



संदर्भसंख्या/Ref No:Ref:/BARAUNI TPS/EMG/2023-24/19

दिनांक/Date:30.11.2023

To,

Integrated Regional Office (East Central Zone), Ministry of Environment, Forest & Climate Change, 2nd Floor, Headquarter- Jharkhand State Housing Board, Harmu Chowk, Ranchi, Jharkhand – 834002, Ranchi Email: ro.ranchi-mef@gov.in

Kind Attention: Dr. T. H. Mahato, Scientist 'C'

Subject: Half Yearly Compliance Report of condition stipulated in Environmental Clearance of 2X250 MW Barauni (Extension) Thermal Power Station at Barauni Block, District Begusarai & Patna, Bihar for the period of April, 2023 to September, 2023.

MOEF&CC Ref: EC letter no. J-13012/143/2008-IA.II(T) dated 08.05.2014 and 22.04.2020

Dear Sir,

Kindly find enclosed Half Yearly Compliance Report regarding compliance of conditions stipulated in Environmental Clearance accorded by MOE&CC vide letter no. J-13012/143/2008-IA.II(T) dated 08.05.2014 and 22.04.2020 for Barauni TPS Stage-II (2x250 MW) for the period 01.04.2023 to 30.09.2023.

This is for your kind information please.

Thanking You

Yours faithfully

(S.K.Singh)
Additional General Manager (EMG & AU)
For & on behalf of Barauni TPS

Encl: As above

Copy to: (i) Regional Office, Bihar Pollution Control Board, Barauni, Dist. BeguSarai.

(ii) Regional Director, CPCB, Kolkata

बरौनी थर्मल पावर स्टेशन, बीटीपीएस, बरौनी, जिला— बेगूसराय — 851116 (बिहार), Barauni Thermal Power Station, BTPS, Barauni, Dist. - Begusarai- 851116 (Bihar) Registered Office: NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi- 110003 Corporate Identification Number- L40101DL1975GO1007966, Website- www.ntpc.co.in



HALF-YEARLY COMPLIANCE REPORT OF BARAUNI THERMAL POWER PLANT STAGE-II (2x250 MW) of NTPC LIMITED (April'2023 to September'2023)

COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS

Vide Letter No. J- 13012/143/2008-IA. II (T) Dated 08h May 2014

SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
A. Spec	cific Conditions:	
(i)	Vision document specifying prospective plan for the site shall be formulated and submitted to the Regional Office of the Ministry within six months.	Complied. NTPC vide its letter dated 19.04.2019 has submitted a Project Vision Document to the Regional Office of Ministry of Environment and Forest & Climate Change (MoEF&CC) at Ranchi.
(ii)	Scheme for implementation for harnessing solar power within the premises of the plant particularly at available roof tops shall be formulated and status of implementation shall be submitted periodically to the Regional Office of the Ministry from time to time.	The contract for 900 KW roof top solar system has been awarded. Preparation of drawings and BBU is under progress. Solar road lights at various places in township has been installed.
(iii)	Sulphur and ash contents in the coal to be used in project shall not exceed 0.6% and 40.1% respectively at any given time. In case of variance of coal quality at any point of time fresh reference shall be made to the Ministry for suitable amendments to environmental clearance Condition(S) wherever necessary.	Complied. As per MoEF&CC Notification dated 21.05.2020, stipulations with regard to ash content in coal used by Thermal Power Plants are waived-off.



SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
(iv)	A stack of 275 m height shall be provided with continuous online monitoring equipment for SOx, NOx, and PM2.5 & PM.10. Exit velocity of flue raises shall not be less than 22 m/sec. Mercury emissions from stack shall also be monitored on periodic basis.	Complied. Equipment for continuous online monitoring of PM _{2.5} & PM ₁₀ in stack emissions is not available in market. Therefore, continuous online monitoring equipment for SOx, NOx, and PM has been installed in stack. However, flue gas velocity is more than 22 m/sec and Mercury emissions from stack are being monitored periodically by third party lab approved by BSPCB and MOEF&CC.
(v)	High Efficiency Electrostatic Precipitator (ESPs) shall be installed to ensure that particulate emission from the proposed plant does not exceed 50 mg/Nm ³ .	Complied. High Efficiency Electrostatic Precipitator (ESPs) are under operation.
(vi)	Adequate dust extraction system such as cyclones/ bag filters and water spray system in dusty areas such as in coal handling and ash handling points transfer areas and other vulnerable dusty areas shall be provided.	Dust suppression has been commissioned in coal handling plant, coal stock yard area, ash handling points and conveyor belts and transfer points for control of fugitive dust emissions. Water sprinkling is being done on roads to minimize dust emissions. Dust extraction system is under commissioning stage.
(vii)	Fly ash shall not be used for agricultural purpose. No mine void filling will be undertaken as an option for ash utilization without adequate lining of mine with suitable media such that no leachate shall take place at any point of time. In case, the option of mine void filling is to be adopted. Prior from an institute of repute and adequate clay lining area shall be ascertained by the State Pollution Control Board and	Complied. No mines are available in Barauni area for ash filling. Therefore, option for mine void filling is not adopted.



SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
	implementation done in close coordination with the State Control Board.	
(viii)	Fly ash shall be collected in dry form and storage facility (silos) shall be provided. Unutilized fly ash shall be disposed off in the ash pond in the form of slurry form. Mercury and other heavy metals (As. Hg. Cr. Pb etc). will be monitored in the bottom ash as also in the effluents emanating from the existing pond, No ash shall be disposed off in low lying area.	Complied. Two Number of Ash Silos of 1300 MT capacity each are under operation for storing and evacuation of fly ash. Heavy metal monitoring is being done in Bottom ash (pond) periodically. Fly ash is being lifted by Cement Industries, ash brick industries and Pond Ash in NHAI, road projects etc. Ash water from ash pond is completely recycled to power plant for ash slurry preparation. No effluent is being discharge from existing ash ponds.
(ix)	Ash pond shall be lined with HDPE/LDPE or any other suitable impermeable media so that no leachate takes place at any point of time. A strong embankment shall be constructed around the ash dyke and TPP to prevent any flood water entering the site. The stability of these embankment shall be studied by reputed institutes like CWPRS, Pune and the recommendations of the institute shall be accordingly implemented.	The 56 Acres contingency dyke has two lagoons. Impermeable LDPE lining work in Lagoon-I & II has been done and Lagoon-II in operation. Embankment has been constructed by Water Resources Department Govt. of Bihar and erstwhile BSPGCL. Same is being maintained by NTPC. The stability of the ash dyke embankment was studied by IIT Hyderabad and recommendation given by them are being followed. The construction of 290 Acres permanent ash dyke is under suspended state due to land issues. The new dyke will be constructed using state of the art technologies.



SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
(x)	Fugitive emission of fly ash (Dry or wet system) shall be controlled such that no agricultural or non agricultural land is affected. Damage to any land shall be mitigated and suitable compensation provided in consultation with the local Panchayat.	Complied. Regular water sprinkling is being done along with covering of dry patches of ash pond with waste polypropylene sheet. No agriculture/Non-agriculture land is affected due to ash.
(xi)	A long term study of heavy metal and radioactivity contents on coal shall be carried out through a reputed institute and results thereof analyzed every two years and reported along with monitoring reports. Thereafter mechanism for in built continuous monitoring of radio activity and heavy metals in coal and fly ash(including bottom ash) will be put in place.	Report of Radio activity analysis of Coal and Ash by BARC in FY 2022-23 attached as Annexure-I . Heavy metal testing in coal, ash, and water is being done. Equipment for continuous monitoring of heavy metals in coal and ash is not available in market.
(xii)	No water bodies (including natural drainage system) in the area shall be disturbed due to activities associated with the setting up/operation of the power plant.	No natural water bodies has been diverted/disturbed for
(xiii)	COC of 5.0 shall be adopted.	Complied.
(xiv)	A well designed rain water harvesting system will be put in place within six months, which shall comprise of rain water collection from built up and open area in the plant premises and detailed record of quantity of water collected and its use. Action plan and road map for its implementation shall be submitted to regional office of Ministry.	12 no of rainwater harvesting pits are constructed. A large storm water pit of 8000 Cum capacity has been constructed to collect rainwater from storm water drains for in plant use.
(xv)	Hydrogeology of the area shall be reviewed annually from an institute /organization of repute to assess impact of surface water and ground regime	Complied. Surface and ground water Quality monitoring is being done periodically and reports are enclosed. There is no



SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
	(especially around ash dyke) in Case any deterioration is observed specific mitigation measures shall be undertaken and reports/ data of water quality monitored regularly and maintained shall be submitted to the Regional Office of the Ministry.	
(xvi)	in the area shall also be regularly conducted and records maintained. The monitored data shall be submitted to the Ministry regularly. Further, monitoring points shall be located between the plant and drainage in the direction of flow of ground water and records maintained. Monitoring for heavy metals in ground water shall be undertaken.	Report of Surface water and groundwater analysis are attached as Annexure-II .
(xvii)	Wastewater generated from the plant shall be treated before discharge to comply limits prescribed by the SPCB.	An effluent management scheme (ETP, STP and Coal Slurry Settling pit) has been implemented. No wastewater is being discharge from plant and it is being completely recycled/reused within plant itself.
(xviii)	No discharge in the River is permitted except if the quality of the effluent is of the quality or better as that of River.	Complied. The plant is Zero Liquid effluent Discharge (ZLD) Plant, and no effluent is being discharged from project boundary. All effluents are being recycled and reused within plant.
(xix)	Additional soil for levelling of the proposed site shall be generated within the sites (to the extent possible) so that natural drainage system of the area is protected and improved.	Complied.
(xx)	Green Belt consisting of three tiers of plantations of native	Complied.Cumulative trees (inhouse and



SI No	MoEF&CC STIPULATIONS	STATUS AS ON 30.09.2023
	species around plant and at least 50 m width shall be raised. Wherever 50 m width is not feasible a 20 m width shall be raised and adequate justification shall be submitted to the Ministry. Tree density shall not be less than 2500 per with survival rate not less than 80%.	planted By Barauni TPS at its project area as well as Baegusarai division is 75100 Nos. till September, 2023.
(xxi)	development of the neighboring villages. Special package with implementation schedule for free potable drinking water supply in	Various community development work like construction of Boundary wall of Govt. schools, Toilets, Infrastructure development etc. has been done. Computer lab in Govt. ITI has
(xxii)	21.996 Crores as one time capital investment shall be earmarked for activities to be taken up under CSR during construction phase of the Project. Recurring expenditure for CSR thereafter shall be RS. 3.66 crores per annum or as per	development has been approved by District Magistrate, Begusarai. Hence development work under progress as per approved plan & directions of district administration along with other
(xxiii)	For proper and periodic monitoring of CSR activities, a CSR committee or a Social Audit committee or a suitable credible external agency shall be appointed. CSR activities shall be	implementation of CSR/CD schemes, A dedicated CSR department is in place and it is functioning under HR dept of Barauni. Corporate R&R, CSR dept. also monitor the CD/CSR



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(xxiv)	implemented in consultation with the village panchayat and the District Administration starting from the development of project itself. As part of CSR prior identification of local employable youth and eventual employment in project after imparting relevant training shall be also undertaken. Company shall	finalized as per recommendation of DM Begusarai. The scheme was approved by DM, Begusarai vide letter dated 12.06.2020 and copy of same has been submitted along with half yearly compliance to R.O., MOEF&CC vide our letter dated 30.12.2020. A Need Assessment Survey for CD/CSR activities has been done in 2021 for details analysis of CD/CSR requirement in the area.
(xxv)	An Environmental Cell comprising of at least one expert	One Senior Manager level executive is M.Tech in Environmental Sc. & Engg.

