--
16.	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	4.0	--

Limit is specified as	IS 10500:2012, RA 2018.
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 limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 0 8 F			
Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-04
Sampling Plan	YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021	
Sampling Location	Tonagatu	Sampling Source		Ground Water	
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity		3000 ml	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46		Temp. – 25ºC	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2.	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.29	1.0-No relaxation
3.	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.21	5-15
6.	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7.	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8.	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
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 subject to the Ranchi Jurisdiction
Remarks	Sample complies with prescribed limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	**Chemical**	**Group**	**Water**	**Sample Description**		**Ground Water**	
Report Release Date		**28th December, 2024**		**Report ID**		**YBAEEL-2412-29**	
W. Order/ JSPCB App. No.		**Via – E-mail**		**Work Order Date**		**17.12.2024**	
Type of Industry(If any)		**Thermal Power Plant**		**Job code/ Ref. no.**		**YBAEEL/C/W/Dec.-24/10**	
Report Issue to		**M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.**					
Sampling Date		**20/12/2024**	**Mode of sample collection**	**By YBAEEL Team**		**Sample Code**	**241221-GW-04**
Sampling Plan		**YBAEEL/SP/252-2024**		**Sample Method**		**IS : 17614 (Part-1): 2021**	
Sampling Location		**Tonagatu**		**Sampling Source**		**Ground Water**	
Sample pkg. Condition		**Sealed Pack in PP Bottle**		**Sample Quantity**		**3000 ml**	
Meteorological Cond. of Field		**W.C.– Clear**		**RH % - 46**		**Temp. – 25ºC**	
Sample receipt Date		**21/12/2024**	**Analysis Started on**	**21/12/2024**	**Analysis completed on**		**28/12/2024**

********Test Results ********

Sl	Parameter	Test Method	Units	Results	Limits
1.	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500:2012, RA 2018
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 mg/l 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 – Pinky Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	**Chemical**	**Group**	**Residue & Contaminants in Water**	**Sample Description**	**Ground Water**
Report Release Date		**28th December, 2024**		**Report ID**	**YBAEEL-2412-29**
W. Order/ JSPCB App. No.		**Via – E-mail**		**Work Order Date**	**17.12.2024**
Type of Industry(If any)		**Thermal Power Plant**		**Job code/ Ref. no.**	**YBAEEL/C/R/Dec.-24/09**
Report Issue to		**M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.**			

Sampling Date	**20/12/2024**	**Mode of sample collection**	**By YBAEEL Team**	**Sample Code**	**241221-GW-04**
Sampling Plan	**YBAEEL/SP/252-2024**		**Sample Method**		**IS : 17614 (Part-1): 2021**
Sampling Location	**Tonagatu**		**Sampling Source**		**Ground Water**
Sample pkg. Condition	**Sealed Pack in PP Bottle**		**Sample Quantity**		**3000 ml**
Meteorological Cond. of Field	**W.C.– Clear**		**RH % - 46**		**Temp. – 25°C**
Sample receipt Date	**21/12/2024**	**Analysis Started on**	**21/12/2024**	**Analysis completed on**	**28/12/2024**

********Test Results ********

Sl	Parameter	Test Method	Units	Results	Limits
1	**Aluminium (as Al)**	**IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)**	***mg/l***	**BDL (MDL 0.02)**	**0.03-0.2**

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL- Minimum detection limit, BDL- Below detection limit.
Env. Condition of Lab	Laboratory is air-conditioning. Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS [90 1956 (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 limit.**

Sample Drawn By – **Angad Munda**
Tested By – **Sweta Kumari (Lab Analyst)**

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC	1	2	9	8	9	2	4	0	0	0	0	0	1	3	6	8	F

Discipline: Biological	Group: Water	Sample Description	Ground Water
Report Release Date	24th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/M/W/Dec.-24/09
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-04
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	ISO – 19458		
Sampling Location	Tonagatu	Sampling Source	Ground Water		
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	250 ml		
Meteorological Cond. of Field	W.C.– Clear	RH % - 46	Temp. – 25°C		
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	23/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 24th Edition 2023 (Multiple Tube Fermentation Technique)	MPN/100 ml	BDL (MDL 1.8)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 24th Edition 2023 (Thermotolercut (Fecal) Coliform Procedure)	MPN/100 ml	BDL (MDL 1.8)	
3.	E coli	APHA 9221-F 24th Edition 2023 (Escherichia Coli Procedure using Flourogenic Substrate)	MPN/100 ml	BDL (MDL 1.8)	

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 in full, without the written permission of the CEO
	[illegible]
	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)

24-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory

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

Authorized Signatory
Microbiological Section
Yugantar [illegible]
Environmental [illegible]

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC1298924000001405F				
Discipline: Chemical	Group: Water	Sample Description: Ground Water			
Report Release Date: 28th December, 2024		Report ID: YBAEEL-2412-29			
W. Order/ JSPCB App. No.: Via – E-mail		Work Order Date: 17.12.2024			
Type of Industry(If any): Thermal Power Plant		Job code/ Ref. no.: YBAEEL/C/W/Dec.-24/10			
Report Issue to: M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Date: 20/12/2024	Mode of sample collection: By YBAEEL Team		Sample Code: 241221-GW-03		
Sampling Plan: YBAEEL/SP/252-2024		Sample Method: IS : 17614 (Part-1): 2021			
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 % - 46		Temp. – 25°C	
Sample receipt Date: 21/12/2024	Analysis Started on: 21/12/2024		Analysis completed on: 28/12/2024		

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	7.36 at 25.8°C	6.5-8.5
2.	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3.	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	<5	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	438.0 at 25.9°C	--
6.	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	163.0	200-600
7.	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	172.0	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	258.0	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	38.0	250-1000
11.	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.79	1.0-1.5
12.	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	4.12	45-No relaxation
13.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	40.06	75-200
14.	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	17.43	30-100
15.	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	28.0	--
16.	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	3.0	--

Limit is specified as	IS 10500:2012, RA 2018
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 limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by :- NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by :- Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018
TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 0 6 F		
Discipline: Chemical	Group: Residue & Contaminants In Water	Sample Description	Ground Water
Report Release Date	28th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-03
Sampling Plan	YBAEEL/SP/252-2024	Sample Method	IS : 17614 (Part-1): 2021		
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 % - 46	Temp. – 25°C		
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2.	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.21	1.0-No relaxation
3.	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.16	5-15
6.	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7.	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8.	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
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 [illegible]
	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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-03
Sampling Plan		YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021
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 % - 46	Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500:2012, RA 2018
Abbreviation	MDL - Minimum detectable limit, BDL - Below detection limit
Env. Condition of Lab	Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (R)
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 shall not be reproduced except in full, without the written permission of the CEO The sample received 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 – Pinky Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-03
Sampling Plan		YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021
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 % - 46		Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results******

Sl	Parameter	Test Method	Units	Results	Limits
1	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	0.03-0.2

Limit is specified as	IS 10500:2012, RA 2018.
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 (R)
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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 3 6 7 F	
Discipline: Biological	Group: Water	Sample Description	Ground Water
Report Release Date	24th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry (If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/M/W/Dec.-24/09
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		
Sampling Date	20/12/2024	Mode of sample collection: By YBAEEL Team	Sample Code: 241221-GW-03
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	ISO – 19458
Sampling Location	Serengatu	Sampling Source	Ground Water
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity	250 ml
Meteorological Cond. of Field	W.C.– Clear	RH % - 46	Temp. – 25°C
Sample receipt Date	21/12/2024	Analysis Started on: 21/12/2024	Analysis completed on: 23/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 24th Edition 2023 (Multiple Tube Fermentation Technique)	MPN/100 ml	BDL (MDL 1.8)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 24th Edition 2023 (Thermotolercut (Fecal) Coliform Procedure)	MPN/100 ml	BDL (MDL 1.8)	
3.	E coli	APHA 9221-F 24th Edition 2023 (Escherichia Coli Procedure using Flourogenic Substrate)	MPN/100 ml	BDL (MDL 1.8)	

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)

24-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory

Authorized Signatory
Microbiological Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accredited Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018
TC-12989

Test Report

ULR (Unique Lab Report) No.		TC	1	2	9	8	9	2	4	0	0	0	0	0	1	4	0	3	F

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no	YBAEEL/C/W/Dec.-24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team		Sample Code	241221-GW-02
Sampling Plan	YBAEEL/SP/252-2024		Sample Method		IS : 17614 (Part-1): 2021	
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 % - 46		Temp. – 25ºC	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on		28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.82 at 25.8°C	6.5-8.5
2	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	5	5-15
5	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	781.0 at 25.9°C	--
6	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	128.0	200-600
7	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	332.0	200-600
8	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	476.0	500-2000
9	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	86.0	250-1000
11	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.49	1.0-1.5
12	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	5.72	45-No relaxation
13	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	79.62	75-200
14	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	32.42	30-100
15	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	24.0	--
16	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	6.0	--

Limit is specified as	IS 10500:2012, RA 2018
Abbreviation	MDL - Minimum Detection limit, BDL - Below detection limit
Env. Condition of Lab	[illegible] Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (C)
Specific contractual notes	All values [illegible] 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 [illegible] reproduced [illegible] 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 [illegible]
Remarks	Sample complies with prescribed limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by :- Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC1298924000001404F			
Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-02
Sampling Plan	YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021	
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 % - 46		Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2.	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.23	1.0-No relaxation
3.	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.25	5-15
6.	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7.	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8.	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-02
Sampling Plan		YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021
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 % - 46	Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500:2012, RA 2018
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit.
Env. Condition of Lab	Laboratory is maintaining, Temperature 27 ± 2°C and Relative Humidity 55 ± 5% in all testing areas as per IS 196:1995 (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 – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-02
Sampling Plan		YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021
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 % - 46		Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	0.03-0.2

Limit is specified as	IS 10500:2012 RA 2018.
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit
Env. Condition of Lab	Laboratory is maintaining Temperature 27 ± 2°C and Relative Humidity 55 ± 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 shall not be reproduced, except when in full, without the written permission of the YBAEEL
	The samples collected shall be destroyed after 15 days from the date of issue of the report, 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 – Sweta Kumari (Lab Analyst)

25/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accredited Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 3 6 6 F		
Discipline: Biological	Group: Water	Sample Description	Ground Water
Report Release Date	24th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/M/W/Dec.-24/09
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-02
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method		ISO – 19458	
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 % - 46		Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	23/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 24th Edition 2023 (Multiple Tube Fermentation Technique)	MPN/100 ml	BDL (MDL 1.8)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 24th Edition 2023 (Thermotolercut (Fecal) Coliform Procedure)	MPN/100 ml	BDL (MDL 1.8)	
3.	E coli	APHA 9221-F 24th Edition 2023 (Escherichia Coli Procedure using Flourogenic Substrate)	MPN/100 ml	BDL (MDL 1.8)	

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
	[illegible] 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)

24-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory

Authorized Signatory
Microbiological Section
Yugantar Bharati Analytical &
Environmental Engineering Laborator

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 0 1 F				
Discipline: Chemical	Group: Water		Sample Description: Ground Water		
Report Release Date: 28th December, 2024			Report ID: YBAEEL-2412-29		
W. Order/ JSPCB App. No.: Via – E-mail			Work Order Date: 17.12.2024		
Type of Industry(if any): Thermal Power Plant			Job code/ Ref. no.: YBAEEL/C/W/Dec.-24/10		
Report Issue to: M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.					
Sampling Date: 20/12/2024	Mode of sample collection: By YBAEEL Team		Sample Code: 241221-GW-01		
Sampling Plan: YBAEEL/SP/252-2024		Sample Method:	IS : 17614 (Part-1): 2021		
Sampling Location: Babhni		Sampling Source:	Ground Water		
Sample pkg. Condition: Sealed Pack in PP Bottle		Sample Quantity:	3000 ml		
Meteorological Cond. of Field: W.C.– Clear		RH % - 46		Temp. – 25°C	
Sample receipt Date: 21/12/2024	Analysis Started on: 21/12/2024		Analysis completed on: 28/12/2024		