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B. Gene	eral Conditions	
(i)	standards only shall be re- circulated and reused within the plant. Arrangements shall be	Complied. Treated effluents conforming to the prescribed standards only are being re-circulated and reused within the plant. As per ZLD scheme effluents drains and and storm water drains do not get mixed.



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(ii)	A sewage treatment plant shall be provided (as applicable) and the treated sewage shall be used for raising green belt/plantation.	A STP in plant has been
(iii)	Adequate safety measures shall be provided in the plant area to check/minimize spontaneous fires in coal yard, especially during summer season. Copy of these measures with full details along with location plant layout shall be submitted to the Ministry as well as to the Regional Office of the Ministry.	Hydrant system for covering the entire power station including all the auxiliaries and buildings in the plant area has been commissioned. Key plan for fire protection system was submitted in Half yearly compliance report dated 06.12.2021.
(iv)	Storage facilities for auxiliary liquid fuel such as LDO/HFO/LSHS shall be made in the plant area in consultation with department of Explosives, Nagpur; Sulphur content in the liquid fuel will not exceed 0.5%. Disaster Management Plan shall be prepared to meet any eventuality in case of an accident taking place due to storage of oil.	A detailed Disaster Management Plan has been prepared and submitted to Chief Inspector of
(v)	First Aid and sanitation arrangements shall be made for	
(vi)	Noise levels emanating from turbines shall be limited to 85 dB (A) from source. For people working in the high noise area, requisite personal protective equipment like ear plugs/ear muffs etc. shall be provided. Workers engaged in noisy areas such as turbine area, air compressors etc. shall be periodically examined to maintain audiometric record and for treatment for any	Personal protective equipment has been arranged through contractors/safety department during execution of works. The operators working in turbine area, compressor etc. or high noisy area are provided ear plugs/ earmuffs by contractors/safety Department. Periodic examination of operators are being done for operators working in Turbine area, air compressors etc. for operational



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	hearing loss including shifting to non noisy/less noisy areas.	Unit.
(vii)	Regular monitoring of ambient air ground level concentration of SO ₂ , NOx, PM _{2.5} & PM ₁₀ and Hg shall be carried out in the impact zone and record maintained. If at any stage these levels are found to exceed the prescribed limits, necessary control measures shall be provided immediately. The	Regular monitoring of AAQ is being done in and around plant area. The CAAQMS have been Implemented in 3 locations. Ambient air quality data (April-Sept.2023) from MOEF&CC and BSPCB approved lab is attached as Annexure-III and same shall be uploaded on NTPC
	location of the monitoring stations and frequency of monitoring shall be decided in consultation with SPCB. Periodic reports shall be submitted to the Regional office of this Ministry. The data shall also be put on the website of the company.	website along with Half yearly Compliance Report.
(viii)	Provision shall be made for the housing of construction labor (as applicable) within the site with all necessary infrastructures and facilities	Complied. NTPC has constructed labour rest rooms with required facilities within the site.
	such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structure to be removed after the completion of the project.	drinking water has been made available to workers.
(ix)	The project proponent shall advertise in at least two local news papers widely circulated in the region around the project, one of which shall bein the vernacular language of the locality concerned within seven days from the date of this clearance letter, informing that the project has been accorded environmental clearance and copies of clearance letter are	The information regarding Environmental Clearance was published by previous project proponent i.e. BSPGCL. NTPC is project proponent of Barauni Thermal Power Station since 15.12.2018.



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	available with the State Pollution Control Board/Committee and may be seen at Website of the Ministry of Environment and Forests at http://envfor.nic.in	
(x)	A copy of the clearance letter shall be sent by the proponent to concerned Panchayat, Zila parishad/Municipal Corporation, urban local body and the Local NGO, if any, from whom suggestions/representations, if any, received while processing the proposal. The clearance letter shall also be put on the website of the Company by the proponent.	Complied. A copy of the clearance letter has been sent to District Collector, Begusarai dated 14.05.2014 and Mukhiya Malhipur Panchyat, Mukhia Kasha Diyara Panchyat and Adhyaska Nagar Parisad, Mokama vide dated 13.05.2014 by earlier project proponent BSPGCL. The Environmental Clearance (EC) copy is available on NTPC website.
(xi)	The proponent shall upload the status of compliance of the stipulated environmental clearance conditions, including results of monitored data on their website and shall update the same periodically. It shall simultaneously be sent to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; SPM, RSPM (PM _{2.5} & PM ₁₀), SO ₂ , NO _x (ambient levels as well as stack emissions) shall be displayed at a convenient location near the main gate of the company in the public domain.	Complied. The latest Half Yearly Compliance (HYC) status report of the stipulated environmental clearance conditions is being submitted to the Regional Office of MOEF&CC at Ranchi and monitoring data are enclosed with this half yearly compliance and will be available on NTPC website after submission. The Arrangement for Digital display of ambient air quality for PM ₁₀ , PM _{2.5} , SO ₂ and NOx and Stack emissions (PM, SO ₂ and NOx) near Plant main gate has been made at main gate.



SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
(xii)	The environment statement for each financial year ending 31stMarch in Form-V as is mandated to be submitted by the project proponent to the concerned State Pollution Control Board as prescribed under the Environment (protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Regional Offices of the Ministry by email.	The environment statement for financial year (2022-23) ending 31 st March in Form-V has been submitted to the Bihar State Pollution Control Board vide letter dated 30.09.2023. A copy of same is also sent by email to Regional office, Ranchi,
(xiii)	The project proponent shall submit six monthly reports on the status of the implementations of the stipulated environmental safeguards to the Ministry of Environment and Forests, its Regional Office, Central Pollution Control Board and State Pollution Control Board. The project proponent shall upload the status of compliance of the environment of the environmental clearance conditions on their website and update the same periodically and simultaneously send the same by email to Regional office, Ministry of Environment and Forests.	Latest Half yearly Compliance status for Period April,2023-September,2023 of the stipulated environmental clearance conditions is being submitted to the Regional Office of MOEF&CC at Ranchi & other authorities and same will be available on NTPC website after submission.
(xiv)	Regional office of the Environment & Forests will monitor the implementation of the stipulated conditions. A complete set of documents including Environmental Impact Assessment Report and	A Copy of EIA/EMP has been submitted to the Regional Office of MoEF&CC at Ranchi.
	/ ASSESSITION REPORT AND	September, 2023 will be available



SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
		on NTPC website after
		submission.
	Environment Management plan along with the additional	·
	information submitted from time to time shall be forwarded	EMP already submitted to RO, MOEF&CC.
	to the Regional Office for their	Latest Half yearly Compliance
	use during monitoring. Project	status for Period April,2023-
	proponent will up-load the compliance status in their	September,2023 will be available on NTPC website after
	website and up-date the same	submission.
	from time to time at least six	
	monthly basis. Criteria	Criteria pollutants levels
	pollutants levels including NOx	including NOx (from stack &
	(from stack & ambient air) shall be displayed at the main gate	ambient air) have been displayed on digital display
	of the power plant.	displayed on digital display board at the main gate of the
	or the power plants	power plant.
(xv)	Separate funds shall be	Complied.
	allocated for implementation of	Implemented Measures
	environmental protection	1.Installation of ESPs of 99.78 %
	measures along with item wise break-up. These cost shall be	efficiency to limit the RSPM concentrations below 50
	included as part of the project	mg/Nm ³ ;
	cost. The funds earmarked for	2.275m stack for wider
	the environment protection	dispersion of gaseous emissions.
	measures shall not be diverted	(Rs.40 Crore)
	for other purpose and year-wise expenditure should be reported	3.ETP for treatment of waste water.
	to the ministry.	4.Coal slurry settling pond.
		5.Dry ash Extraction system.
		6.STP for treatment of sewage.
		7. Dust suppression has been
		commissioned in coal handling
		area including coal stock yard area, ash handling points for
		control of fugitive dust
		emissions.
		8. Continuous emission
		monitoring system(CEMS) and
		Effluent Quality Monitoring System(EQMS).(Rs.53 Lakhs)
		9. Ambient Air quality
		monitoring system(AAQMS).
		(Rs.5 Crore)



SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
		Implemented 1. Asphalting of the roads within the plant area. 2. Rainwater harvesting system /pit. 3. Zero liquid discharge system. (Rs. 60 Lakhs) 5. Dust extraction system being commissioned at transfer points of conveyor system. 6. Plantation in Begusarai division through DFO with provision of expenditure of Rs. 2.2 Crores from CSR/CD expenses in FY2020-24. 7. Plantation in Begusarai Division through DFO with provision of expenditure of Rs. 1.27 Crores in FY 2022-26. 8. Total cost Rs. 12.785 Crore for NOx modification of both units. Unit#8 & 9 combustion modification completed.
		Systems under tendering/implementation 1. Technoeconomic feasibility is being explored for alternate technologies for SO ₂ reduction. Estimated cost Rs. 350 Crore. 3.Contract for Roof Top Solar
(vvi)	The project authorities shall	awarded for Rs. 4.2 Crore. Work is under progress.
(xvi)	The project authorities shall inform the Regional Office as well as the Ministry regarding the date of financial closure and final approval of the project by the concerned authorities and the dates of start of land development work and commissioning of plant.	2015 with PFC. Commercial operation



SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
(xvii)	Full cooperation shall be extended to the Scientists/officers from the Ministry / Regional Office of the Ministry/ CPCB /SPCB who would be monitoring the compliance of environmental status.	Full cooperation is being extended to the Scientists/ officers from the Ministry / Regional Office of the Ministry at Ranchi/ the CPCB / the SPCB during monitoring of the project.
6.	The Ministry of Environment and Forests reserves the right to revoke the clearance if conditions stipulated are not implemented to the satisfaction of the Ministry. The Ministry may also impose additional environmental conditions of modify the existing ones, if necessary.	Noted.
7.	The environmental clearance accorded shall be valid for a period of 5 years from the date of issue of this letter to start operations by the power plant.	Noted.
8.	Concealing factual data or submission of false/fabricated data and failure to comply with any of the conditions mentioned above may result in withdrawal of this clearance and attract action under the provisions of Environment (Protection)Act, 1986.	Noted.
9.	In case of any deviation or alteration in the project proposed including coal transportation system from those submitted to this Ministry for clearance, a fresh reference should be made to the Ministry to assess the adequacy of the condition(s) imposed and to add additional environmental protection measures required, if any.	Noted.



SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
10.	The above stipulations would be enforced among others under the water (prevention and Control of pollution) Act, 1974, the Air (Prevention and Control of Pollution) Act,1981, the Environment(Protection) Act,1986 and rules there under, Hazardous Wastes (Management, Handling & Transboundary Movement) Rules, 2008 and its amendments, the public Liability Insurance Act,1991 and its amendments.	Noted.
11.	Any appeal against this Environmental Clearance shall lie with the National Green Tribunal, if preferred, within 30 days as prescribed under Section 16 of the National Green Tribunal Act, 2010. r Observation	Noted.
(i)	PP should get the	
(ii)	PP should ensure Adequate dust extraction system such as cyclones/bag filters and water spray system in dusty areas such as in coal handling and ash handling points, transfer areas and other vulnerable dusty areas of BTPS stage I Plant. PP should also furnish up to date status to the ministry in the matter (Specific condition vi)	been commissioned in coal handling area including coal stock yard area, ash handling points for control of fugitive dust



COMPLIANCE STATUS OF ENVIRONMENTAL CLEARANCE CONDITIONS

Vide Letter No. J-13012/143/2008-IA.II(T) dated 22.04.2020

SI No	MoEF STIPULATION	STATUS AS ON 30.09.2023
Additio	nal Condition	
	nal Condition The necessary pollution control	The following pollution control measures has been implemented to comply new emission norms. i. Installation of ESPs of 99.78 % efficiency to limit the RSPM concentrations below 50 mg/Nm³; ii. Combustion modification for reduce NOx emissions in Unit#8 and Unit#9 completed. iii. Technoeconomic
		feasibility is being explored for alternate technologies for SO ₂ reduction. iv. AWRS System and recycle of treated effluents to achieve specific water consumption norms.

भारत सरकार परमाणु ऊर्जा विभाग विकिरण एवं आइसोटोप प्रौद्योगिकी बोर्ड



Government of India Department of Atomic Energy Board of Radiation & Isotope Technology

Certificate Tracking ID / CTID : 2306749 Date of Issue / DOI : 13-Jul-2023 Certificate Serial No. / CSN : RAL(V)-2300055



Radioanalytical Laboratory

RADIOACTIVITY TEST CERTIFICATE

Ref: BRIT/RAL/DOM/65-88/MISC/39-62/23-24

M/S NTPC LIMITED **BARAUNI THERMAL POWER STATION** P.O. BTPP, DIST. BEGUSARAI, PIN-85116

This is regarding the sample of "COAL & ASH" sent for radioactivity analysis vide your letter ref. no. NTPC/BARAUNI/CHEMISTRY/BRITS/2022-23/001 dated 27.04.2023 as shown in italics:

1) COAL SAMPLES (2 NOS.) 2) ASH SAMPLES (4 NOS.) SAMPLE DESCRIPTION

QUANTITY (IN GM) 300 GMS EACH SAMPLING DATE 27/04/2023

SAMPLE LOCATION NTPC LIMITED, BARAUNI, BEGUSARAI

DATE OF RECEIPT OF SAMPLE: 10.05.2023 DATE OF COMPLETION OF TEST: 23.06.2023

The samples were analysed for U-238, Ra-226, Th-232 and K-40 radioactivity content by HPGe gamma spectrometry and the values obtained are as follows:

Sr. No	NAME OF THE PRODUCT	U-238 (Bq/Kg)	Ra-226 (Bq/Kg)	Th-232 (Bq/Kg)	K-40 (Bq/Kg)
1	COAL-1 (CAL/BTPS/COAL/ECL/01)	35 ± 1.9	28.9 ± 3.6	67.7 ± 7.0	168.5 ± 10.3
2	COAL-2 (CAL/BTPS/COAL/PBCMP/01)	46.4 ± 2.5	44.7 ± 5.2	62.7 ± 6.7	75 ± 5.9
3	ASH-1 (CAL/BTPS/FLY-ASH/01)	71.7 ± 2.1	52.4 ± 4.9	106.3 ± 10.6	316.4 ± 15.2
4	ASH-2 (CAL/BTPS/BOTTOM-ASH/01)	77 ± 2.9	62.8 ± 5.5	114.9 ± 11.5	315.1 ± 15.4
5	ASH-3 (CAL/BTPS/POND-ASH/01)	90 ± 3.1	88.7 ± 8.4	124.7 ± 12.9	250.9 ± 16.0
6	ASH-4 (CAL/BTPS/POND-ASH/02)	83.6 ± 2.8	78 ± 9.0	123.7 ± 12.6	262.3 ± 15.6

Opinion: The measurement values are below the clearance level for radionuclides of natural origin in bulk solid materials, as per AERB directive 01/2010 (table-3) dated 26/11/2010.

Note: (i) The report pertains to the given sample only. (ii) The sample will be retained in this laboratory for a period of 1 month from certificate date and thereafter it will be disposed off. (iii) This report shall not be reproduced except in full, without written approval of the laboratory. (iv) The sampling is not done by this laboratory.

Checked by: **Authorized Signatory:** SHEEBA S.W. AJAY NANA THAMKE Assistant OIC, RAL

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

1/1

The authenticity of this certificate is verifiable. Please scan the QR code using a QR scanning application on any mobile devices. Upon redirection you must enter the necessary information in landing page https://eportal.britatom.gov.in. We will then revert you back with a digital copy of the certificate in your verified e-mail ID. In accordance to IT Act 2000 (21 of 2000), this document is generated electronically through a validated s/w and need no physical/ digital signature(s).









RECOGINSED AS ENVIRONMENTAL LABORATORY BY MoEFCC, GOVT. OF INDIA, UNDER ENVIRONMENT (PROTECTION) ACT 1988, DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL SOARD

TEST REPORT

wer, v	lo. STH/TR/23-24/440 Dt	26.04.2023	1.0		000283588-05	1-1019 DE	: 20.07,2022		
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample					ter Sample				
[0] 8	Sample Collected by			Shiva Ter	st House on 1	8.04.23			
	Sampling Location	Collected for	rom C W Blow	Down- Stage - 2					
[e] Method of Sampling					APHA	- National Physics Color Manager Life			
	Sampling Environmental Condition			Temp (°c		38 Humidity	(%) 31		
[g] Details of Sample Container (No. & Type of Container)				the second secon	ylene bottle (0	02)			
	[h] Sample Quantity			2 Liters	8 00				
-	Sample Code			GW-440					
-	Sample Condition on Receipt			Fit for analysis					
-	tems required to be tested			As per contract					
	Whether any specific Method of Te suggested by the customer	est has been		No					
[m] [Date of receiving the sample in La	boratory		18.04.23	1				
[n] /	Analysis Start Date / Analysis Con	pletion Date		18.04.23	/21.04.23	-company - it was	-2		
					Limit as p	er IS 10500: 2012			
S.N.	Parameters	Unit	Method	l of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Results		
1.	pH		IS 3025	(Part-11)	6.5	8.5	7.19		
2.	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	376.0		
3.	Conductivity	μmhos/cm	IS 3025	(Part-14)	No	t Specified	565.0		
4.	Turbidity on NTU	NTU	IS 3025	(Part-10)	1.0	5.0	1.0		
5.	Total Alkalinity as CaCO ₁	mg/l.	IS 3025	(Part-23)	200.00	600.00	314.0		
6.	Total Hardness as CaCOs	mg/L	IS 3025	(Part-21)	200.00	600.00	294.0		
7.	Sodium as Na	mg/l	183025(Part-45)	No	t Specified	39.4		
8.	Sulphate as SO ₄	mg/l.	IS 3025	(Part-24)	200.00	400.00	24.50		
2.5	C000-00110700 00000000	100000000000000000000000000000000000000	1.00.0000000000000000000000000000000000			CONTRACTOR OF THE PARTY OF THE	-		



IS3025(Part-34)

Digitally signed by SHIBESHWAR PRASAD SHIBESHW AR PRASAD Date: 2023.04.27

> Verified by : Technical Manager

Nitrate as NOs

Prasad

No relaxation

45.00

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:56:34 +05'30"

2.01

Authorized Signatory Quality Manager

- END OF TEST REPORT -

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mg/L

Contact us:

9.

122-C, Aastha, Road No. 5A, Patliputra Colony, Patna - 800 013 (Bihar)

Mob.: +918676886249; +919431047908 Email

sthpamal@vahoo.co.in:info@shivatest.com

Website: www.shivatest.com; www.shivatesthouse.com



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TEST REPORT

Ref. N	io. STH/TR/23-24/440(A)	Dt: 26.04.2023		Your PO No	. 4000283588-	057-1019 E	h: 20,07.2	02	
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample					ter Sample				
	Sample Collected by			Shiva Te	st House on 1	18.04.23			
	Sampling Location			Collected f	rom C W Blow	Down- Stage - 2			
	Nethod of Sampling	Sale		IS: 3025,	APHA				
	Sampling Environmental Condition			Temp (°c)	38 Humidity(%) 3	31	
[g] Details of Sample Container (No. & Type of Container)				Polyprop	ylene bottle (i	02)			
[h] S	Sample Quantity	10		2 Liters		010			
	Sample Code			GW-440					
01 8	Sample Condition on Receipt			Fit for analysis					
	tems required to be tested			As per contract					
	Whether any specific Method of suggested by the customer	Test has been		No					
[m] C	Date of receiving the sample in L	aboratory		18.04.23					
[n] A	Analysis Start Date / Analysis Co	impletion Date	1	18.04.23	/21.04.23				
-5000 == 1					Limit as p	er IS 10500: 2012			
S.N.	Parameters	Unit	Method	i of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Resul	ts	
1,	Dissolved Oxygen	mg/l.	IS3025	(Part-38)	No	t Specified	4.2	9	
2,	BOD (3 days at 270C)	mg/l	183025	IS3025(Part-44)		t Specified	< 0.1	1	
3.	COD	mg/l	IS3025	(Part-58)	No	t Specified	1.0		
4.	Total Suspended Solids	mg/l.	IS 3025	(Part-17)	No	t Specified	5.0	-	



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.04.27

> Verified by : Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:56:55 +05'30"

Authorized Signatory Quality Manager

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Websita: www.shivatest.com; www.shivatesthouse.com