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.86 at 26.1°C	6.5-8.5
2.	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3.	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4.	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	<5	5-15
5.	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	296.0 at 26.0°C	--
6.	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	74.0	200-600
7.	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	98.2	200-600
8.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	176.0	500-2000
9.	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10.	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	26.0	250-1000
11.	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.44	1.0-1.5
12.	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	2.87	45-No relaxation
13.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	36.02	75-200
14.	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	1.87	30-100
15.	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	16.0	--
16.	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	4.0	--

Limit is specified as	IS 10500:2012, RA 2018
Abbreviation	MDL - Minimum detectable 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
	Interest @ 24% per annum is levied 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 – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 0 2 F				
Discipline: Chemical	Group: Residue & Contaminants in Water			Sample Description: Ground Water	
Report Release Date	28th December, 2024			Report ID: YBAEEL-2412-29	
W. Order/ JSPCB App. No.	Via – E-mail			Work Order Date: 17.12.2024	
Type of Industry(if any)	Thermal Power Plant			Job code/ Ref. no.: YBAEEL/C/R/Dec.-24/09	
Report issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date: 20/12/2024	Mode of sample collection: By YBAEEL Team			Sample Code: 241221-GW-01	
Sampling Plan: YBAEEL/SP/252-2024		Sample Method: IS : 17614 (Part-1): 2021			
Sampling Location: Babhni		Sampling Source: Ground Water			
Sample pkg. Condition: Sealed Pack in PP Bottle		Sample Quantity: 3000 ml			
Meteorological Cond. of Field: W.C.– Clear		RH % - 46		Temp. – 25°C	
Sample receipt Date: 21/12/2024	Analysis Started on: 21/12/2024		Analysis completed on: 28/12/2024		

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.16	1.0-No relaxation
3	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.18	5-15
6	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
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 complete collection 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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

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

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-01
Sampling Plan		YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021
Sampling Location		Babhni		Sampling Source	Ground Water
Sample pkg. Condition		Sealed Pack In PP Bottle		Sample Quantity	3000 ml
Meteorological Cond. of Field		W.C.- Clear		RH % - 46	Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500:2012, RA 2018
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 – Pinky Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by : Jharkhand State Pollution Control Borad (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Ground Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-GW-01
Sampling Plan		YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021
Sampling Location		Babhni	Sampling Source		Ground Water
Sample pkg. Condition		Sealed Pack in PP Bottle	Sample Quantity		3000 ml
Meteorological Cond. of Field		W.C.– Clear	RH % - 46		Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	0.03-0.2

Limit is specified as	IS 10500.2012, RA 2018.
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit
Env. Condition of Lab	Temperature 27 ± 2°C & 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. The report in full or in part shall not be used for advertising or as evidence in any court of law. This result cannot be reproduced, except when in full, without the written permission of the CLC. The sample collected will be destroyed after 15 days from the date of issue of the test report 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 – Sweta Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by :- NABL Accredited Testing Laboratory Vide Certificate No. TC -12989
Registered by :- Jharkhand State Pollution Control Board (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018
TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 3 6 5 F		
Discipline: Biological	Group: Water	Sample Description	Ground Water
Report Release Date	24th December, 2024	Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail	Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant	Job code/ Ref. no.	YBAEEL/M/W/Dec.-24/09
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.		

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-GW-01
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method		ISO – 19458	
Sampling Location	Babhni	Sampling Source		Ground Water	
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity		250 ml	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46		Temp. – 25ºC	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	23/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	APHA 9221B 24th Edition 2023 (Multiple Tube Fermentation Technique)	MPN/100 ml	BDL (MDL 1.8)	Shall not to be Detectable in any 100 ml sample
2.	Fecal coliform	APHA 9221E 24th Edition 2023 (Thermotolercut (Fecal) Coliform Procedure)	MPN/100 ml	BDL (MDL 1.8)	
3.	E coli	APHA 9221-F 24th Edition 2023 (Escherichia Coli Procedure using Flourogenic Substrate)	MPN/100 ml	BDL (MDL 1.8)	

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 ± 2ºC 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 sample 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)

24-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory

Authorized Signatory
Microbiological Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by / Registered by / Certified by | NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989 Jharkhand State Pollution Control Board (JSPCB) ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.	TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 3 F				
Discipline / Chemical		Group	Water	Sample Description	Drinking Water
Report Release Date	28th December, 024			Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.	Via – E-mail			Work Order Date	17.12.2024
Type of Industry(If any)	Thermal Power Plant			Job code/ Ref. no.	YBAEEL/C/WI/Dec -24/12
Report Issue to	M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.				
Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-DW-01
Sampling Plan	YBAEEL/SP/252-2024		Sample Method		IS : 17614 (Part-1): 2021
Sampling Location	Canteen		Sampling Source		Drinking Water
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity		3000 ml
Meteorological Cond. of Field	W.C.– Clear		RH % - 46		Temp. – 25°C
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results******

Sl	Parameter	Test Method	Units	Results	Limits
1	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	7.41 at 25.8°C	6.5-8.5
2	Odour	IS 3025 (P-05):2018	--	Agree.	Agreeable
3	Taste	IS 3025 (P- 08):2023	--	Agree.	Agreeable
4	Colour	IS 3025 (P-04):2021 (Visual Comparison Method)	Hazen	5	5-15
5	Conductivity	IS 3025 (P-14):2013, RA 2019	µs/cm	422.0 at 25.8°C	--
6	Total Alkalinity (as $CaCO_3$)	IS 3025 (P-23):1986, RA 2019 (Indicator Method)	mg/l	146.0	200-600
7	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	188.42	200-600
8	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	226.0	500-2000
9	Chlorine Residual	IS 3025 (P-26):2021 (Iodometric Method)	mg/l	BDL (MDL 0.07)	0.2-1
10	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	18.0	250-1000
11.	Fluoride (as F^-)	APHA 4500 F-C 24th edition 2023 (Ion Selective Electrode Method)	mg/l	0.48	1.0-1.5
12.	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	3.26	45-No relaxation
13.	Calcium (as Ca)	IS 3025 (P-40): 1991, RA 2019 (EDTA Titrimetric Method)	mg/l	50.41	75-200
14	Magnesium (as Mg)	APHA 3500 Mg B 24th edition 2023	mg/l	15.16	30-100
15	Sodium (as Na^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	14.0	--
16.	Potassium (as K^+)	IS 3025 (P-45), Flame Emission Photometric Method.	mg/l	2.0	--

Limit is specified as	IS 10500:2012, RA 2018.
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 limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by : Jharkhand State Pollution Control Borad (JSPCB)
Certified by ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Drinking Water
Report Release Date		28th December, 024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/12
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-DW-01
Sampling Plan	YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021	
Sampling Location	Canteen		Sampling Source	Drinking Water	
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity	3000 ml	
Meteorological Cond. of Field	W.C.– Clear		RH % - 46	Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	BDL (MDL 0.003)	--

Limit is specified as	IS 10500 2012, RA 2018.
Abbreviation	MDL – Minimum detection limit, BDL – Below detection limit
Env. Condition of Lab	[illegible] Temperature 27 ± [illegible] and Relative Humidity 65 ± 5% in all testing areas as per IS 196 1966 [illegible]
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 [illegible]
	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 - Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 4 F			
Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Drinking Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/11
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection		By YBAEEL Team		Sample Code	241221-DW-01
Sampling Plan	YBAEEL/SP/252-2024		Sample Method			IS : 17614 (Part-1): 2021	
Sampling Location	Canteen		Sampling Source			Drinking Water	
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity			3000 ml	
Meteorological Cond. of Field	W.C.– Clear		RH % - 46			Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024		Analysis completed on		28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Arsenic (as As)	APHA 3114 C 24th edition 2023 (Continuous Hydride Generation Method)	mg/l	BDL (MDL 0.003)	0.01-No relaxation
2.	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.14	1.0-No relaxation
3.	Copper (as Cu)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.01)	0.05-1.5
4.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.01-No relaxation
5.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.1)	5-15
6.	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.003-No relaxation
7.	Nickel (as Ni)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	0.02-No relaxation
8.	Cobalt (Co)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.03)	--

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL – Minimum detection limit, BDL – Below detection limit
Env. Condition of Lab	[illegible] 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 [illegible] and results listed refer only to the tested sample and applicable parameter in Lab's Permanent Facility
	[illegible] for advertising or as evidence in any court of law
	[illegible] without the written permission of the CEO
	The [illegible] after 15 days from the date of issue of the certificate unless specified otherwise
	[illegible]
	[illegible]
Remarks	Sample complies with prescribed limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by : Jharkhand State Pollution Control Borad (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Residue & Contaminants in Water	Sample Description	Drinking Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/R/Dec.-24/11
Report issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-DW-01
Sampling Plan		YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021
Sampling Location		Canteen	Sampling Source		Drinking Water
Sample pkg. Condition		Sealed Pack in PP Bottle	Sample Quantity		3000 ml
Meteorological Cond. of Field		W.C.– Clear	RH % - 46		Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1	Aluminium (as Al)	IS 3025 (P-55):2003, RA 2019 (Eriochrome Cyanine R Method)	mg/l	BDL (MDL 0.02)	0.03-0.2

Limit is specified as	IS 10500:2012, RA 2018.
Abbreviation	MDL - Minimum detection limit, BDL - Below detection limit
Env. Condition of Lab	[illegible] Temperature 27° ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (E)
Specific contractual notes	All values are expressed in as unit and results is/are refer only to the tested sample and applicable parameter at 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 sample collected will 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 limit.

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)
Authorized Signatory
Chemical Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	**Biological**	**Group**	**Water**	**Sample Description**	**Drinking Water**
Report Release Date		**22nd December, 2024**		**Report ID**	**YBAEEL-2412-29**
W. Order/ JSPCB App. No.		**Via – E-mail**		**Work Order Date**	**17.12.2024**
Type of Industry(If any)		**Thermal Power Plant**		**Job code/ Ref. no.**	**YBAEEL/M/W/Dec.-24/10**
Report Issue to		**M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.**			

Sampling Date	**20/12/2024**	**Mode of sample collection**	**By YBAEEL Team**	**Sample Code**	**241221-DW-01**
Sampling Plan	**YBAEEL/SP/252-2024**		**Sampling Method**	**ISO – 19458**	
Sampling Location	**Near Canteen**		**Sampling Source**	**Drinking Water**	
Sample pkg. Condition	**Sealed Pack in PP Bottle**		**Sample Quantity**	**250 ml**	
Meteorological Cond. of Field	**W.C.– Clear**		**RH % - 46**	**Temp. – 25°C**	
Sample receipt Date	**21/12/2024**	**Analysis Started on**	**21/12/2024**	**Analysis completed on**	**22/12/2024**

********Test Results ********

Sl	Parameter	Test Method	Units	Results	Limits
1.	Total coliform	IS – 15185: 2016 (Membrane Filtration Method)	cfu/100 ml	ND	Shall not to be Detectable in any 100 ml sample
2.	E coli	IS – 15185: 2016 (Membrane Filtration Method)	cfu/100 ml	ND	

Limit is specified as	IS 10500: 2012
Abbreviation	MDL : Minimum detection limit, BDL : Below detection limit, ND : Not detected <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 maintained at Temperature 25 ± 2°C and Relative Humidity 35 ± 5% in all testing areas as per IS 196 1900 (Pt)
Specific contractual notes	All calculations expressed in as test 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)**

22-12-2024
Verified & Issued by
(Mukesh Kumar)
Authorized Signatory
Authorized Signatory
Microbiological Section
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accredited Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.		TC1298924000001411F			
Discipline	Chemical	Group	Water	Sample Description	Surface Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/11
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-SW-01
Sampling Plan	YBAEEL/SP/252-2024	Sample Method		IS : 17614 (Part-1): 2021	
Sampling Location	Near Cooling Tower	Sampling Source		Surface Water	
Sample pkg. Condition	Sealed Pack in PP Bottle	Sample Quantity		3000 ml	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46		Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results******

Sl	Parameter	Test Method	Units	Results	Limits
1	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.78 at 25.8°C	6.5-8.5
2	Total Hardness (as $CaCO_3$)	IS 3025 (P-21):2009, RA 2019 (EDTA Method)	mg/l	122.24	–
3	Total suspended solids	IS 3025 (P-17):2022 (Gravimetric Method)	mg/l	34.0	–
4	Oxygen (dissolved)	IS 3025 (P-38):1989, RA 2019 (Titrimetric Method)	mg/l	6.2	> 4
5	Chloride (as Cl)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	38.0	–
6	Nitrate (as NO_3^-- N)	APHA 4500 NO_3^- (B) 24th edition 2023 (UV Screening Method)	mg/l	0.74	–
7	BOD	IS 3025 (P-44):1993, RA 2019 (Oxygen Depletion Method)	mg/l	2.6	3
8	COD	IS 3025 (P-58):2006, RA 2022	mg/l	46.0	–
9	Oil and grease	IS 3025 (P-39):2021 (Partition Gravimetric Method)	mg/l	BDL (MDL 4.0)	–
10	Sulphate (as SO_4^{2-})	IS 3025 (P-24-Sec 1):2022 (Turbidity Method)	mg/l	36.0	–

Limit is specified as	EPA 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 [illegible]
Specific contractual notes	All values are [illegible] and results listed refer only to the tested sample and applicable parameter [illegible]
	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 [illegible] 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 limit.