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TEST REPORT

				NTDC LIMITE		7.5	-7000077780	
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample				Surface Water	er Sample			
[c] S	ample Collected by			Shiva Test H	ouse on 18.04.2	23		
	ampling Location			Collected Fron	n Near Awrs Pum	p House Stage-2		
	lethod of Sampling			IS: 3025, AP	HA			
[f] Sampling Environmental Condition			Temp (°c)	38	Humidity(%) 31		
[g] Details of Sample Container (No. & Type of Container)				Polypropylen	e bottle (02)		A.A	
[h] Sample Quantity				2 Liters				
	ample Code			SW-442				
	ample Condition on Receipt			Fit for analys				
	ems required to be tested	they been		As per contra	ect			
s	Whether any specific Method of Te uggested by the customer			No				
	ate of receiving the sample in Lab			18.04.23				
[n] A	nalysis Start Date / Analysis Com	pletion Date		18.04.23 / 21	And the second s			
					Limit as per IS IS 2296-1982			
S.N.	Parameters	Unit	Me	thod of Test	Tolerance Linet as per IN 2296-1982 for Class '4" (mg/L)	Tolerance Limit as par 18 2295-1982 for Class 'C'** (MgS.)	Results	
1.	pH	-	IS 3	025 (Part-11)	6.5 - 8.5	6.5 - 8.5	7.11	
2	Dissolved Oxygen	mg/l.	IS3	025(Part-38)	6.0	4.0	5.8	
3.	BOD (3 days at 27 ⁰ C)	mg/l	IS3	025(Part-44)	2.0	3.0	2.4	
4.	COD	mg/l	IS3	025(Part-58)	Not Sp	ecified	28.0	
5.	Total Suspended Solids	mg/l.	IS 3	025 (Part-17)	Not Sp	ecified	36.0	
6.	Total Dissolved Solids (TDS)	mg/l.	IS 3	025 (Part-16)		1500.00	484.0	
7_	Conductivity	μmhos/cm.	IS 3	025 (Part-14)	Not Sp	ecified	926.0	
8.	Turbidity on NTU	NTU	IS 3	025 (Part-10)	1.0	5.0	2.1	
10	Sodium as Na	mg/l	many law Automate	Market and the Company of the Compan	Not Sp	1000	48.1	
10.		-	IS3025(Part-45)			The state of the s		
11.	Sulphate as SO ₄	mg/l,	IS 3025 (Part-24)		200.00	400.00	25.4	



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> Verified by: Technical Manager

Shreyasee Prasad

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Authorized Signatory Quality Manager:

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Website: www.shrvatest.com; www.shrvatesthusse.com





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TEST REPORT

Ref. N	io. STH/TR/23-24/442(A)	Dt: 26.04.2023	1	Your PO No. 4	000283588-057-1	019 D	1: 20.07	.202	
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample				Surface Wat	er Sample				
[c] Sample Collected by					louse on 18.04.2	23			
[d] Sampling Location				Callected Froi	n Near Awrs Pum	ρ House Stage-2			
[e] M	lethod of Sampling			IS: 3025, AP	HA				
[f] Sampling Environmental Condition				Temp (%c)	38	Humidity(%)	31	
[9] D	etails of Sample Container (No. 8	Type of Conta	siner)	Polypropyler	e bottle (02)	100000000000000000000000000000000000000		. 1-11	
[h] S	ample Quantity			2 Liters					
I S	ample Code			SW-442					
S	ample Condition on Receipt			Fit for analysis					
[k] Ite	ems required to be tested	2011 19		As per contract					
	thether any specific Method of Te aggested by the customer	st has been		No					
	ate of receiving the sample in Lal	poratory		18.04.23					
	nalysis Start Date / Analysis Com			18.04.23 / 21	1.04.23				
		1	-		Limit as per IS IS 2296-1982				
s.N.	Parameters	Unit	Method of Test		Tolorowce Limit es per 18 2296-1982 for Class '1'' (mg/L)	Tolerance Limit us per IS 2296-1982 for Chan 'C'- (mg/L)	Results		
1.	Total Alkalinity as CaCO ₃	mg/l.	IS 30	025 (Part-23)	Not Sp	ecified	136	.0	
2.	Total Hardness as CaCO ₃	mg/l.	IS 30	025 (Part-21)	Not Sp	ecified	404	0	



Digitally signed by SHIBESHWAR PRASAD SHIBESHW AR PRASAD Date: 2023.04.27

> Verified by: Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:59:38 +05'30' Authorized Signatory Quality Manager

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Contact us :

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TEST REPORT

Ref. No. STH/TR/23-24/443	Dt: 26.04.202	3 Your PO	No. 4000	1283588-057-1019	t: 20.07.2022			
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample		THE RESERVE OF THE PERSON AND THE PE	d Effluent Sample					
[c] Sample Collected by				Test House on 18.04.23				
[d] Sampling Location			ETP C	Outlet Stage I				
[e] Method of Sampling				5, APHA				
[f] Sampling Environmental Co		ASSESSED IN CO.	Temp.		ity (%) 3			
[g] Details of Sample Containe	r (No. & Type of C	container)		opylene Bottle (02)				
[h] Sample Quantity			2 Litre	S				
[i] Sample Code	4		E-443					
[] Sample Condition on Recei	p1		Fit for analysis					
 [k] Items required to be tested [l] Whether any specific Methor 	of Tank has has	n accommend by	As per contract					
 Whether any specific Methors the customer 	od of restrias nee	n suggested by	No					
[m] Date of receiving the sampl	e in Laboratory		18.04	23				
[n] Analysis Start Date / Analys	sis Completion Dat	te	18.04.	23 / 21.04.23				
Parameters	Unit	Method of	Test	Standards as per E(P) Rules Schedule VI	Results			
1. pH		IS 3025 (Par	rt-11)	6.5 - 8.5	8.24			
2. Conductivity	μmhos/cm.	IS 3025 (Par	1-14)	Not Specified	1597.0			
Total Suspended Solids	mg/l.	IS 3025 (Par	1-17)	100	23.0			
4. Total Dissolved Solids	mg/l.	IS 3025 (Par	1-16)	Not Specified	934.0			
 B.O.D. (3 days at 27°C) 	mg/l.	IS 3025 (Par	1-44)	30	13.0			
6. C.O.D.	mg/l.	APHA (522)	0 B)	250	44.0			
7. Oil & Grease	mg/L	IS 3025 (Par		10	0.9			



SHIBESHW Digitally signed by SHIBESHWAR PRASAD. AR PRASAD Date: 2023,04,27

> Verified by : Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.04.27 15:00:02 +05'30'

Authorized Signatory Quality Manager

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Contact us:

122-C, Aastha, Road No. 5A, Patliputra Colony, Patra - 300 013 (Bibur)

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sthpatnal @yahoo.co.in . info@shivutest.com

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TEST REPORT

Ref. No. STH/TR/23-24/444	Dt: 26.04	1.2023 Your Po	O No. 40002	83588-057-1019	Dt: 2	0.07.202	
[a] Name and address of the	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] Details of Sample			Treated E	ffluent Sample			
[c] Sample Collected by				t House on 18.04	4.23		
[d] Sampling Location			ETP Outle				
[e] Method of Sampling			IS 3025, A	APHA			
[f] Sampling Environmental C			Temp. (PC) 38 lene Bottle (02)	Humidity (%)	31	
[g] Details of Sample Contains					20 30000000	o de mar	
[h] Sample Quantity			2 Litres				
[i] Sample Code			E-444				
Sample Condition on Rece			Fit for analysis				
[k] Items required to be tested	the same of the sa		As per contract				
 Whether any specific Meth the customer 	od of Test has b	een suggested by	No				
[m] Date of receiving the samp			18.04.23				
[n] Analysis Start Date / Analy	sis Completion D	Date	18.04.23/	21.04.23			
Parameters	Unit	Method of Tes		andards as per l Rules Schedule		Results	
1. pH		IS 3025 (Part-11	(3)	6.5 - 8.5		9.05	
2. Conductivity	μmhos/cm.	IS 3025 (Part-14	1)	Not Specified		1482.0	
3. Total Suspended Solids	mg/l.	IS 3025 (Part-17	t)	100		20.0	
4. Total Dissolved Solids	mg/l.	IS 3025 (Part-16	3)	Not Specified		865.0	
 B.O.D. (3 days at 27°C) 	mg/l.	IS 3025 (Part-44	1)	30		8.0	
6, C.O.D.	mg/l.	APHA (5220 B)		250		28.0	
7. Oil & Grease	mg/l.	IS 3025 (Part-39		10		0.7	



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.04.27

> Verified by: Technical Manager

Shreyasee Digitally signed by Shreyasee Prasad Prasad

Date: 2023.04.27 15:00:29 +05'30'

Authorized Signatory Quality Manager

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TEST REPORT

Ref. N	o. STH/TR/23-24/1200 D	1: 26.05.2023	Ye	our PO No.	4000283588-0	57-1019 Dt	20.07.2022		
[a] N	lame and address of the Custome	¥		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
(b) C	Details of Sample			the latest and the la	Vater Sample				
	Sample Collected by				st House on 1				
	Sampling Location			Collected fr	om Near Tempi	e punys house			
	Method of Sampling		IS: 3025.						
if s	Sampling Environmental Condition			Temp (%c		35 Humidity(%	6) 42		
	Details of Sample Container (No. 8	Type of Cont	Polyprop	rlene bottle (l	02)				
	Sample Quantity		2 Liters	19743-0902910	8/1//				
-	Sample Code		GW-1200						
	Sample Condition on Receipt		Fit for analysis						
	tems required to be tested			As per co	ntract				
	Whether any specific Method of Te suggested by the customer	est has been		No					
	Date of receiving the sample in La	boratory		13.05.23	en version and the version				
	Analysis Start Date / Analysis Con			13.05.23	/16.05.23				
		1172.93.1		100000	Limit as p	er IS 10500: 2012			
s.N.	Parameters	Unit	Method	of Test	Limit (mgf.) Acceptable	Permissible Limit in the absence of alternative source	Results		
1.	pH	******	IS 3025	(Part-11)	6.5	8.5	7.51		
25	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	242.0		
3,	Conductivity	μmhos/cm	IS 3025	(Part-14)	No	t Specified	441.0		
4.	Turbidity on NTU	NTU	IS 3025	(Part-10)	1.0	5.0	0.9		
5,	Total Alkalinity as CaCO ₃	mg/l.	IS 3025	(Part-23)	200.00	600.00	242.0		
3.	Total Hardness as CaCO ₃	mg/l.	streething development to be	(Part-21)	200.00	600.00	164.0		
7.	Sodium as Na	mg/l	IS3025(t Specified	37.8		
3.	Sulphate as SO ₄	mg/l.	-	(Part-24)	200.00	400.00	21.8		
		100	E. C. Harris, Service Michigan,		The second second	1-21-2	400 (1,000)		

Part na 900013

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.01

> Verified by : Technical Manager

Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.06.01 14:09:01 +05'30'

> Authorized Signatory Quality Manager

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Website: www.shivates.com; www.shivatesfloose.com