Sample Drawn By – Angad Munda
Tested By – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by : Jharkhand State Pollution Control Borad (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Water	Sample Description	Surface Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/W/Dec.-24/11
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			
Sampling Date		20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code 241221-SW-01
Sampling Plan		YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021
Sampling Location		Near Cooling Tower		Sampling Source	Surface Water
Sample pkg. Condition		Sealed Pack in PP Bottle		Sample Quantity	3000 ml
Meteorological Cond. of Field		W.C.– Clear		RH % - 46	Temp. – 25°C
Sample receipt Date		21/12/2024	Analysis Started on	21/12/2024	Analysis completed on 28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Phosphate (as PO_4^{3-})	IS 3025 (P-31/Sec1):2022 (Stannous Chloride Method)	mg/l	0.048	--

Limit is specified as	EPA 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 this 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 – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accreditated by : NABL Accreditated Testing Laboratory Vide Certificate No. TC -12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018

TC-12989

Test Report

ULR (Unique Lab Report) No.			TC	1	2	9	8	9	2	4	0	0	0	0	0	1	4	1	2	F			
Discipline	Chemical	Group	Residue & Contaminants in Water							Sample Description					Surface Water								
Report Release Date		28th December, 2024								Report ID					YBAEEL-2412-29								
W. Order/ JSPCB App. No.		Via – E-mail								Work Order Date					17.12.2024								
Type of Industry(If any)		Thermal Power Plant								Job code/ Ref. no.					YBAEEL/C/R/Dec.-24/10								
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.																					
Sampling Date		20/12/2024	Mode of sample collection							By YBAEEL Team					Sample Code					241221-SW-01			
Sampling Plan		YBAEEL/SP/252-2024								Sample Method					IS : 17614 (Part-1): 2021								
Sampling Location		Near Cooling Tower								Sampling Source					Surface Water								
Sample pkg. Condition		Sealed Pack In PP Bottle								Sample Quantity					3000 ml								
Meteorological Cond. of Field		W.C.– Clear								RH % - 46					Temp. – 25°C								
Sample receipt Date		21/12/2024	Analysis Started on							21/12/2024					Analysis completed on					28/12/2024			

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	Iron (as Fe)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.24	--
2.	Lead (as Pb)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--
3.	Cadmium (as Cd)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--
4.	Chromium (as Cr)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	BDL (MDL 0.02)	--
5.	Zinc (as Zn)	APHA 3111 B 24th edition 2023 (Direct Air Acetylene Flame Method)	mg/l	0.14	--

Limit is specified as	EPA 1986.
Abbreviation	MDL- Minimum detectable limit, BDL- Below detectable 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 No disputes are entertained in this laboratory jurisdiction
Remarks	----------

Sample Drawn By – Angad Munda
Tested By – Sweta Kumari (Lab Analyst)

28/12/24

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI

ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Accredited by : NABL Accreditated Testing Laboratory Vide Certificate No. TC-12989
Registered by : Jharkhand State Pollution Control Board (JSPCB)
Certified by : ISO 9001:2015 & ISO 45001:2018
TC-12989

Test Report

ULR (Unique Lab Report) No.		TC 1 2 9 8 9 2 4 0 0 0 0 0 1 4 1 5 F			
Discipline	Chemical	Group	Pollution & Environment	Sample Description	Waste Water / Effluent Water
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/PE/Dec.-24/09
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-WW-01
Sampling Plan	YBAEEL/SP/252-2024		Sample Method	IS : 17614 (Part-1): 2021	
Sampling Location	Neutralization Pit (Near Block – 03)		Sampling Source	Effluent Water	
Sample pkg. Condition	Sealed Pack in PP Bottle		Sample Quantity	3000 ml	
Meteorological Cond. of Field	W.C.– Clear		RH % - 46	Temp. – 25°C	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/2024	Analysis completed on	28/12/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results	Limits
1.	pH value	IS 3025 (P-11):2022 (Electrometric Method)	pH	6.82 at 25.9°C	5.5-9.0
2.	Temperature	IS 3025 (P-09):2023	°C	26.2	--
3.	Total dissolved solids	IS 3025 (P-16):2023 (Gravimetric Method)	mg/l	184.0	--
4.	Total Solids	IS 3025 (P-15):1984, RA 2019 (Gravimetric Method)	mg/l	226.0	--
5.	Total Suspended Solids	IS 3025 (P-17):2022 (Gravimetric Method)	mg/l	36.0	--
6.	BOD (3 days at 27°C)	IS 3025 (P-44):1993, RA 2019 (Oxygen Depletion Method)	mg/l	6.0	30
7.	COD	IS 3025 (P-58):2006, RA 2022	mg/l	40.0	250
8.	Oil & Grease	IS 3025 (P-39):2021 (Partition Gravimetric Method)	mg/l	4.2	10
9.	Chloride (as Cl^-)	IS 3025 (P-32):1988, RA 2019 (Argentometric Method)	mg/l	32.0	--
10.	Sulphate (as SO_4^{2-})	IS 3025 (P-24-Sec 1):2022 (Turbidity Method)	mg/l	54.2	--

Limit is specified as	Environmental (Protection) Rule – 1986.
Abbreviation	[illegible] BDL – Below detection limit
Env. Condition of Lab	[illegible] Temperature 27 ± 2°C and Relative Humidity 65 ± 5% in all testing areas as per IS 196:1966 (?)
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
	[illegible] not 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 – Pinky Kumari (Lab Analyst)

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Report Release Date	**28th December, 2024**	**Report ID**	**YBAEEL-2412-29**
W. Order/ JSPCB App. No.	**Via – E-mail**	**Work Order Date**	**17.12.2024**
Type of Industry(if any)	**Thermal Power Plant**	**Job code/ Ref. no.**	**YBAEEL/C/W/Dec.-24/14**
Report Issue to	**M/s Inland Power Limited** Tonagatu, Gola, Ramgarh, Jharkhand.		
Sample Description	**Water Level**		
Sampling Date	**20/12/2024**	**Mode of sample collection**	**By YBAEEL Team**
Meteorological Cond. of Field	**W.C.– Clear**	**RH % - 46**	**Temp. – 25°C**

******Test Results ******

Sl	Location	Ground Water Level (mbgl)
1.	Tonagatu Village	6.6
2.	Bariyatu	7.2
3.	Biyang	5.8
4.	Serengatu	5.4

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 will 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	----------

Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

Technical Manager
Yugantar Bharati Analytical & Environmental Engineering Laboratory

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

Yugantar Bharati Analytical & Environmental Engineering Laboratory

YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY
Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

JHARKHAND State Pollution Control Board

Test Report

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(If any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/S/Dec.- 24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-AS-01	
Sampling Plan	YBAEEL/SP/252-2024			Sampling Method	IS 6491:1972	
Sampling Location	Silo			Sampling Source	Fly Ash	
Sample pkg. Condition	Sealed Pack in Zipper Bag			Sample Quantity	2.5 Kg Approx.	
Meteorological Cond. of Field	W.C.– Clear	RH % - 46			Temp. – 25ºC	
Sample receipt Date	21/12/2024	Analysis Started on	21/12/024	Analysis completed on	28/12/2024	

******Test Results ******

Sl	Parameter	Test Method	Units	Results
1.	Iron (as Fe)	APHA 3111 B, 24th Edition 2023	ppm	19.42
2.	Zinc (as Zn)	APHA 3111 B, 24th Edition 2023	ppm	0.52
3.	Copper (as Cu)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.01)
4.	Lead (as Pb)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
5.	Nickel (as Ni)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
6.	Cadmium (as Cd)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
7.	Chromium (as Cr)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
8.	Arsenic (As)	APHA 3114 B, 24th Edition 2023	ppm	BDL (MDL 0.003)
9.	Mercury (Hg)	APHA 3112 B, 24th Edition 2023	ppm	BDL (MDL 0.003)

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-is basis and results relate only to the tested sample and applicable parameter in Lab's Permanent Facility
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Remarks	....

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

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

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YUGANTAR BHARATI
ANALYTICAL & ENVIRONMENTAL ENGINEERING LABORATORY

Registered by :- Jharkhand State Pollution Control Borad (JSPCB)
Certified by :- ISO 9001:2015 & ISO 45001:2018

State Pollution Control Board

Test Report

Discipline	Chemical	Group	Pollution & Environment	Sample Description	ASH
Report Release Date		28th December, 2024		Report ID	YBAEEL-2412-29
W. Order/ JSPCB App. No.		Via – E-mail		Work Order Date	17.12.2024
Type of Industry(if any)		Thermal Power Plant		Job code/ Ref. no.	YBAEEL/C/S/Dec.- 24/10
Report Issue to		M/s Inland Power Limited Tonagatu, Gola, Ramgarh, Jharkhand.			

Sampling Date	20/12/2024	Mode of sample collection	By YBAEEL Team	Sample Code	241221-AS-02
Sampling Plan	YBAEEL/SP/252-2024	Sampling Method	IS 6491:1972		
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 % - 46	Temp. – 25°C		
Sample receipt Date	28/09/2024	Analysis Started on	28/09/2024	Analysis completed on	07/10/2024

******Test Results ******

Sl	Parameter	Test Method	Units	Results
1.	Iron (as Fe)	APHA 3111 B, 24th Edition 2023	ppm	18.16
2.	Zinc (as Zn)	APHA 3111 B, 24th Edition 2023	ppm	0.44
3.	Copper (as Cu)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.01)
4.	Lead (as Pb)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
5.	Nickel (as Ni)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
6.	Cadmium (as Cd)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
7.	Chromium (as Cr)	APHA 3111 B, 24th Edition 2023	ppm	BDL (MDL 0.02)
8.	Arsenic (As)	APHA 3114 B, 24th Edition 2023	ppm	BDL (MDL 0.003)
9.	Mercury (Hg)	APHA 3112 B, 24th Edition 2023	ppm	BDL (MDL 0.003)

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)
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	All disputes are subjected to the Ranchi Jurisdiction
Remarks	------------------------

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

28/12/24
Verified & Issued by
Sanjeev Kumar Singh
(Technical Manager)

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

Authorized Signatory
Chemical Section
Yugantar Bharati Analytical &
Environmental Engineering Laboratory

116 Annex-C/A-4

Online Stack Monitoring Equipments

InlandPower LTD.