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TEST REPORT

Ref. N	a. STH/TR/23-24/1200(A)	Dt: 26,05,2023	5	Your PO No	. 4000283588-	057-1019 D	t: 20.07.202		
[a] N	lame and address of the Custon	ner		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] [etails of Sample			Ground V	Vater Sample				
	Sample Collected by			Shiva Tea	st House on 1	2.05.23			
[d] S	Sampling Location			Collected fr	rom Near Templ	e punys house			
	Method of Sampling		IS: 3025,	APHA	and the same of th	- 13			
[f] S	Sampling Environmental Condition	n	Temp (0c	1	35 Humidity(%	5 42			
[g] C	Details of Sample Container (No.	& Type of Cor	Polypropy	ylene bottle (I	02)				
	Sample Quantity	CHIANOSOBIPOCKO	TO WHEN IN	2 Liters					
[S	Sample Code			GW-1200					
	Sample Condition on Receipt			Fit for analysis					
	tems required to be tested			As per contract					
	Whether any specific Method of 1 suggested by the customer	Test has been		No					
	ate of receiving the sample in L	aboratory		13.05.23					
	inalysis Start Date / Analysis Co		3 - 1	13.05.23	/16.05.23				
	94	Seed No.	-2000	Cours In	Limit as p	er IS 10500: 2012	1200 50		
S.N.	Parameters	Unit	Method	of Test	Limit (mgfl.) Acceptable	Permissible Limit in the absence of alternative acurce	Results		
1.	Dissolved Oxygen	mg/l.	IS3025((Part-38)	No	t Specified	4.4		
2.	BOD (3 days at 27 ⁰ C)	mg/l	IS3025	(Part-44)	No	t Specified	< 0.1		
3.	COD	mg/I	IS3025	(Part-58)	No	t Specified	1.0		
4	Total Suspended Solids	mg/l.	IS 3025	(Part-17)		t Specified	12.0		



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.01

Verified by : Technical Manager Prasad

Shreyasee Shreyasee Prasad Digitally signed by Date: 2023,06.01 14:09:21 +05'30'

Page I of I

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Website : www.shivatest.com; www.shivatesthouse.com







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TEST REPORT

Ref. N	o, STH/TR/23-24/1201 D	1: 26.05.2023	Y	our PO No.	4000283588-0	57-1019 Dt:	20.07.2022		
[a] N	lame and address of the Custome	r		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
	etails of Sample			Ground V	Vater Sample				
[c] S	Sample Collected by				st House on 1	And the second s			
[d] S	lampling Location	Collected, of Ash por		mp near Chakballi Dia	ya (East sid				
	fethod of Sampling		IS: 3025,	APHA					
	ampling Environmental Condition			Temp (°c		35 Humidity(%) 42		
	Petails of Sample Container (No. 8	E Type of Cont		lene bottle (0	02)				
	ample Quantity			2 Liters					
	lample Code			GW-1201					
	ample Condition on Receipt			Fit for analysis As per contract					
III V	tems required to be tested Whether any specific Method of Te aggested by the customer	est has been		No No	ntract				
	ate of receiving the sample in La	boratory		13.05.23					
	nalysis Start Date / Analysis Con			13.05.23	/ 16.05.23				
		1	100		Limit as p	er IS 10500: 2012			
S.N.	Parameters	Unit	Method	of Test	Limit (mg1.) Acceptable	Permissible Limit in the absence of alternative source	Results		
1.	pH		18 3025	(Part-11)	6.5	8.5	7.33		
2.	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	232.0		
3.	Conductivity	µmhos/cm	IS 3025	(Part-14)	No	t Specified	418.0		
4.	Turbidity on NTU	NTU	18 3025	(Part-10)	1.0	5.0	0.9		
5.	Total Alkalinity as CaCO ₂	mg/l.	IS 3025	(Part-23)	200.00	600.00	204.0		
6.	Total Hardness as CaCO ₂	mg/l.	IS 3025	(Part-21)	200.00	600,00	176.0		
7.	Sodium as Na	mg/l	183025	Part-45)	No	t Specified	36.5		
8.	Sulphate as SO ₄	mg/L	IS 3025	(Part-24)	200.00	400.00	20.60		
9.	Nitrate as NO ₃	ma/l.	And in contrast of the last of	Part-34)	45.00	No relaxation	2.07		

AR PRASAD Date: 2023,06.01

SHIBESHW Digitally signed by SHIBESHWAR PRASAD

Verified by 1 Technical Manager



Digitally signed by Shreyasee Prasad Shreyasee Prasad

14:09:34 = 05'30' Authorized Signatory Quality Manager

- END OF TEST REPORT -

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TEST REPORT

Ref. N	lo. STH/TR/23-24/1201(A)	Dt: 26.05.2023	Ç.	Your PO No	4000283588-	057-1019	Dt:	20.0	.202	
[a] N	Name and address of the Custor	ner		NH 31, B	THERMAL POY	2702222222	ROJECT			
	Details of Sample			Ground Water Sample						
[c] S	Sample Collected by			the state of the s	st House on 1	CONTRACTOR OF THE PARTY OF THE				
[d] 5	Sampling Location		of Ash por	from Hand pui id)	np near Chal	iballi Diaye	(Eas	side		
[e] N	Method of Sampling	IS: 3025,								
	Sampling Environmental Condition	Temp (°c			lumidity(%)		42			
	Details of Sample Container (No.	Polypropylene bottle (02)								
	Sample Quantity		1000	2 Liters						
4.5	Sample Code			GW-1201						
	Sample Condition on Receipt			Fit for analysis						
	tems required to be tested			As per contract						
	Whether any specific Method of suggested by the customer	Test has been		No						
[m] [Date of receiving the sample in L	aboratory		13.05.23						
[n] A	Analysis Start Date / Analysis Co	impletion Date		13.05.23	/16.05.23					
					Limit as p	er IS 10500	: 2012			
S.N.	Parameters	Unit	Method	d of Test	Limit (mgt.) Acceptable	Permissible the absence alternative s	of	Res	ults	
1.	Dissolved Oxygen	mg/L		(Part-38)	No	t Specified		4	5	
2.	BOD (3 days at 27 ⁰ C)	- mg/l	183025	(Part-44)	No	t Specified		50	1.1	
3.	COD	mg/l	183025	(Part-58)	No	d Specified		1.	0	
4.	Total Suspended Solids	mg/l.	IS 3025	(Part-17)		t Specified		51	.0	

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.01

Verified by : Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.06.01 14:09:50 +05'30'

> Authorized Signatory Quality Manager

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Contact us:

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TEST REPORT

Mer I	o. STH/TR/23-24/1202 I	0: 26.05.2023		Your PO No. 4	000283588-057-1	019 Dt	20.07,202	
[a] N	ame and address of the Custome			NTPC LIMITE BARAUNI THE NH 31, BARA BEGUSARA	RMAL POWER PL	ANT PROJECT		
b] D	etails of Sample			Surface Wate	er Sample			
c] S	ample Collected by			Shiva Test H	ouse on 12.05.23			
	ampling Location				n Near Awrs Pumy	House Stage-2		
	lethod of Sampling		IS: 3025, AP	ANTA CONTRACTOR OF THE PARTY OF	TO TO STATE OF THE			
	ampling Environmental Condition		-	Temp (°c)	35	Humidity(%	42	
	etails of Sample Container (No. &	Type of Contain	ner)	Polypropylen	e bottle (02)			
_	ample Quantity	7 12-12 1 WILL C-11 1 WOLL		2 Liters				
	ample Code			SW-1202				
	ample Condition on Receipt ems required to be tested		Fit for analysis As per contract					
II W	The ther any specific Method of Telegogested by the customer	st has been		No No	su;			
	ate of receiving the sample in Lab	oratory		13.05.23	23-21			
	nalysis Start Date / Analysis Com			13.05.23 / 16	3.05.23			
		T T			Limit as per I	S 15 2296-1982		
S.N.	Parameters	Unit	Met	thod of Test	Tolorance Limit av per IS 2296-1982	Telerance Limit es per 18 2296-1982	Results	
0.14.					for Class 'A' (ong C)	for Ches 'E'm (reg(X)	rvesures	
	pH	-	IS 3	025 (Part-11)			7,77	
1.	pH Dissolved Oxygen	mg/L	A COLUMN TWO IS NOT THE OWNER.	025 (Part-11) 025(Part-38)	(ug/t)	(Ng/X)		
1.	Dissolved Oxygen		153	Control of the last own with the last of the last own	6.5 - 8.5	(regX) 6.5 - 8.5	7,77	
1.	- Friday	mg/L	IS3	025(Part-38)	6.5 - 8.5 6.0	(next) 6.5 - 8.5 4.0 3.0	7,77 7.8	
1. 2. 3.	Dissolved Oxygen BOD (3daysat27 ⁰ C)	mg/L mg/l	IS3 IS3 IS3	025(Part-38) 025(Part-44)	6.5 - 8.5 6.0 2.0	(Nex.) 6.5 - 8.5 4.0 3.0 ecified	7,77 7,8 1,8	
1. 2. 3. 4.	Dissolved Oxygen BOD (3dayset27 ⁰ C) COD	mg/l. mg/l mg/l	IS3 IS3 IS3	025(Part-38) 025(Part-44) 025(Part-58)	6.5 - 8.5 6.0 2.0 Not Sp	(Nex.) 6.5 - 8.5 4.0 3.0 ecified	7,77 7,8 1,8 24.0	
1. 2. 3. 4. 5.	Dissolved Oxygen BOD (3daysat27 ^D C) COD Total Suspended Solids	mg/l. mg/l mg/l.	IS3 IS3 IS3 IS 3	025(Part-38) 025(Part-44) 025(Part-58) 025 (Part-17)	(Mg/L) 6.5 - 8.5 6.0 2.0 Not Sp Not Sp	6.5 - 8.5 4.0 3.0 ecified ecified 1500.00	7,77 7,8 1,8 24.0 126.0	
1. 2. 3. 4. 5.	Dissolved Oxygen BOD (3daysat27 ^D C) COD Total Suspended Solids Total Dissolved Solids (TDS)	mg/L mg/l mg/L mg/L	IS3 IS3 IS3 IS 3 IS 3	025(Part-38) 025(Part-44) 025(Part-58) 025 (Part-17) 025 (Part-16)	(Mg/L) 6.5 - 8.5 6.0 2.0 Not Sp Not Sp	6.5 - 8.5 4.0 3.0 ecified ecified 1500.00	7,77 7,8 1,8 24,0 126,0 272.0	
1. 2. 3. 4. 5. 6. 7. 8. 9.	Dissolved Oxygen BOD (3daysat27 ^D C) COD Total Suspended Solids Total Dissolved Solids (TDS) Conductivity	mg/L mg/l mg/L mg/L µmhos/cm.	IS3 IS3 IS3 IS 3 IS 3 IS 3	025(Part-38) 025(Part-44) 025(Part-58) 025 (Part-17) 025 (Part-16) 025 (Part-14)	(Mg/f) 6.5 - 8.5 6.0 2.0 Not Sp Not Sp - Not Sp	6.5 - 8.5 4.0 3.0 ecified ecified 1500.00 ecified 5.0	7,77 7.8 1.8 24.0 126.0 272.0 438.0	

SHIBESHW

Nitrate as NO3

Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023/06/91

> Verified by : Technical Manager



mg/l.