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Real Time Data Acquisition And Monitoring

Site Name: M/s. Inland Power Limited

Report: Average Report

From Date: 01-10-2024T00:01:22Z To Date: 17-01-2025T11:47:10Z

Description	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
Prescribed Standards	0 -	0 - 150	0 -
Maximum Data	128.93	29.0	825.35
Minimum Data	38.83	0.0	20.68
Geometric Mean	53.04	23.42	227.45
Median	45.84	26.63	258.15
Standard Deviation	17.63	7.47	86.24
Maximum Value At Time	2024-10-03 00:00:00	2025-01-10 00:00:00	2024-10-07 00:00:00
Minimum Value At Time	2024-10-07 00:00:00	2024-10-16 00:00:00	2024-10-28 00:00:00
Valid Data Points	100	108	100
Total Data Points	108	108	108
Data Availability %	92.59%	100.0%	92.59%

Sl No.	Time	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
1	2024-10-01 00:00:00	76.43	27.00	164.90
2	2024-10-02 00:00:00	92.38	25.36	176.70
3	2024-10-03 00:00:00	128.93	20.29	235.18
4	2024-10-04 00:00:00	78.68	19.49	170.50
5	2024-10-05 00:00:00	59.07	18.85	153.54
6	2024-10-06 00:00:00	88.93	25.73	185.89
7	2024-10-07 00:00:00	38.83	27.00	825.35
8	2024-10-08 00:00:00	88.01	27.00	128.02
9	2024-10-09 00:00:00	87.98	27.00	127.62
10	2024-10-10 00:00:00	88.19	27.00	128.02
11	2024-10-11 00:00:00	88.92	27.00	128.02
12	2024-10-12 00:00:00	88.75	27.00	128.02
13	2024-10-13 00:00:00	88.64	27.00	128.02
14	2024-10-14 00:00:00	88.54	27.00	128.02

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Sl No.	Time	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
15	2024-10-15 00:00:00	88.39	14.98	128.02
16	2024-10-16 00:00:00	NA	0.00	NA
17	2024-10-17 00:00:00	77.06	6.39	129.52
18	2024-10-18 00:00:00	77.06	28.50	129.52
19	2024-10-19 00:00:00	77.11	28.88	129.53
20	2024-10-20 00:00:00	77.10	14.55	129.55
21	2024-10-21 00:00:00	NA	0.00	NA
22	2024-10-22 00:00:00	77.01	24.86	129.55
23	2024-10-23 00:00:00	76.98	27.98	129.55
24	2024-10-24 00:00:00	76.97	27.92	129.55
25	2024-10-25 00:00:00	60.21	28.00	122.85
26	2024-10-26 00:00:00	46.40	27.71	111.87
27	2024-10-27 00:00:00	45.73	27.54	131.23
28	2024-10-28 00:00:00	46.03	27.20	20.68
29	2024-10-29 00:00:00	46.66	26.79	216.17
30	2024-10-30 00:00:00	46.63	26.12	222.41
31	2024-10-31 00:00:00	46.38	26.95	241.01
32	2024-11-01 00:00:00	46.31	27.04	309.37
33	2024-11-02 00:00:00	46.58	27.08	305.05
34	2024-11-03 00:00:00	46.72	27.23	352.02
35	2024-11-04 00:00:00	46.36	27.92	401.26
36	2024-11-05 00:00:00	45.78	27.99	337.07
37	2024-11-06 00:00:00	45.89	28.00	270.86
38	2024-11-07 00:00:00	45.54	28.04	268.25

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Sl No.	Time	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
39	2024-11-08 00:00:00	45.42	28.10	265.69
40	2024-11-09 00:00:00	45.13	27.97	264.69
41	2024-11-10 00:00:00	44.60	27.02	263.76
42	2024-11-11 00:00:00	44.45	27.92	264.79
43	2024-11-12 00:00:00	44.21	25.24	264.20
44	2024-11-13 00:00:00	44.18	1.04	265.00
45	2024-11-14 00:00:00	43.47	18.61	262.98
46	2024-11-15 00:00:00	43.07	21.00	263.25
47	2024-11-16 00:00:00	42.68	21.00	262.80
48	2024-11-17 00:00:00	42.32	21.00	262.40
49	2024-11-18 00:00:00	42.21	21.00	261.87
50	2024-11-19 00:00:00	42.17	23.22	261.18
51	2024-11-20 00:00:00	42.06	24.00	257.07
52	2024-11-21 00:00:00	41.85	24.00	255.42
53	2024-11-22 00:00:00	41.65	24.00	255.93
54	2024-11-23 00:00:00	41.46	24.00	257.60
55	2024-11-24 00:00:00	41.30	24.00	262.39
56	2024-11-25 00:00:00	41.22	24.00	261.89
57	2024-11-26 00:00:00	41.13	24.00	260.76
58	2024-11-27 00:00:00	41.12	24.00	260.46
59	2024-11-28 00:00:00	41.02	24.00	260.53
60	2024-11-29 00:00:00	40.97	24.00	260.34
61	2024-11-30 00:00:00	40.90	24.00	260.26
62	2024-12-01 00:00:00	40.79	22.72	260.21

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Sl.No.	Time	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
63	2024-12-02 00:00:00	40.73	20.41	260.16
64	2024-12-03 00:00:00	40.74	15.21	259.70
65	2024-12-04 00:00:00	NA	0.00	NA
66	2024-12-05 00:00:00	NA	0.00	NA
67	2024-12-06 00:00:00	NA	0.00	NA
68	2024-12-07 00:00:00	NA	0.00	NA
69	2024-12-08 00:00:00	NA	0.00	NA
70	2024-12-09 00:00:00	41.17	18.14	259.89
71	2024-12-10 00:00:00	41.18	24.94	259.17
72	2024-12-11 00:00:00	41.22	26.75	258.71
73	2024-12-12 00:00:00	41.37	26.97	258.72
74	2024-12-13 00:00:00	41.35	26.41	260.27
75	2024-12-14 00:00:00	41.50	26.92	261.24
76	2024-12-15 00:00:00	41.52	25.14	261.30
77	2024-12-16 00:00:00	41.62	26.02	261.06
78	2024-12-17 00:00:00	41.44	25.67	260.61
79	2024-12-18 00:00:00	41.29	25.96	260.43
80	2024-12-19 00:00:00	41.30	25.80	260.49
81	2024-12-20 00:00:00	41.24	25.71	260.23
82	2024-12-21 00:00:00	40.94	26.52	260.34
83	2024-12-22 00:00:00	40.81	26.74	259.44
84	2024-12-23 00:00:00	40.71	27.00	259.37
85	2024-12-24 00:00:00	40.70	27.00	259.64
86	2024-12-25 00:00:00	40.41	27.00	260.06

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Sl No.	Time	Stack_1_Boiler-NOx(mg/Nm3)	Stack_1_Boiler-PM(mg/Nm3)	Stack_1_Boiler-SO2(mg/Nm3)
87	2024-12-26 00:00:00	40.23	27.00	260.16
88	2024-12-27 00:00:00	40.19	27.00	258.98
89	2024-12-28 00:00:00	40.17	27.00	258.78
90	2024-12-29 00:00:00	NA	27.00	NA
91	2024-12-30 00:00:00	49.73	27.00	201.49
92	2024-12-31 00:00:00	50.27	27.00	200.28
93	2025-01-01 00:00:00	50.68	27.02	200.27
94	2025-01-02 00:00:00	51.13	27.84	200.14
95	2025-01-03 00:00:00	51.34	27.96	199.99
96	2025-01-04 00:00:00	51.18	27.99	199.89
97	2025-01-05 00:00:00	50.78	27.44	199.90
98	2025-01-06 00:00:00	50.40	27.24	199.96
99	2025-01-07 00:00:00	50.15	27.74	199.97
100	2025-01-08 00:00:00	50.52	28.00	199.95
101	2025-01-09 00:00:00	50.87	28.51	199.82
102	2025-01-10 00:00:00	51.16	29.00	199.80
103	2025-01-11 00:00:00	51.17	28.63	199.60
104	2025-01-12 00:00:00	51.21	23.17	199.10
105	2025-01-13 00:00:00	50.04	25.16	199.77
106	2025-01-14 00:00:00	50.03	25.66	199.35
107	2025-01-15 00:00:00	50.12	26.29	199.25
108	2025-01-16 00:00:00	50.62	25.02	199.49

Report Details: Inland_P | 2025-01-17 11:48:26 | Average Report

122

Real Time Data Acquisition And Monitoring

Site Name: M/s. Inland Power Limited

Report: Average Report

From Date: 01-10-2024T00:01:22Z To Date: 17-01-2025T11:51:10Z

Description	CAAQMS-PM10(ug/m3)
Prescribed Standards	0 - 100
Maximum Data	62.74
Minimum Data	36.73
Geometric Mean	50.24
Median	50.33
Standard Deviation	4.45
Maximum Value At Time	2025-01-06 00:00:00
Minimum Value At Time	2024-12-30 00:00:00
Valid Data Points	99
Total Data Points	108
Data Availability %	91.67%

Sl No.	Time	CAAQMS-PM10(ug/m3)
1	2024-10-01 00:00:00	50.33
2	2024-10-02 00:00:00	50.33
3	2024-10-03 00:00:00	50.33
4	2024-10-04 00:00:00	50.33
5	2024-10-05 00:00:00	50.33
6	2024-10-06 00:00:00	50.33
7	2024-10-07 00:00:00	50.33
8	2024-10-08 00:00:00	50.33
9	2024-10-09 00:00:00	50.33
10	2024-10-10 00:00:00	50.33
11	2024-10-11 00:00:00	50.33
12	2024-10-12 00:00:00	50.33
13	2024-10-13 00:00:00	50.33
14	2024-10-14 00:00:00	50.28
15	2024-10-15 00:00:00	NA
16	2024-10-16 00:00:00	NA
17	2024-10-17 00:00:00	NA
18	2024-10-18 00:00:00	NA
19	2024-10-19 00:00:00	NA
20	2024-10-20 00:00:00	NA
21	2024-10-21 00:00:00	NA
22	2024-10-22 00:00:00	NA
23	2024-10-23 00:00:00	NA
24	2024-10-24 00:00:00	49.37

123

Sl No.	Time	CAAQMS-PM10(ug/m3)
25	2024-10-25 00:00:00	47.82
26	2024-10-26 00:00:00	46.41
27	2024-10-27 00:00:00	57.97
28	2024-10-28 00:00:00	53.73
29	2024-10-29 00:00:00	44.88
30	2024-10-30 00:00:00	49.42
31	2024-10-31 00:00:00	49.99
32	2024-11-01 00:00:00	44.86
33	2024-11-02 00:00:00	51.74
34	2024-11-03 00:00:00	51.36
35	2024-11-04 00:00:00	50.37
36	2024-11-05 00:00:00	53.77
37	2024-11-06 00:00:00	53.62
38	2024-11-07 00:00:00	48.67
39	2024-11-08 00:00:00	54.92
40	2024-11-09 00:00:00	46.28
41	2024-11-10 00:00:00	53.00
42	2024-11-11 00:00:00	54.83
43	2024-11-12 00:00:00	57.28
44	2024-11-13 00:00:00	53.62
45	2024-11-14 00:00:00	54.72
46	2024-11-15 00:00:00	45.67
47	2024-11-16 00:00:00	48.86
48	2024-11-17 00:00:00	53.27
49	2024-11-18 00:00:00	52.99
50	2024-11-19 00:00:00	48.52
51	2024-11-20 00:00:00	53.86
52	2024-11-21 00:00:00	49.37
53	2024-11-22 00:00:00	43.43
54	2024-11-23 00:00:00	39.51
55	2024-11-24 00:00:00	54.05
56	2024-11-25 00:00:00	51.89
57	2024-11-26 00:00:00	52.40
58	2024-11-27 00:00:00	44.40
59	2024-11-28 00:00:00	48.39
60	2024-11-29 00:00:00	57.70
61	2024-11-30 00:00:00	51.18
62	2024-12-01 00:00:00	51.03
63	2024-12-02 00:00:00	46.93
64	2024-12-03 00:00:00	50.86
65	2024-12-04 00:00:00	44.93

124

Sl No.	Time	CAAQMS-PM10(ug/m3)
66	2024-12-05 00:00:00	52.94
67	2024-12-06 00:00:00	49.53
68	2024-12-07 00:00:00	50.00
69	2024-12-08 00:00:00	56.73
70	2024-12-09 00:00:00	54.45
71	2024-12-10 00:00:00	51.30
72	2024-12-11 00:00:00	54.68
73	2024-12-12 00:00:00	45.45
74	2024-12-13 00:00:00	53.57
75	2024-12-14 00:00:00	56.28
76	2024-12-15 00:00:00	56.12
77	2024-12-16 00:00:00	53.49
78	2024-12-17 00:00:00	54.32
79	2024-12-18 00:00:00	46.77
80	2024-12-19 00:00:00	48.18
81	2024-12-20 00:00:00	53.23
82	2024-12-21 00:00:00	52.74
83	2024-12-22 00:00:00	49.08
84	2024-12-23 00:00:00	52.80
85	2024-12-24 00:00:00	52.70
86	2024-12-25 00:00:00	44.60
87	2024-12-26 00:00:00	40.08
88	2024-12-27 00:00:00	53.71
89	2024-12-28 00:00:00	49.00
90	2024-12-29 00:00:00	59.74
91	2024-12-30 00:00:00	36.73
92	2024-12-31 00:00:00	44.47
93	2025-01-01 00:00:00	54.11
94	2025-01-02 00:00:00	51.61
95	2025-01-03 00:00:00	50.31
96	2025-01-04 00:00:00	48.71
97	2025-01-05 00:00:00	45.09
98	2025-01-06 00:00:00	62.74
99	2025-01-07 00:00:00	47.44
100	2025-01-08 00:00:00	46.90
101	2025-01-09 00:00:00	40.18
102	2025-01-10 00:00:00	44.11
103	2025-01-11 00:00:00	47.87
104	2025-01-12 00:00:00	54.36
105	2025-01-13 00:00:00	43.40
106	2025-01-14 00:00:00	49.56

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Sl No.	Time	CAAQMS-PM10(ug/m3)
107	2025-01-15 00:00:00	40.87
108	2025-01-16 00:00:00	51.58

Report Details: Inland_P | 2025-01-17 11:51:31 | Average Report

Annex- C1A-5 (126)

JHARKHAND STATE POLLUTION CONTROL BOARD

TOWNSHIP ADMINISTRATION BUILDING, HEC COMPLEX, DHURWA, RANCHI 834004
Telephone: 0651-2400850 (Fax)/ 2400851/2400852/2401847/2400979/2400139

Ref No. JSPCB/HO/RNC/CTO-17290597/2024/20 Dated : 2024-01-06

Consent to operate (CTO) under section 25 /26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981

1. Application (s) dated 2023-10-27 of INLAND POWER LIMITED, Occupier Name :GIRIRAJ KUMAR JHAWAR for consent under section 25 (1)(b)/25 (1) (c)/26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21(1) of the Air (Prevention & Control of Pollution) Act,1981..

2. **Documents Relied Upon:**

(a) The content of Environmental Clearance from MoEF, New Delhi vide Ref. No. J-13012/115/2008-IA.II(T) dated 20.12.2011.

(b) The content of Consent to Establish (CTE), Ref No. N-85 dated 22.09.2010, JSPCB, Ranchi.

(c) The content of Consent to operate (CTO) vide Ref. No. JSPCB/HO/RNC/CTO-3476021/2019/69, dated 09.01.2019 for the production of (a) Power Plant-1X63 MW, (b) Fly Ash Bricks-252055 nos./day, valid upto 31.12.2023 JSPCB, Ranchi.

(d) The content of affidavit submitted regarding installation of online system for remote calibration.

(e) The content of direction of CPCB in the matter of installation of remote calibration.

(f) The content of Inspection Report (I/R), Ref No. 1579 dated 04.12.2023 of RO, RO-cum-Lab, Hazaribagh.

(g) The content of authorization under HoWM Rules'2016 vide ref. no. JSPCB/HO/RNC/HWM-7270813/2021/49, dated 20.09.2021, valid for the period upto 31.12.2023.

3. The consent is granted under section 25 / 26 of the Water (Prevention & Control of Pollution) Act, 1974 and under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 to operate the project in Mauza -TONAGTU, BIYANG , P S -GOLA , District -RAMGARH , as follows:

Project	Site-Area		Investment (Rs)	Product & Capacity	Period of CTO
	Plot Nos.	Area			Date of issue To
Before Expansion	2255, 2261, 2267,2274 etc. Kha ta NO. :84, 87, 88,91, 92, 100	79.88 Acre	352 Crore	(a) Power Plant-1X63 MW, (b) Fly Ash Bricks-252055 nos./day	31/12/2025

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(A) **Specific Conditions:**

1. That, the occupier shall continuously transmit the online monitoring data of ambient air quality, stack emission and effluent quality to the server of the Board, if any time transmission of data is found discontinued consent to operate shall be revoked.

2. That, the occupier shall install online stack emission monitoring system and shall ensure on line data transmission to CPCB and JSPCB server and also shall install web camera at effluent discharge point.

3. That, the occupier shall establish and operate well equipped environmental laboratory with facilities to monitor at least all regulatory parameters and duly accredited by NABL.

4. That, the occupier shall operate and maintain fixed type water sprinklers at all dusty place around the unit.

5. That,the occupier shall fully comply the provision of charter on corporate responsibility for environmental protection.

6. That, the occupier shall utilise 100% fly ash and shall not dispose off fly ash in the nearby villages or any places out side the unit.

7. That,the occupier shall ensure the cleaning and wetting of the ground regularly to improve house Keeping.

8. That, the occupier shall keep the industrial effluent in closed circuit.

9. That, the occupier shall operate and maintain Effluent Treatment Plant regularly.

10. That, the occupier shall prevent all leakages, spillages of the system.

11. That the occupier shall submit the fly ash generation and utilization data at regular interval.

12. That, the occupier shall make transportation of fly ash by covered vehicles.

13. That,the occupier shall submit six quarterly compliance report of conditions imposed in Environmental Clearance to the Board.

14. That, this CTO is valid subject to the status/order passed in the case matter filed and pending with the Hon'ble High Court of Jharkhand named WP (PIL) No. 6017 of 2016 Uma Shankar Mahto Vs. The State of Jharkhand & Others.

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15. That, the occupier shall install and maintain the software for online remote calibration as per CPCB direction and ensure data transmission to CPCB server and JSPCB server as mentioned in affidavit.

16. That, this CTO is valid subject to the further order of CPCB in the matter.

17. That, the occupier shall submti compliance of this CTO conditions every year alongwith the recent analysis reports successively.

18. That, the occupier shall obtain authorization under HoWM Rules' 2016.

19. That, the occupier shall not use fly ash for mine void filling without carrying geo hydrological study.

20. That, the occupier shall undertake measures and ensure that no fugitive fly ash emissions take place at any point of time.

21. That, the occupier shall maintain the height of the stack as per prescribed norms of CPCB.

22. That, the occupier shall maintain the dust extraction system installed in the plant.

23. That, this CTO supersedes the CTO vide ref. no. JSPCB/HO/RNC/CTO-3476021/2019/69, dated 09.01.2019.

24. That,the occupier shall submit applications for renewal of consent under section 25 / 26 of the water (Prevention & Control of Pollution) Act,1974 and under section 21 of the Air (Prevention & Control of Pollution) Act,1981 again 120 days prior to the date of expiry of this consent to operate to the date.

(B) General Conditions :

(1) That, the occupier shall maintain the **National Ambient Air Quality Standard** given below:

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S N	Pollutant	Time Weighted Average	Concentration in Ambient Air	
			Industrial, Residential, Rural and Other Area	Ecologically Sensitive Area (notified by Central Govt.)
(1)	(2)	(3)	(4)	(5)
1.	Sulphur Dioxide (SO2), µg/m3	Annual 24 hours	50 80	20 80
2.	Nitrogen Dioxide (NO2), µg/m3	Annual 24 hours	40 80	30 80
3.	Particulate Matter (size less than 10 µm) or PM10, µg/m3	Annual 24 hours	60 100	60 100
4.	Particulate Matter (size less than 2.5 µm) or PM2.5, µg/m3	Annual 24 hours	40 60	40 60
5.	Ozone(O3), µg/m3	8 hours 1 hour	100 180	100 180
6.	Lead (Pb) µg/m3	Annual 24 hours	0.50 1.0	0.50 1.0
7.	Carbon Monoxide (CO) mg/m3	8 hours 1 hour	02 04	02 04
8.	Ammonia (NH3) µg/m3	Annual 24 hours	100 400	100 400
9.	Benzene (C6H6) µg/m3	Annual	05	05
10.	Benzo(a) Pyrene(BaP) Particulate Phase only ng/m3	Annual	01	01
11.	Arsenic (As) ng/m3	Annual	06	06
12.	Nickel (Ni) ng/m3	Annual	20	20

Note : Serial no. 1 to 4 – Mandatory
Serial no. 5 to 12 As applicable for specific type of industry.

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(2) That, the occupier shall maintain the emission quality within the standard and the quantity, as follows:

S N	Parameter	Standard
1	Particulate Matter	50 mg/Nm3

(3) That, the occupier shall keep process effluent in close-circuit and the quality of effluent from other sources in conformity with the standard (s) and the discharge quantity as below:

S N	Parameter	Standard
1	Total Suspended Solids	100 mg/L
2	BOD	30 mg/L
3	COD	250 mg/L
4	Oil & Grease	10 mg/L

(4) That, the occupier shall dispose of solid wastes as follows:

S N	Waste Type	Mode of Disposal
1	Hazardous Carbonaceous Wastes	In co-processing in high temperature furnaces or kilns
2	Hazardous Non-Carbonaceous Wastes	In TSDF
3	Non-Carbonaceous Non-Hazardous solid wastes/ Mine Over Burden	As a substitute of Soil or Mineral

(5) That, the occupier shall keep D G Set(s) within acoustic enclosure and shall keep the height(s) of exhaust pipe(s) as per Central Pollution Control Board norm.

(6) That, the occupier shall install and maintain Central Ground Water Board/ State Ground Water Directorate approved system of rain water harvesting-cum-ground water recharge and submit the photographic view of the structures within a month.

(7) That, the occupier shall grow and maintain greenery of the project in the periphery and other available spaces and shall continue enhancing its plant density and biodiversity.

(8) That, the occupier shall submit environmental statement with supporting stoichiometric calculations analyses reports, every year latest by 30th September of the next financial year.

(9) That, the occupier shall submit report(s) duly monitored and issued by an NABL accredited / ISO 9001:2008 and OHSAS 18001:2007 certified laboratory in compliance sub-para (2), (3), (4) and (5) of paragraph 3 of this CTO yearly at required periodicity.

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(10) That, this CTO is valid subjected to the validity of mining Lease/Mining Plan/Ecofriendly/Environmental Clearance, if applicable. In case of no renewal of Mining Lease/Mining Plan, this consent shall be treated as revoked automatically.

(11) That, this CTO is issued from the environmental angle only and does not absolve the occupier from other statutory obligations prescribed under any other law or any other instrument in force. The sole and complete responsibility to comply with these conditions laid down in all other laws for the time-being in force, rests with the industry/ unit/ occupier.

(12) That, this CTO shall not in any way, adversely affect or jeopardize the legal proceeding , if any, instituted in the past or that could be , instituted against you by the State Board for violation of the provisions of the Act or the Rules made there under.

(13) That, the occupier shall comply with all applicable provisions of the Water (Prevention & Control of Pollution) Act, 1974; the Water (Prevention & Control of Pollution) Cess Act, 1977; the Air (Prevention & Control of Pollution) Act, 1981; and the Environment (Protection) Act, 1986 and Rules made there under.