IS3025(Part-34)

Prasad

45.00

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.06.01 14:10:15 +05'30'

0.72

Authorized Signatory Quality Manager

No relaxation

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TEST REPORT

Ref. N	lo. STH/TR/23-24/1202(A)	Dt: 26-05,202	3	Your PO No.	4000283588-057	1019 D	: 20.07	.202			
[a] N.	ame and address of the Custon	ner		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI 851 116							
[b] D	etails of Sample			Surface Wat	er Sample						
[c] S	ample Collected by			Shiva Test H	puse on 12.05.23	V.					
[d] S	ampling Location			Collected From	n Near Awrs Pum	House Stage-2					
	lethod of Sampling			IS: 3025, AP	HA	Service of the servic	-01				
	ampling Environmental Condition		Temp (dc)	35	Humidity(%)	42				
[g] D	etails of Sample Container (No.	& Type of Conta	iner)	Polypropylene bottle (02)							
[h] S	ample Quantity	THE CHEST STREET	5055500	2 Liters							
	ample Code			SW-1202							
J S	ample Condition on Receipt			Fit for analysis							
	ems required to be tested			As per contract							
	whether any specific Method of auggested by the customer	Test has been		No							
[m] D	ate of receiving the sample in L	aboratory		13.05.23							
[n] A	nalysis Start Date / Analysis Co	mpletion Date	-0.0	13.05.23 / 16	5.05.23						
-					Limit as per l	S IS 2296-1982					
S.N.	Parameters	Unit	Met	hod of Test	Tolerence Lines as per 13 7296-1982 for Class 'A'* (mg/L)	Tolerance Limit as per IV 2296-/982 for Class *C*** (mg/L)	Res	ults			
1.	Total Alkalinity as CaCO ₃	mg/l.	IS 3	025 (Part-23)	Not Sp	ecified	180	0.0			
2.	Total Hardness as CaCO ₃	mg/l.	IS 3	025 (Part-21)	Not Sp	edified	152	2.0			



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.01

Verified by Technical Manager Shreyasee Digitally signed by Shreyasee Prasad

Date: 2023.06.01

Prasad 14:10:29 +05'30'

> Authorized Signatory Quality Manager

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Contact us :

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TEST REPORT

Ref. No. STH/TR/23-24/1203	Dt: 26.05.20	23 Your P	O No. 400	0283588-057-1019	Dt: 20.07.202		
[a] Name and address of the (Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample			Treated	Effluent Sample			
[c] Sample Collected by			Shiva T	est House on 12.05.23			
[d] Sampling Location				itlet Stage I			
[e] Method of Sampling	- mod #1044 #100/#			, APHA			
[f] Sampling Environmental C		1000 - 1000	Temp.		nidity(%) 42		
[g] Details of Sample Contains	er (No. & Type of		pylene Bottle (02)	Market and the contract of the			
[h] Sample Quantity		2 Litres					
[i] Sample Code			E-1203				
 Sample Condition on Rece 			Fit for a	ACAMORPO CONCESSOR DE LA CONCE			
[k] Items required to be tested	PROFESSIONAL PROFE		As per	contract	- 17		
 Whether any specific Meth by the customer 	100-50 SEC. 11-50-50	en suggested	No				
[m] Date of receiving the samp			13.05.23				
[n] Analysis Start Date / Analy	sis Completion D	ate	13.05.2	23 / 16:05.23			
Parameters	Unit	Method of	Test	Standards as per E(P) Rules Schedule VI	Results		
1. pH	**	IS 3025 (Pa	rt-11)	6.5 - 8.5	8.0		
Conductivity	µmhos/cm.	IS 3025 (Pa	rt-14)	Not Specified	1578.0		
Total Suspended Solids	mg/L	IS 3025 (Pa	irt-17)	100	26.0		
4. Total Dissolved Solids	mg/L	IS 3025 (Pa	rt-16)	Not Specified	907.0		
 B.O.D. (3 days at 27°C) 	mg/L	IS 3025 (Pa		30	12,0		
8, C.O.D.	mg/L	APHA (52)		250	52.0		
7. Oil & Grease	mg/l.	IS 3025 (Pa	-	10	1.1		

SHIBESHW AR PRASAD Date: 2023.06.01

Digitally signed by SHIBESHWAR PRASAD

Verified by : Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.06.01 14:10:42 +05'30"

Authorized Signatory Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/1204	Dt: 26.05.	2023 Your	PO No.	4000283588-057-1019	Dt:	20.07.202		
[a] Name and address of the	Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample			Tree	sted Effluent Sample	Openios.			
[c] Sample Collected by			Shiv	a Test House on 12.	05.23			
[d] Sampling Location				Outlet Stage II				
[e] Method of Sampling				025 APHA				
Sampling Environmental C				p. (°C) 35	Humidity (%	6) 42		
g Details of Sample Contain	er (No. & Type		propylene Bottle (02)				
h] Sample Quantity		-	2 Litres					
i] Sample Code			-	E-1204				
Sample Condition on Rec				or analysis				
[k] Items required to be tester	Commission of the Control of the Con		Ast	As per contract				
 Whether any specific Methods by the customer 	nod or Test has	been suggested	No	No +				
[m] Date of receiving the same	ple in Laboratory	ŕ	13.05.23					
[n] Analysis Start Date / Analysis	ysis Completion	Date	13.0	5.23 / 16.05.23				
Parameters	Unit	Method of To	st	Standards as per Rules Schedule		Results		
1. pH	-	IS 3025 (Part-	11)	6.5 - 8.5		8.79		
2. Conductivity	µmhos/cm.	IS 3025 (Part-	14)	Not Specified		1502.0		
Total Suspended Solids	mg/l.	IS 3025 (Part-	17)	100		10.0		
4. Total Dissolved Solids	mg/l.	IS 3025 (Part-	16)	Not Specified		878.0		
 B.O.D. (3 days at 27°C) 	mg/l.	IS 3025 (Part-	44)	30		10.0		
6, C.O.D.	mg/l.	APHA (5220)		250		36.0		
7. Oil & Grease	mg/L	IS 3025 (Part-		10		0.8		

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.01

Verified by Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prased Date: 2023.06.01 14:10:57 +05'30"

> Authorized Signatory Quality Manager

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Contact us :

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Website wax shivatest.com away shivatesthoree con



SHIVA TEST HOUSE



(Serving since 1988)

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TEST REPORT

Ref. No. STH/TR/23-24/1936	Dt: 28.06.2023	Your PO No. 400	00283588-057-101	9 Dt:	20.07.2022			
[a] Name and address of the Custo	mer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] Details of Sample		Monitoring of A	mblent Noise Leve	1				
[c] Sample Collected By		SHIVA TEST HOUSE on 12/13.06.23						
[d] Sampling Location		Within Premise	8		-X			
[e] Sampling Environmental Condit	ion	Temp. (°C)	39	Humidity (%	35			
[f] Sample Code		N-1936						
[g] Items required to be tested		Day & Night tim	e Noise Level					
 [h] Whether any specific Method of suggested by the customer 	Test has been	No						
[i] Date of receiving the sample in	Laboratory	13.06.23						
	Unit			Standards				
ampling Point		00000000000000000000000000000000000000	Noise Level	Industria	l Area			
		Day Time (6.0am to 19.0pm)	Night Time (10.0pm to 6.0am)	Day Time	Night Time			
STAGE-I								
1. CHP	dB(A)	65.1	52.1	75.00	70.00			
2. Cooling Tower	dB(A)	66.7	47.8	-do-	-do-			
3. Main Gate	dB(A)	64.4	58.0	-do-	do-			
4. Post Office	dB(A)	62.5	50.4	do	do-			
5. ETP	dB(A)	58.3	50,0	-do	do-			
STAGE - II								
6. CW Pump House	dB(A)	62.9	59.4	-do	do-			
7. Cooling Tower	dB(A)	67,4	48.7	-do-	do-			
And the second of the second o	dB(A)	62.8	54.6	-do-	do-			
8. ETP			00000000					
8. ETP 9. Canteen	dB(A)	58.2	51.1	do	do-			

R PRASAD

SHIBESHWA Digitally signed by 5HBESHWAR PRASAD Date: 2023,06:29 11:23:01 +05'30'

Verified by : Dr. Shibeshwar Praxad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:36:38 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyusee Presad Quality Manager

- END OF TEST REPORT

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Contact us:

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athprimal Wyahoo co.in ; info@shivutest.com

Website: www.shvatest.com. www.shvateshouse.com









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TEST REPORT

Ref. No	STH/TR/23-24/1948 De:	28.06.2023		our PO No.	4000283588-05	57-1019 Dr	20.07.2022		
[a] Na	ame and address of the Custome	f		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] De	etails of Sample			Surface Water Sample					
	imple Collected by				st House on 1				
[d] Sa	impling Location			Near AV	VRS Pump Hou	ise (Stage -2)			
e] Me	ethod of Sampling			IS: 3025	APHA				
f) Sa	impling Environmental Condition			Temp (⁰ c	2)	39 Humidi	ty(%) 35		
	etails of Sample Container (No. 8	Type of Co	ontainer)		ylene bottle (0	2)	10-20-11		
	imple Quantity	111.000.00.11.00.000.1		2 Liters					
المعراكية المراطب المعاركة	imple Code			SW-1946					
	imple Condition on Receipt		Fit for an						
	ms required to be tested			As per o	ontract				
	hether any specific Method of Te ggested by the customer	st has beer	1	No					
[m] Da	ite of receiving the sample in Lat	oratory		13.06.23	and the second				
[n] An	ałysis Start Date / Analysis Com	pletion Dat	e	14.06.23	/ 17.05.23				
	esc.				Limit as p	er IS 10500: 2012			
S.N.	Parameters	Unit	Method o	of Test	Limit (mg/l.) Acceptable	Permissible Limit in the absence of alternative source	Results		
1.	pH at 25° C		IS 3025 (Part-11)	6.5	8.5	6.87		
2.	Dissolved Oxygen	mg/l.	1S3025(P	art-38)	No	t Specified	5.5		
3.	BOD (3 days at 27 ⁰ C)	ma/l	IS3025(P	art-44)	No	t Specified	2.3		
4.	COD	mg/l	IS3025(P	art-58)	No	t Specified	42.0		
5.	Total Suspended Solids	mg/l.	19 3025 (t Specified	32.0		
6.	Total Dissolved Solids (TDS)	mg/l.	IS 3025 (500.00	2000.00	489.0		
7.	Conductivity	µmhos/ cm.	IS 3025 (Part-14)	No	t Specified	932.0		
8.	Turbidity on NTU	NTU	IS 3025 (Part-10)	1.0	5.0	1.46		
9.	Total Alkalinity as CaCO ₂	mg/l.	IS 3025 (Part-23)	200.00	600.00	246.0		
10.	Total Hardness as CaCO ₃	mg/l.	IS 3025 (Part-21)	200.00	600.00	354.0		
11.	Sodium as Na	mg/l	IS3025(P		No	t Specified	47.1		
12.	NAME OF THE PERSON OF T	The second second second second second	and the street spread and the state of the s	Children Committee					
16.	Sulphate as SO ₄	mg/l.	IS 3025 (Part-24)	200.00	400.00	26.7		

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.29

Verified by : Dr. Shibeshwar Prasod Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:38.23 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us :

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Website www.shivatest.com www.shivatesthopse.com