4. **That, this CTO shall not absolve the occupier from making compliance of other statutory prescribed under any law or direction of courts or any other instrument for the time being in force.**

5. **That, this CTO is being issued on the basis of information/ documents/ certificate submitted by the unit. This CTO will be revoked if any of the information/documents/certificates/undertaking given by the occupier is found false/fictitious/forged in future.**

6. **The Order shall be valid subject to compliance of all other legal requirements applicable to the unit.**

7. **The State Board reserve the right to revoke, withdraw or make any reasonable variation / change / alteration in conditions of this consent.**

Yatindra Kumar Das Digitally signed by Yatindra Kumar Das Date: 2024.01.06 14:34:16 +05'30'

This is issued with the approval of the Competent authority

[Y. K. Das]
Member Secretary

Memo No. : JSPCB/HO/RNC/CTO-17290597/2024/20

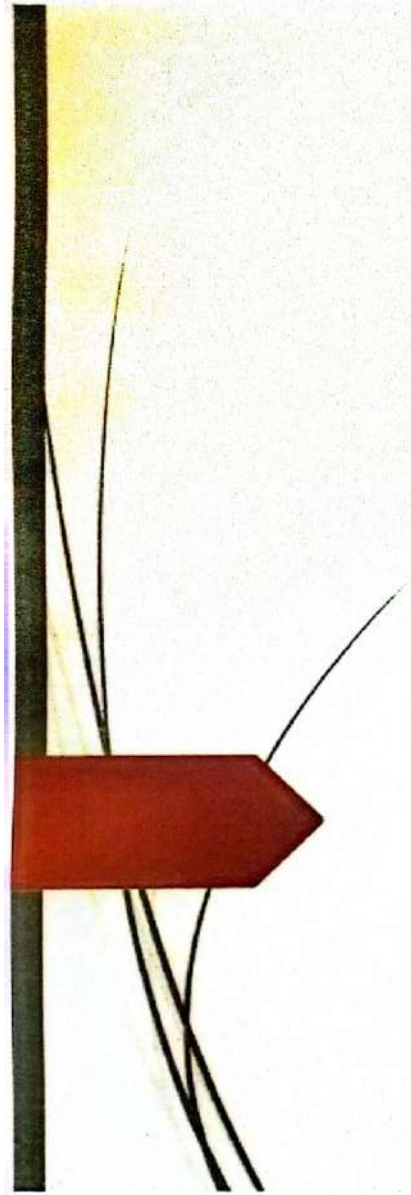
Dated : 2024-01-06

Copy to: M/s Inland Power Limited, Vill- Tonagatu, PO-Saram, PS-Gola, Distt -Ramgarh/ Chief Inspector of Factories, Ranchi/ Director of Industry, Government of Jharkhand, Ranchi/ Director of Mines, Government of Jharkhand, Ranchi/ Deputy Commissioner, Ramgarh/ DFO, Ramgarh/ DMO, Ramgarh/ R O, JSPCB, Hazaribagh for information & ensuring compliance of the above.

Yatindra Kumar Das Digitally signed by Yatindra Kumar Das Date: 2024.01.06 14:34:35 +05'30'

[Y. K. Das]
Member Secretary

Annex - C/A - 6



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Presents

Its Corporate Social Responsibility Journey

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Corporate Social Responsibility

Energy With Sustainable Development

63 MW Thermal Power & 350 KLPD Ethanol Project

At Village-Tonagatu, Gola, Ramgarh, Jharkhand

Introduction

- Inland Power Ltd a company promoted by Inland Group has a diversified portfolio that spans logistics, power, ethanol, metal production, bottling, retail, and electric trucks, showcasing a commitment to various industries.
- The Group has a turnover of Rs 4000 Crore and 5000 employees with 350 offices across India.
- In Jharkhand Inland has invested Rs 815 Crore in the field of Power Generation, Construction Material, and Ethanol production.

Inland Group
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Inland World Logistics
— Imagine. Integrate. Impact —

Inland Power
— Imagine. Integrate. Impact —

Inland Green Energy
Imagine. Integrate. Impact

BHARTIYAM FOOD AND BEVERAGES

Inland EV Green
SERVICES PVT LTD

THE GOPALPUR TEA COMPANY LIMITED

Inland Mining & Handling

SG Maart

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Business Ethics

➡Inland Power is committed to conducting its business in a socially responsible and ethical manner. As a part of our operations at the 63 MW Thermal Power Plant in Tonagatu, Ramgarh district, Jharkhand, we recognize our obligation to contribute positively to the community and environment in which we operate.

Naveen Somani
Executive Director

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Purpose of CSR

- Our CSR policy aims to outline the company's commitment to sustainable development, community engagement, and environmental stewardship. Our goal is to enhance the quality of life for the people of Ramgarh and create a positive impact on society.
- To be a responsible corporate citizen, fostering sustainable development and improving the well-being of the communities surrounding our operations through effective engagement and support.

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CSR Objective

- To improve the living standards of local communities through education, healthcare, and skill development initiatives.
- To promote environmental sustainability through initiatives focused on conservation, resource management, and renewable energy.
- To encourage local economic development by supporting local businesses and employment opportunities.
- To ensure transparency and accountability in all CSR activities.

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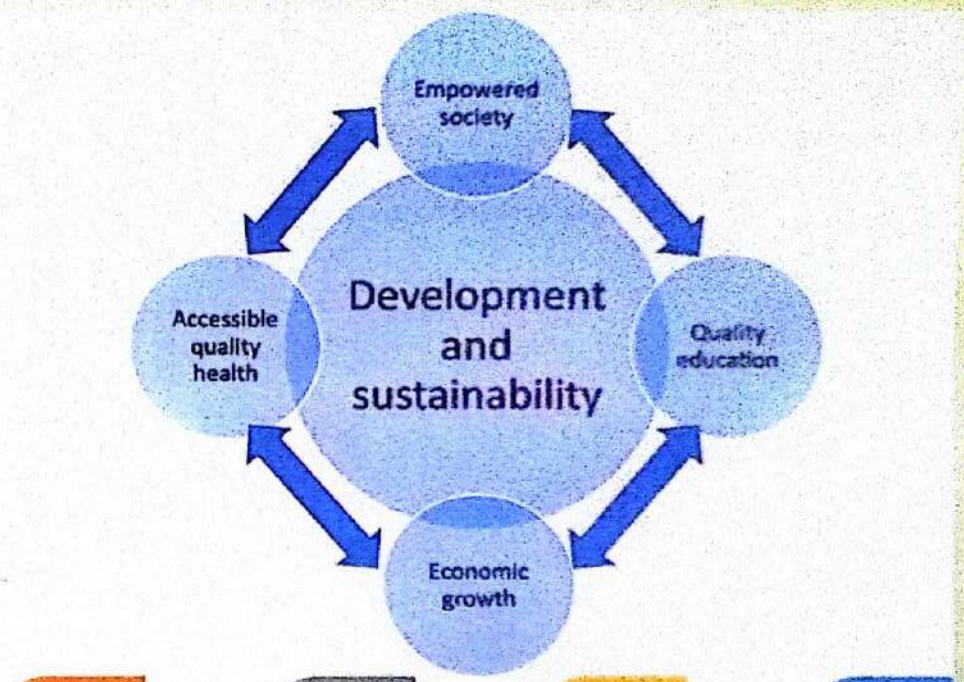
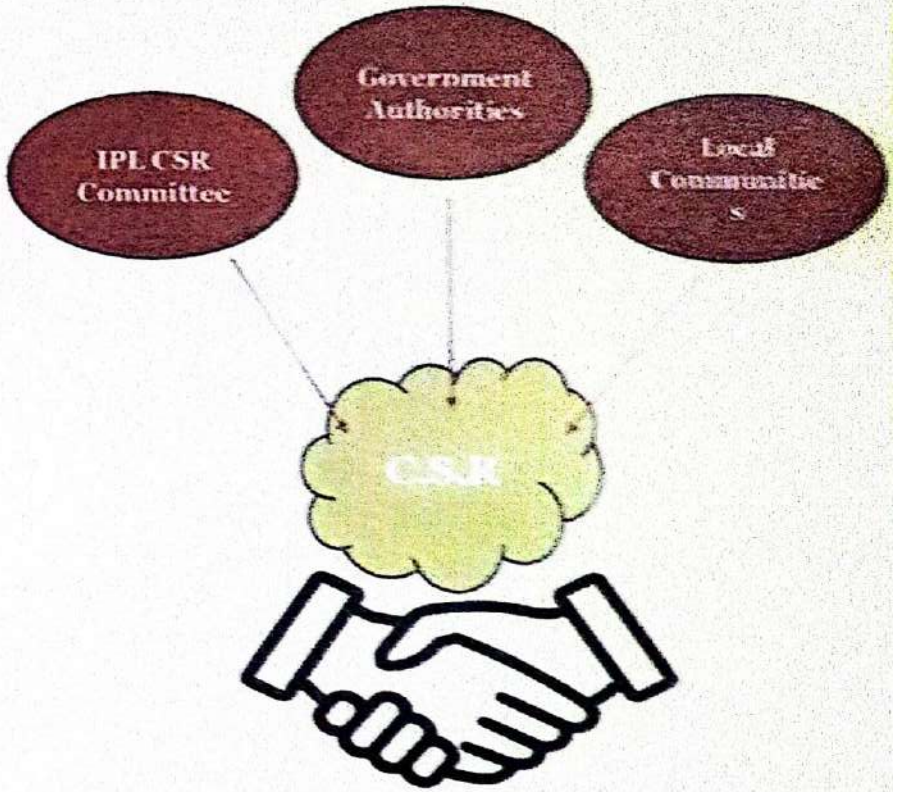


Implementation Framework

- **CSR Committee:** A dedicated CSR committee has been formed to oversee the implementation of the CSR initiatives, ensuring alignment with our objectives and regular monitoring of progress.
- **Stakeholder Engagement:** We engage with local communities, government authorities, and other stakeholders to identify needs and collaborate on CSR initiatives.
- **Partnerships:** We seek partnerships with non-profit organizations, educational institutions, and government bodies to enhance the effectiveness of our CSR programs.



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CSR Initiatives

.....Health & Hygiene

COMMUNITY HEALTH

(151)

Water Purifier Installation Under Clean Drinking Water Initiative

- **Health risks:** Unsafe water leads to gastrointestinal infections, cholera, and waterborne diseases, affecting students' health, attendance, and academic performance.
- **Corporate Environmental Responsibility:** Inland Green Energy, a division of Inland Power Ltd, is implementing initiatives focused on student well-being and environmental sustainability.
- **Recent projects:** Installation of water purifiers at UHS Bariatu and UHS Biyang, benefiting **over 1500 students** with access to clean, safe drinking water.
- **Impact:** Healthier school environment by reducing waterborne disease risks and improving student hydration.

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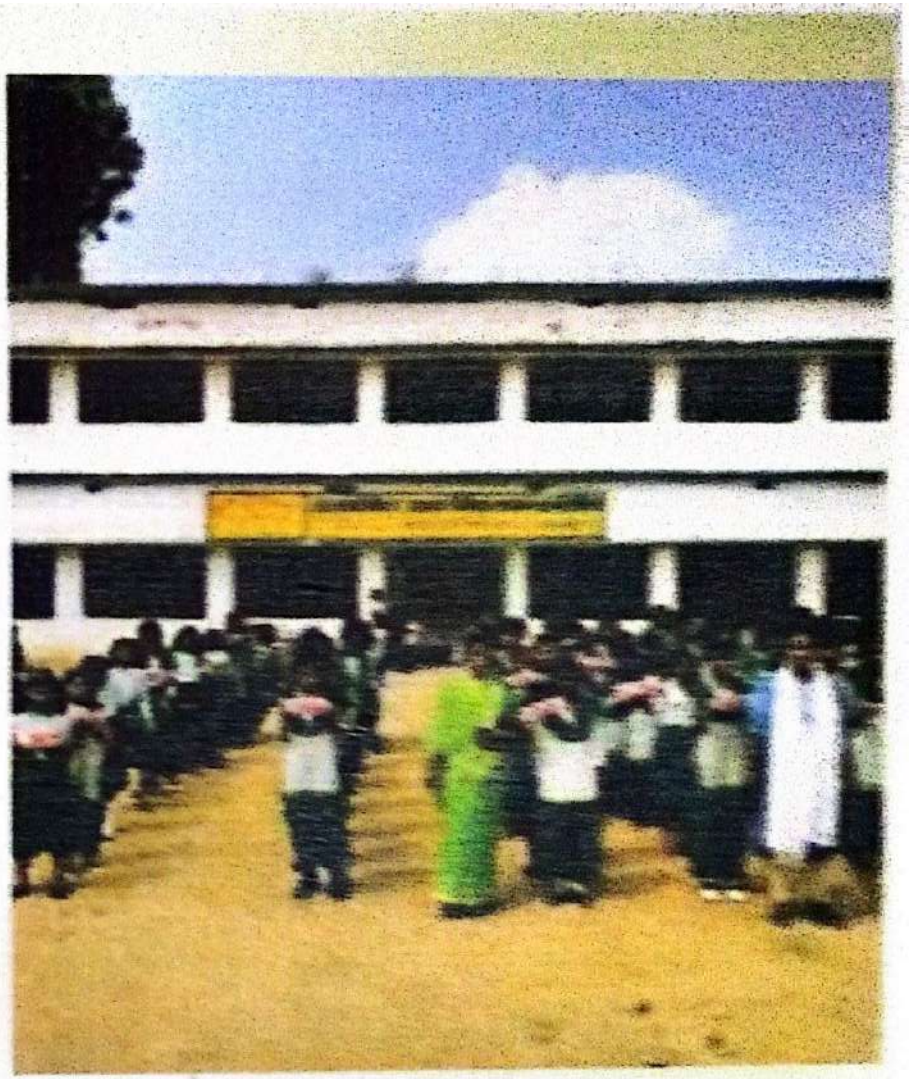
रामगढ़ 29-08-2024

विद्यार्थी को अब मिलेगा प्यूरिफाई पानी

Distribution of Sanitary Napkins

- **700+ sanitary napkins** distributed to schoolgirls.
- **Objective**: Address menstrual hygiene needs, and reduce health issues, discomfort, and school absenteeism.
- **Broader initiative**: Includes workshops to raise awareness, dispel myths, and promote open discussions on menstrual health.
- **Impact**: Aims to empower girls, ensuring dignity and confidence, while fostering academic and personal success.



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Eye Health Check-Up

- Eye health camp Inland Power Ltd, in collaboration with Arogya Foundation, organized an eye check-up camp for local villagers.
- **Results: 120 individuals** were examined **48 identified** with eyesight issues.
- **CSR commitment:** Inland Power will provide eyeglasses based on check-up recommendations.
- **Impact:** Addresses immediate health needs and demonstrates dedication to improving the community's well-being.

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Wheelchair Distribution to Physically Challenge People

- **CSR initiative:** Inland Power Ltd distributed 20 wheelchairs to physically challenged individuals.
- **Objective:** Improve mobility and enhance quality of life.
- **Community involvement**: Event saw enthusiastic participation, reinforcing the company's commitment to inclusivity.
- **Impact:** Demonstrates dedication to positive social impact and fostering a culture of care and compassion.

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दिव्यांगों के बीच ह्वीलचेयर का वितरण

रजरप्पा. गोला के टोनागातू स्थित इनलैंड पावर लिमिटेड के सौजन्य से सीएसआर कार्यालय में शनिवार को दिव्यांगों के बीच ह्वील चेयर का वितरण किया गया. इस दौरान सीएसआर मैनेजर मितेन मुखर्जी, पदाधिकारी रमेश कुमार ने पुरनी कुमारी, पंकज प्रमाणिक, अमन राज, रिंकू कुमारी, छत्रु चौधरी, सरीफुन निशा, सहजनाथ चौधरी, जगदीश चौधरी, दुर्गाचरण मुंडा, बसंत कुमार, दिलो देवी, भुखली कुमारी, रमेश ठाकुर, विकास कुमार स्वर्णकार, संगीता कुमारी सहित कई दिव्यांग के

Health Camp

- **CSR initiative:** Inland Power Ltd organized a health camp offering free blood sugar and blood pressure check-ups.
- **Services provided:** General health screenings and medical facilities for diagnosing common health issues.
- **Community response:** The camp was well-received, with many residents benefiting from the free healthcare services.
- **Impact:** Demonstrates Inland Power's commitment to fostering a healthier community and ensuring access to essential healthcare.


कैंप में ग्रामीणों ने कराई जांच

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Bleaching Powder Distribution for Health & Sanitation

- **CSR initiative:** Inland Power Ltd distributed **200 kg of bleaching powder** to local villages.
- **Objective:** Improve sanitation and public health.
- **Impact:** Helps prevent waterborne diseases by disinfecting water sources and public spaces, ensuring a healthier living environment.

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Distribution of Hand Washing Kit to Anganwari Centers

- **CSR initiative:** Inland Power Ltd distributed hand washing kits to Anganwadi centers.
- **Objective:** Promote hygiene, improve health standards, and prevent disease spread.
- **Focus areas:** Rural communities, targeting young children, pregnant women, and lactating mothers.
- **Impact:** Raises awareness of proper hygiene in areas lacking sanitation resources, especially near Inland Power operations.

(II)Malnutrition free Jharkhand:- [illegible]

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Woolen Blanket Distribution

- **Objective:** Provide warm blankets to vulnerable communities during winter.
- **Focus:** Underprivileged, rural, and economically weaker sections.
- **Goal:** Improve quality of life, support during harsh winter conditions.
- **CSR Commitment:** Part of a broader strategy focused on sustainable development, community welfare, and environmental responsibility.
- **Impact:** Ensures no one is left behind in facing seasonal challenges.

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Rural Toilet Construction for Villagers by Inland Power Ltd.

- **Objective:** Improve sanitation and hygiene by constructing toilets in rural areas.
- **Alignment:** Supports SDG Goal 6 (clean water and sanitation for all).
- **Impact:** Enhances quality of life, addresses health issues, and promotes hygienic practices in underserved communities.
- **CSR Focus:** Part of a broader strategy to improve health, hygiene, and sanitation, fulfilling basic needs like access to clean water.

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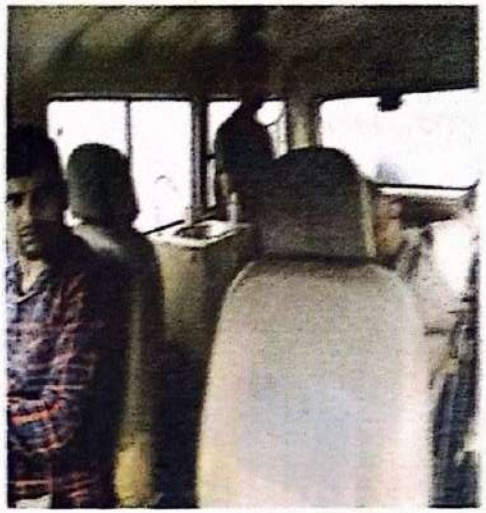
Ambulance Service to Rural people

- **CSR initiative:** Inland Power Ltd provides 24/7 ambulance services in rural areas, addressing the critical need for emergency healthcare.
- **Objective:** Improve access to emergency medical care in underserved communities, where timely transport can be life-saving.
- **Impact:** Helps reduce preventable deaths, strengthens rural healthcare, and enhances overall well-being, contributing to a more resilient community.



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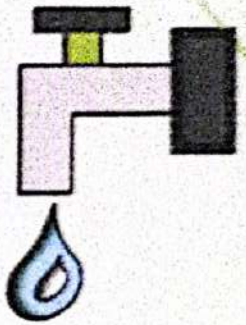
CSR Initiatives

....Drinking Water



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Jalminar with Borewell in Babhni Village

- **Objective:** Ensure sustainable access to clean water for Babhni Village.
- **Impact:** Benefits over 50 households by improving hygiene, reducing waterborne diseases, and supporting local agriculture.
- **Significance:** Enhances the overall quality of life, strengthens community health, and promotes long-term sustainability in the village.
- **CSR Commitment:** Part of Inland Power's broader efforts to uplift rural communities by addressing essential needs like clean water.

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Well Construction at Water Storage System at village Jarabandha

- Inland Power Ltd. is proud to support the development of Jarabandha Village.
- Our CSR initiative focuses on constructing a well for a sustainable water storage system.
- This project will ensure reliable water availability for farmers, households, and the entire community.
- By reducing dependence on rainfall and improving water access, we are contributing to rural development and environmental sustainability.

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Water Tanker Facility provided by Inland Power Ltd.

- **CSR initiative:** Inland Power Ltd provides water tankers for special village events such as marriages, rituals, festivals, and funerals.
- **Objective:** Ensure adequate water supply during large social and cultural gatherings, especially in water-scarce areas.
- **Impact:** Supports vital community functions by providing water for cooking, cleaning, religious rituals, and hospitality, enhancing the well-being of villagers.

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Drinking Water Facilities in Rural Area

- Inland Power Ltd. is committed to improving the lives of rural communities.
- Our CSR initiatives focus on providing clean and safe drinking water.
- Access to potable water is essential for health, education, and socio-economic development.
- By addressing this critical need, we are making a significant contribution to the well-being of rural populations.
- Together, we are building a healthier and more sustainable future.

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Overhauling of Closed Hand Pumps

- Overhauling 60 Handpumps: Inland Power has undertaken a significant CSR initiative to revitalize 60 previously closed handpumps in nearby villages.
- Improving Access to Clean Water: This effort aims to address water scarcity and improve the health and well-being of local communities.
- Comprehensive Rehabilitation: The process involved assessing, repairing, and ensuring the full functionality of the handpumps.
- Empowering Villages: By providing reliable access to clean water, Inland Power empowers villagers and enhances their quality of life.
- Commitment to Social Responsibility: This initiative demonstrates Inland Power's dedication to sustainable development and fostering positive community relationships.
- Impact on Community: The project can lead to improved public health, increased community engagement, and a lasting positive impact.

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(iii) Safe drinking water for all:- इस योजना के तहत हमारे प्लांट के सबसे नजदीक स्थित बेयांग ग्राम के टोला बभनी को पिछले तीन वर्षों से बोर वेल द्वारा पाईप लाईन के माध्यम से पिने का पानी मुहैया कराया जा रहा है। लगभग चालिस घर लाभान्वित हो रहे है। इसके अलावे आस–पास के गाँवों में लगभग ८० नाया नलों का जिर्णोधार कर पीने का पानी मुहैया कराया गया है।

A CSR Initiative for Students and the Community
Water Boring at Biyang School.

- Inland Power Ltd. is proud to announce the successful installation of a new water pump and deep boring system at Biyang UHS School.
- This initiative is a testament to our ongoing commitment to Corporate Social Responsibility (CSR) and our dedication to providing essential resources to the communities we serve.
- By ensuring a reliable water supply, we aim to improve the learning environment for students and enhance the overall well-being of the surrounding community.
- Together, we can create a brighter future.

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CSR Initiatives

....*Education*

Education

(151)

Additional Teacher in the School

- **Providing Additional Teacher:** Inland Power has taken a significant step towards supporting education by providing an additional teacher to Bariatu School.
- **Addressing Teacher Shortage:** This initiative aims to address the shortage of teaching staff and improve the overall quality of education at the school.
- **Alignment with SDGs:** Inland Power's CSR strategy is aligned with Goal 4 of the Sustainable Development Goals, emphasizing quality education for all.
- **Creating a More Equitable Future:** By investing in education, Inland Power contributes to a more equitable and sustainable future for the children of Bariatu.
- **Empowering Future Generations:** This initiative demonstrates Inland Power's dedication to community welfare and the empowerment of future generations.
- **Cornerstone of CSR Efforts:** The Bariatu School project is just one example of how Inland Power supports education as a cornerstone of its CSR efforts.

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Providing Benches & Desks in the Schools

- Inland Power Ltd. is proud to support the educational needs of the local community.
- We have recently donated school benches and desks to the village school in Babhni.
- This initiative aims to create a more conducive learning environment for students, ensuring they have the necessary infrastructure for academic success.
- By bridging the gap between urban and rural education, we are committed to promoting equality and opportunity for all.
- Together, we can build a stronger and more educated future.