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TEST REPORT

Ref. No. STH/TR/23-2	4/1948(4)	Dt: 28,06,2023	Your PO No. 4000283588-05	57-1019 De	20.07.2022					
[a] Name and addre	ss of the (Customer	NTPC LIMITED BARAUNI THERMAL POWER NH 31, BARAUNI BEGUSARAI - 851 116	BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI						
[b] Details of Sample	5		1 20 00 14 30 20 16 20 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1	Surface Water Sample						
[c] Sample Collected			Shiva Test House on 13.00	5.23						
[d] Sampling Location			Near AWRS Pump House	(Stage -2)						
[e] Method of Sampl			IS 3025, APHA							
[f] Sampling Environ			Temp. (°C)	39 Humidit	y(%) 35					
		No. & Type of Container		Western - Transfer						
[h] Sample Quantity			2 Litres							
[i] Sample Code			SW-1948							
 Sample Condition 			Fit for analysis							
	cific Meth	od of Test has been	As per contract							
suggested by the			10.00.00							
[m] Date of receiving			13.06.23							
[n] Analysis Start Da	ne / Analy		14.06.23 / 17.06.23							
Parameters	Unit	Acceptable Limit	Permissible Limit in the absence of alternative SOURCE	Method of Test	Results					
1.Jron as Fe	mg/L	1.0	No relaxation	APHA3500 Fe B	0.35					
2.Copper as Cu	.Rgm	0.05	1.50	APHA(3111B)	< 0.05					
3.Manganesse as Mn	mg/l.	0.1	0.3	APHA3111B	<0.01					
4 Mercury as Hg	mg/L	0.001	No Relaxation	APHA3111E	<0.001					
5 Cadmium as Cd	mg/L	0.003	No Relaxation	APHA3111B	< 0.003					
6.Selenium as Se	mg#.	0.01	No Relaxation	APHA3111B	<0.01					
7.Total Arsenic as As	mg/l.	0.01	0.05	APHA(3114B)	< 0.01					
8.Cyanide as CN	mg/l.	0.05	No Relaxation	IS3025(Part-27)	<0.01					
9,Lead as Pb	mg/l.	0.01	No Relaxation	APHA31118	<0.01					
10 Zinc as Zn	mg/L	5.00	15.00	APHA(3111B)	0.42					
11.Chromium as Cr	mg/l.	0.06	No Relaxation	APHA(3111B)	⊀0.05					
12.Aluminium as Al	mg/l.	0.03	0.2	APHA3111 D	<0.03					
13 Boron as B	mg/l.	0.5	1.0	APHA4500BB	< 0.5					

SHIBESHW AR PRASAD 11:24:17 + 05'38'

Digitally signed by SHIBESHWAR PRASAD

Verified by t Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:38:47 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No.	STH/TR/23-24/1948(N	ICB)	Dt: 28.06.2023	Your PO No.	4000283588-05	7-1019 Dt	: 20.07.2022		
[a] Nar	ne and address of t	he Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Det	ails of Sample			Surface Wate	r Sample				
[c] San	nple Collected by			Shiva Test I	House on 13	3.06.23			
[d] San	npling Location			Near AWRS	Pump Hou	se (Stage -2)			
[e] Met	hod of Sampling			IS 1622					
[f] San	npling Environment	al Condition		Temp (%c)	39	Humidity (%)	35		
[g] No.	& Type of Contain	er		One Sterilized Glass Bottle					
[h] San	nple Quantity			250 mi					
[i] San	nple Code			SW-1948					
[] San	nple Condition on R	leceipt		Fit for analysis					
4.1	is required to be te			As per contract					
	other any specific M gested by the custo		t has been	No					
[m] Date	e of receiving the sa	ample in Lab	oratory	13.06.23					
[n] Ana	lysis Start Date / A	nalysis Comp	letion Date	14.06.23 / 16	.06.23				
S.N.	Parameters	Unit	Method of Test	Limit as per 201		Result	8		
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det		Detected / 10	00 ml		
2	E coli	/ 100 mi	IS 1622:1981	Shall not be det		Detected / 10	00 ml		



Authorized Signatory Mr. Vishal Sharma Section In-Charge (Microbiology)

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TEST REPORT

[o] Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[p] Details of Sample	Surface Water Sample				
[q] Sample Collected by	Shiva Test House on 13.06.23				
[r] Sampling Location	Ganga Water Reservoir Tank				
[s] Method of Sampling	IS: 3025, APHA				
[t] Sampling Environmental Condition	Temp (⁰ c) 39 Humidity(%) 35				
[u] Details of Sample Container (No. & Type of Container	Polypropylene bottle (02)				
[v] Sample Quantity	2 Liters				
[w] Sample Code	SW-1949				
[x] Sample Condition on Receipt	Fit for analysis				
[y] Items required to be tested	As per contract				
[z] Whether any specific Method of Test has been suggested by the customer	No				
[aa] Date of receiving the sample in Laboratory	13.06.23				
[bb] Analysis Start Date / Analysis Completion Date	14.06.23 / 17.06.23				
	Limit as nor IS 10500: 2012				

				7.1 F. (5.1 (10), 4.7 (10) (10)		
5-7/1				Limit as p		
S.N. Parameters		Unit	Method of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Results
1.	pH at 25° C		IS 3025 (Part-11)	6.5	8,5	7.34
2.	Dissolved Oxygen	mg/l.	IS3025(Part-38)	No	t Specified	7.7
3.	BOD (3 days at 27 ⁰ C)	mg/l	IS3025(Part-44)	No	t Specified	1.5
4.	COD	mg/l	IS3025(Part-58)	Not Specified		15.0
5.	Total Suspended Solids	mg/i.	IS 3025 (Part-17)	Not Specified		35.0
6,	Total Dissolved Solids (TDS)	mg/l.	IS 3025 (Part-16)	500.00	2000.00	284.0
7.	Conductivity	µmhos/ cm.	IS 3025 (Part-14)	Not Specified		547.0
8.	Turbidity on NTU	NTU	IS 3025 (Part-10)	1.0	5.0	1.58
9,	Total Alkalinity as CaCO ₂	mg/l.	IS 3025 (Part-23)	200.00	600.00	144.0
10.	Total Hardness as CaCO2	mg/l.	IS 3025 (Part-21)	200.00	600.00	158.0
11.	Sodium as Na	mg/l	IS3025(Part-45)	No	t Specified	32.1
12.	Sulphate as SO ₄	mg/l.	IS 3025 (Part-24)	200.00	400.00	19.2
13.	Nitrate as NO ₃	mg/l.	IS3025(Part-34)	45.00	No relaxation	0.85

SHIBESHW AR PRASAD Dete: 2023.06.29

Digitally signed by SHIBESHWAR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023,06.29 11:39:03 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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Website was shoulest com, was shiratesthouse com





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TEST REPORT

Ref. No. STH/TR/23-2	4/1949(A)	Dt: 28.06.2023	Your PO No. 4000283588-05	57-1019 Dt	20.07.2022			
[a] Name and address of the Customer			NTPC LIMITED BARAUNI THERMAL POWER NH 31, BARAUNI BEGUSARAI - 851 116	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI				
[b] Details of Sample	ė		Surface Water Sample					
[c] Sample Collected	by .		Shiva Test House on 13.00	6.23				
[d] Sampling Location			Ganga Water Reservoir Te	ank				
[e] Method of Sample		No. of the last of	IS 3025, APHA					
[f] Sampling Enviror			Temp. (°C)	39 Humidity	y(%) 35			
	Container	(No. & Type of Container						
[h] Sample Quantity			2 Litres					
Sample Code	e es Flass	ctus	SW-1949					
Sample Condition			Fit for analysis As per contract					
Items required to be tested Whether any specific Method of Test has been suggested by the customer			No No					
[m] Date of receiving the sample in Laboratory			13.06.23	13.06.23				
		sis Completion Date	14.06.23 / 17.06.23					
		Requireme	nt as per IS 10500:2012	Section Investment	Result			
Parameters	Unit	Acceptable Limit	Permissible Limit in the absence of alternative SOURCE	Method of Test				
1.Iron as Fe	mg/L	1.0	No relaxation	APHA3500 Fe B	0.42			
2.Copper as Cu	mg/L	0.05	1.50	APHA(31118)	< 0.05			
3.Manganesse as Mn	mg/L	0.1	0,3	APHA3111B	< 0.01			
4 Mercury as Hg	mg/L	0.001	No Relaxation	APHA3111B	<0.001			
5.Cadmium as Cd	mg/L	0.003	No Relexation	APHA3111B	<0.003			
6.Selenium as Se	mg/L	0.01	No Relaxation	APHA3111B	< 0.01			
7. Total Arsenic as As	mg/L	0.01	0.05	APHA(3114B)	< 0.01			
8 Cyanide as CN	mg/L	0.05	No Relaxation	IS3025(Part-27)	< 0.01			
9 Lead as Pb	mg/L	0.01	No Relaxation	APHA3111B	< 0.01			
10 Zinc as Zn	mg/l.	5.00	15.00	APHA(31118)	0.42			
11.Chromium as Cr	mg/l.	0.05	No Relexation	APHA(3111B)	< 0.05			
12.Aluminium as Al	mg/L	0.03	0.2	APHA3111 D	< 0.03			
13.Boron as B	mg/l.	0.5	1.0	APHA4500BB	< 0.5			

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.29

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad Shreyasee Prasad

Digitally signed by Date: 2023.06.29 11:39:26 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Ref. No.	STH/TR/23-24/1949(N	(CB)	Dt: 28.86.2023	Your PO No.	4000283588-05	7-1019 Dt	: 20.07,2022	
[a] Nar	me and address of t	the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Det	ails of Sample			Surface Wate	r Sample			
[c] Sar	nple Collected by			Shiva Test I	House on 13	.06.23		
[d] San	npling Location			Ganga Wate	er Reservoir	Tank		
[e] Met	hod of Sampling			IS 1622				
[f] San	npling Environment	al Condition		Temp ("c)	39	Humidity (%)	35	
[g] No	& Type of Contain	er		One Sterilized Glass Bottle				
[h] Sample Quantity				250 ml				
[] San	nple Code			SW-1949				
[] San	nple Condition on F	Receipt		Fit for analysis				
	ns required to be te		V3771 W	As per contract				
	ether any specific M gested by the custo		t has been	No				
[m] Dat	e of receiving the sa	ample in Lab	oratory	13.06.23				
[n] Ana	lysis Start Date / A	nalysis Comp	letion Date	14.06.23 / 16	.06.23			
S.N.	Parameters	Unit	Method of Test	Limit as per		Result	В	
1	Total Coliform	/ 100 ml	IS 1622 1981	Shall not be det		Detected / 10	l0 ml	
2	E coli	7 100 ml	IS 1622:1981	Shall not be det		Detected / 10	00 ml	



Authorized Signatory Mr. Vishal Sharma Section In-Charge (Microbiology)