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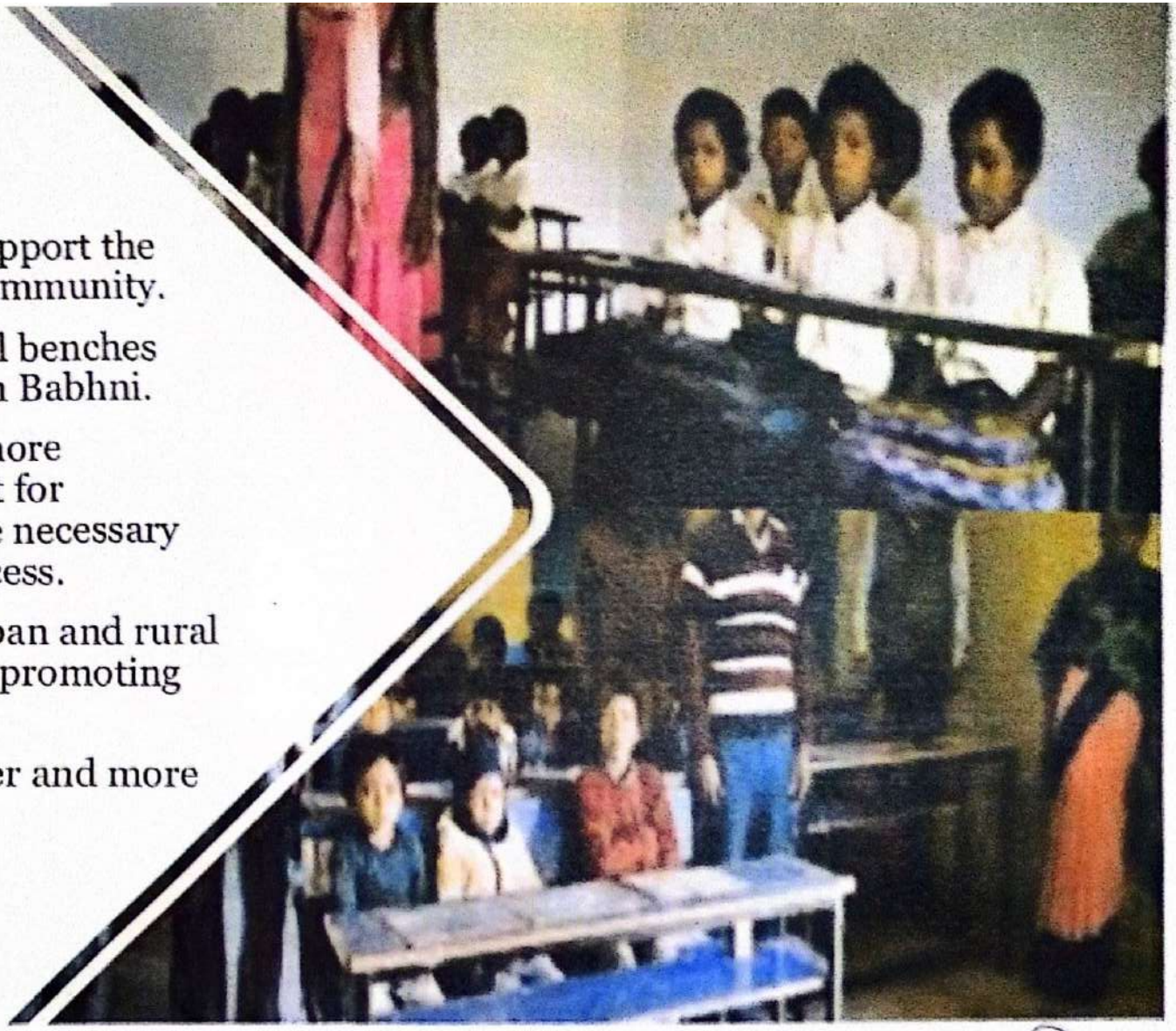

Distribution of Food Packets In the Blind School

- Inland Power Ltd. is committed to making a positive impact on the communities we serve.
- We recently extended our Corporate Social Responsibility (CSR) initiatives by distributing essential grocery items to Divyang Netrahin Awasay Vidyalaya.
- This residential school provides education and care for 35 physically challenged students.
- By supporting their nutritional needs, we contribute to their overall well-being and ensure they have access to wholesome meals.
- Our commitment to inclusivity and care for individuals with disabilities is reflected in our CSR efforts.

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गोला में स्कूली बच्चों के बीच खाद्य सामग्री का वितरण

166

Distribution of School Bags to the Rural Children

- Inland Power Ltd. believes in the transformative power of education.
- Our CSR initiatives are focused on uplifting rural communities by investing in their future.
- By providing school bags to students, we are empowering them to pursue education with dignity and enthusiasm.
- This initiative is a long-term investment in a brighter, more educated generation.
- Together, we are working towards educational equity in society.

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विकास मेला में आईटीआई की विद्यार्थियों को पुरस्कृत

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CSR Initiatives

.....Infrastructure Development

Infrastructure

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Constructs Brick Road Pathway and Bike Stand at CHC Gola Hospital

- The construction of the brick road pathway and bike stand directly benefits the community by:
- Improving Access: Ensuring easier and safer access to healthcare services for patients, especially those with mobility challenges.
- Promoting Sustainable Transport: Providing a dedicated bike space encourages environmentally friendly transportation methods, which can help reduce congestion and pollution in the area.
- Enhancing Overall Experience: A well-maintained pathway contributes to a more welcoming and efficient hospital environment, making visits more pleasant for everyone.

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Iron grills for the balconies, iron rods, and gate grills throughout the school premises(UHS Biyang)

- Inland Power Ltd. is committed to making a positive impact on the communities it serves. By supporting Biyang UHS School, the company is promoting education and ensuring a safe learning environment for students. This initiative aligns with Inland Power's vision of empowering communities and fostering well-being. Together, we can create a safer future for children.

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Constructs of Main School Gate at Runchi School

- Inland Power Ltd. is pleased to announce the completion of the main school gate at Runchi School, a key initiative under our Corporate Social Responsibility (CSR) program. This project aims to improve the educational environment and safety for students and staff.
- Enhanced Security: The new gate will provide a controlled access point,
- enhancing the overall safety of students and staff.
- Improved Accessibility: A well-designed entrance allows for easier
- access to the school, making it more welcoming for students, parents, and visitors.
- Positive School Image: A sturdy and attractive main gate contributes to a
- positive impression of the school, fostering a sense of pride among
- students and the community.

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Construction Main Gate and Boundary wall (Bariatu School

- Inland Power Ltd. is proud to announce the completion of a new school gate and boundary wall at Bariatu School. This initiative is part of our Corporate Social Responsibility (CSR) efforts, aimed at enhancing the safety and accessibility of educational facilities in the community.
- The construction of the school gate and boundary wall at Bariatu School offers significant benefits to the local community:
- Safety for Students: Parents can have peace of mind knowing that their children are learning in a secure environment, which can enhance their overall educational experience.
- Encouragement of Enrollment: A safe and well-maintained school can attract more students and encourage families to enroll their children, contributing to the growth of the educational community.

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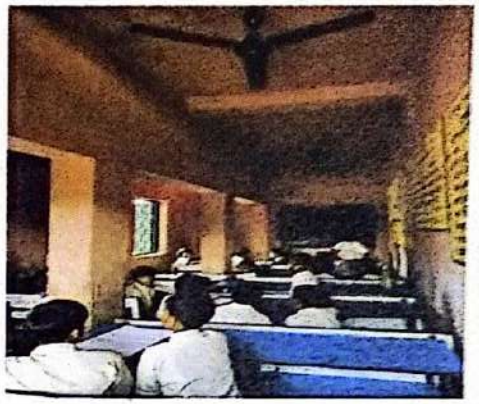
Distributes Ceiling Fans at Biyang Government School

- Inland Power Ltd. is proud to support the educational needs of our community.
- We have recently installed ceiling fans at Biyang Government School as part of our CSR initiatives.
- This initiative aims to create a more comfortable and conducive learning environment for students and teachers.
- By providing a cooler and more pleasant atmosphere, we believe we can enhance student engagement and productivity.
- Together, we are building a brighter future for our community.



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(691)

Construction of the Amrit Sarovar Pond at Pathalgera, Serengatu

- Inland Power Ltd. has undertaken a significant Corporate Social Responsibility (CSR) project to construct an Amrit Sarovar pond in Pathalgera, Serengatu.
- This initiative aligns with the national mission of water conservation and management, promoting sustainable water resources in rural areas.
- The Amrit Sarovar pond reflects Inland Power's commitment to community development, environmental sustainability, and social welfare. By contributing to the Jal Shakti Abhiyan and aligning with Sustainable Development Goals (SDGs), the company is demonstrating its dedication to corporate social responsibility and fostering development while preserving ecological balance

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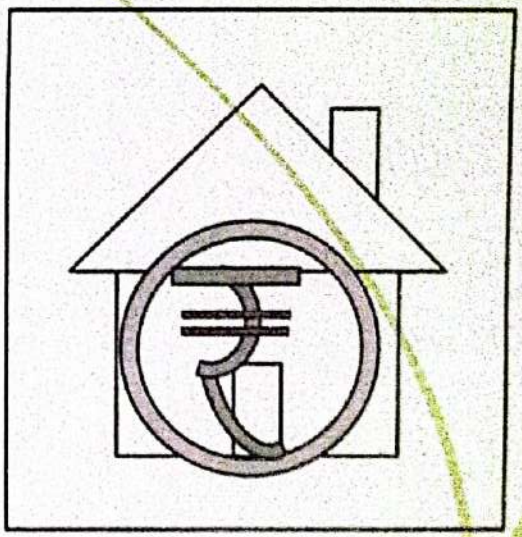
CSR Initiatives

.....Livelyhood



Distribution of Tailoring Machines for Small Business Development and Tricycles distribution to Empowering People with Disabilities

- Inland Power Ltd. is committed to empowering individuals and promoting inclusivity.
- Our CSR initiatives focus on providing tricycles to physically challenged individuals and tailoring machines to those seeking economic independence.
- These tools enable beneficiaries to improve their mobility and start their own small businesses.
- By addressing social inequalities and fostering self-reliance, we are creating a more inclusive and equitable society

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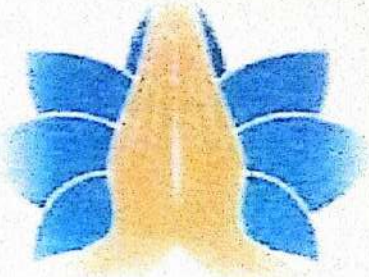
Thanking You

.....for your kind attention



We always welcome your suggestions and appreciation

csr@inlandpower.in

FOR DAMODAR POWER LTD
Authorised Signatory/Director
Signature

VAKALATNAMA

In the National Green Tribunal Eastern Bench. Kol.

original Suit / Case No. 204 of 20 24

Plaintiff

Applicant

Binu kumar Mahato Yuva Appellant
Tiger purv pratyashi Ramgarh Vidhan Sabha

-Versus-

Defendant

State of Jharkhand Opp. Party
& ors Respondent

KNOW ALL MEN by these that I/We do hereby constitute and appoint the undermentioned Advocate, Pleaders, Vakils jointly and each of them severally to be pleader of ME/US and on MY/OUR behalf to appear for ME/US in the above cause and to take such steps and proceeding as may be necessary on MY/OUR behalf and for that purpose to make sign verify and present all necessary petitions. Plaints, written statements and other documents and do nominate and appoint of retain senior Counsels, Vakils, Advocates and other persons, lodge and deposit moneys and documents and other papers in Court and the same again to withdraw and to take out of Court and to obtain or grant as the case may be effectual receipts and discharge for the same and for all moneys which may be payable to ME/US in the premises. To enter into compromise with MY/OUR approval and withdraw all moneys from Court. **AND GENERALLY** to act in the premises and proceeding arising thereout whether by way of execution, review, appeal or otherwise or in any manner contested therewith as effectually and to all intents and purpose as I/WE could act if personally present and **ALSO** for all and of the purpose aforesaid to appoint a substitute or substitutes and such substitution and as pleasure to revoke. I/WE hereby ratifying and agreeing to confirm whatever may be lawfully done by virtue hereof:

IN WITNESS WHEREOF this Vakalatnama has been executed by ME/US on this the day of 20

Received & accepted by me - NJaiswal Advocate

Name of Advocate

1. Manju Jaiswal
Adv.
9831578313
2. Arun
Adv.
EN° JH - 383/2017
MOB. 9431175178