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TEST REPORT

Ref. No. 5	STH/TR/23-24/19	950	Dt: 28.06.202	23	Your PO No. 4000283583	8-057-1019	Dr. 20,07,2022		
[a] Name and address of the Customer				NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI - \$51,116					
	s of Sample				Ground Water Sample no	var Ash Pond			
	le Collected by				Shiva Test House on 7	3.06.23			
	ling Location				South side of Ash poud (i	fandpunp at Chak Ba	H VIII.)		
	d of Sampling				IS 3025, APHA		15 100-		
Market and the second s	ling Environmen				Temp. (°C)		fity(%) 35		
	of Sample Contr	ainer (No.	& Type of Cont.	ainer)	Polypropylene Bottle (2	2)	UI O COSTANII III III		
[h] Sample Quantity				2 Litres					
[i] Sample Code			BW-1950						
[j] Sample Condition on Receipt			Fit for analysis						
Items required to be tested Whether any specific Method of Test has been suggested by the customer			As per contract No						
	of receiving the		n Laboratory		13.06.23				
[n] Analys	sis Start Date /	Analysis	Completion Da	ate	14.06.23 / 17.06.23				
			100 100 100 100 100 100 100 100 100 100	STATE OF THE STATE OF	s per /S10500:2012	L MANAGEMENT CONT.			
Parameter	rs	Unit	Acceptable Limit	0.00	ssible Limit in the absence of alternative SOURCE	Method of Test	Results		
1. Iron a	s Fe	mg/l,	1.0		No relaxation	APHA3500	0.47		
Coppe	er as Cu	mg/L	0.05		1.50	APHA(3111B)	< 0.01		
3. Cadm	um as Cd	mg/l.	0.003		No Relaxation	APHA3111B	< 0.01		
4. Hexav	alent	mg/l.			***	IS 3025 (P-52)	<0.01		
5. Chron	nium as Cr	mg/L	0.05	No Relaxation		APHA(3111B)	<0.01		
6. Leada	as Pb	mg/l.	0.01		No Relaxation	APHA3111B	<0.01		
7. Total	Arsenic as As	mg/l.	0.01		0.05	APHA(3114B)	<0.01		
AT CARDON I				0.05					

AR PRASAD Date: 2023.06.29

SHIBESHW SHIBESHWAR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Presed Date: 2023,06.29 11:39:51 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyosee Prenad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/1951	Dx: 28,06.20	23	Your PO No. 4000283588	8-057-1019 D	20.07,2022		
[a] Name and address of the Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH J1, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample			Groundwater Sample nea	ir Ash Pond			
[c] Sample Collected by			Shiva Test House on 1	3.06.23			
[d] Sampling Location			East Side of Ash pond (H	andpump at Mahua VIII.	/		
[e] Method of Sampling			IS 3025, APHA				
[f] Sampling Environmental			Temp. (PC)	39 Humidity	(%) 35		
[g] Details of Sample Contained	r (No. & Type of Cant	ainer)	Polypropylene Bottle (2	?)	A-C-Paris - Comment		
[h] Sample Quantity			2 Litres				
[i] Sample Code		BW-1951					
Sample Condition on Receipt		Fit for analysis					
[k] Items required to be tested [l] Whether any specific Method of Test has been suggested by the customer [l] Stems required to be tested [l] Whether any specific Method of Test has been suggested by the customer.			As per contract No				
[m] Date of receiving the san			13.06.23				
[n] Analysis Start Date / Ana		ate	14.06.23 / 17.06.23				
			per IS10500:2012				
Parameters	Acceptable Limit	Permi	ssible Limit in the absence of alternative SOUTCE	Method of Test	Results		
1. Iron as Fe	1.0		No relaxation	APHA3500 FeB	0.49		
2. Copper as Cu	0.05		1.50	APHA(3111B)	< 0.0		
3. Cadmium as Cd	0.003		No Relaxation	APHA3111B	<0.0		
4. Hexavalent				IS 3025 (P-52)	<0.0		
5. Chromium as Cr	0.05		No Relaxation	APHA(3111B)	< 0.0		
6. Lead as Pb	0.01		No Relaxation	APHA3111B	<0.0		
7. Total Arsenic as As	0.01		0.05	APHA(3114B)	< 0.0		
A CONTRACTOR OF THE CONTRACTOR		0.05 No Relaxation					

Digitally signed by SHIBESHWAR PRASAD SHIBESHW AR PRASAD Date: 2023/06/29

Verified by : Dr. Shibeshwar Praxad Technical Manager



Shreyasee

Prasad

Digitally signed by Shreyasee Prasad Date: 2023:06:29 11:40:16 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Onality Manager

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Contact us:

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Wabsite: www.shivatest.com; www.shivatesthouse.com





SHIVA TEST HOUSE



(Serving since 1988)

RECOGINSED AS ENVIRONMENTAL LABORATORY BY MoEFCC, GOVT. OF INDIA, UNDER ENVIRONMENT (PROTECTION) ACT 1986, DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

Ref. N	o. STH/TR/23-24/1952 Dt:	28.06.2023	Your PO No. 40002	283588-057-1019	Dt: 20.07,202	
[a]	Name and address of the Custor	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample		Treated Effluent 5	Sample		
[c]	Sample Collected by		Shiva Test House	on 13.06.23		
[d]	Sampling Location		Collected from ETP O	utlet Stage #1		
[e]	Method of Sampling		IS 3025, APHA			
	Sampling Environmental Condi	etic in	Temp. (°C)	39 Humidity(%)	35	
[1]		OOB		39 Humidity(%)	35	
g	No. & Type of Container		Plastic Bottle			
[h]	Sample Quantity		2 Litres			
[i]	Sample Code		E-1952			
lil.	Sample Condition on Receipt		Fit for Analysis			
[k]	Items required to be tested		As per contract			
[1]	Whether any specific Method of been suggested by the party	No				
[m] Date of receiving the sample			13.06.23			
n] Analysis Start Date / Analysis Completion Date			- Contraction -			
		T I		Limit as per E (P)	1	
SI, no	Parameters	Unit	Method of Test	Rules	RESULTS	
1.	pH at 25 ¹ C	-	IS 3025 (Part-11)	5.5 - 9.00	7.78	
2	Oil & Grease	mg/L	IS 3025 (Part-39)	10.00 mg/l.	1.0	
3.	Ammonical Nitrogen as N	mg/L	IS 3025 (Part-34)	50.00 mg/l.	7.3	
4.	Total Kjeldahi Nitrogen as N	mg/t,	IS 3025 (Part-34)	100.00 mg/l_	10.1	
5.	BOD (3 days at 27°C)	mg/L	IS 3025 (Part-44)	100.00 mg/l	14.0	
6.	COD	mg/L	APHA (5220 B)	Not Specified	60,0	
7.	Arsenic as As	mg/L	APHA 3114 B	0.20 mg/l	< 0.20	
8.	Mercury as Hg	mg/l.	APHA 3112 B	0.01 mg/l.	< 0.001	
9.	Lead as Pb	mg/l	APHA 3111 B	0,10 mg/l.	<0.1	
10.	Cadmium as Cd	mg/l.	APHA 3111 B	2.00 mg/l	<0.1	
11.	Hexavalent Chromium as Cr-6	mg/l.	IS 3025 (Part-52)	0.10 mg/l	< 0.1	
12.	Total Chromium as Cr	mg/l.	IS 3025 (Part-52)	2.00 mg/L	<0.1	
13.	Copper as Cu	mg/l.	APHA 3111 B	3.00 mg/l.	≪3.0	
14.	Zinc as Zn	mg/l.	APHA 31118	5.00 mg/l.	0.10	
15.	Iron as Fe	mg/l.	IS 3025 (Part-53)	3.00 mg/l.	0.4	
16.	Nickel as Ni	mg/L	APHA 3111 B	3.00 mg/l.	< 0.1	
17.	Boron as B	mg/L	APHA 4500 B B	Not Specified	0.08	
18.	Fluoride as F	mg/L	APHA (4500 F D)	2.00 mg/l.	0.4	
19.	Dissolved Phosphates as P	mg/L	IS 3025 (Part-31)	5.00 mg/l.	0.79	
20.	Sulphide as S	mg/l	APHA 4500 S ² F	2.00 mg/l.	<0.1	
21.	Sulphate as 5O4	mg/L	153025(Part-24)	Not Specified	42.8	

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.86.29

Verified by: Dr. Shibeshwar Prasud Technical Manager



Shreyasee Prasad

Signals oper by Heymon Preset Core 2012 06-29 11-40-88 +05/2 E

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us:

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TEST REPORT

Ref.	No. STH/TR/23-24/1952(A) D	t: 28.06.2023		0283588-057-1019	Di: 20.07.2022	
[a] Name and address of the Customer			NTPC LIMITED BARAUNI THERMA NH 31, BARAUNI BEGUSARAI – 8	L Power Plant Project	म	
[6]	Details of Sample		Treated Effluent	Sample		
[c]	Sample Collected by		Shiva Test House			
[d]	Sampling Location		Collected from ETP (Outlet Stage #1		
[e]	Method of Sampling		IS 3025, APHA			
(f)	Sampling Environmental Condition	Sep.	Temp. (°C)	39 Humidity	v(%) 35	
-	The state of the s	on .	Plastic Bottle	38 Hullium	(30) 22	
[g]	No. & Type of Container					
[h]	Sample Quantity		2 Litres			
[1]	Sample Code		E+1952			
U	Sample Condition on Receipt		Fit for Analysis			
[k] Items required to be tested			As per contract			
 Whether any specific Method of Test has been suggested by the party 			No			
[m] Date of receiving the sample			13.06.23			
[n]	Analysis Start Date / Analysis Co	moletion Day	11.77.77.77.77.77	2.7		
SI.	Parameters	Unit	Method of Test	Limit as per E (P) Rules	RESULTS	
t.	Particle size of Suspended Solids	_	122	Shall pass 850 micron IS Sieve	Passes Test (850 micron)	
2.	Temperature	90		Shall not exceed 5°C above the receiving water temp.	23.0	
3.	Colour	Hazen	IS 3025 (Part-4)	Colourless	<5.0	
4.	Odour	-	IS 3025 (Part-4)	Odourless	Odcurless	
5.	Suspended Solids	mg/L	IS 3025 (Part-17)	100.00 mg/l.	28.0	
6.	Selenium as Se	mg/l.	APHA 3500 Se	0.05 mg/t.	< 0.01	
7.	Free Ammonia as NH:	mg/l.	APHA 4500 NH ₂ C	5.0 mg/l.	<1.0	
8.	Percent Sodium	mg/l		Not Specified	10.8	
9.	Residual Sodium Carbonate	me/l.	****	Not Specified	4.08	
10.	Cyanide as CN	mg/L	IS 3025 (Part-37)	0.20 mg/L	<0.1	
11.	Phenolic Compound as CaHaOH	mg/l.	APHA 6420 B	1.00 mg/L	< 0.001	
12.	Chloride	mg/l.	IS3025(Part-32)	Not Specified	0.88	
13.	Total Residual Chlorine	mg/l.	IS3025(Part-26)	1,00mg/L	50.1	
14.	Total Dissolved Bolids	mg/L	IS3025(Part-16)	Not Specified	879.0	
15.	Big-Assay Test	-	IS 6582 1971	90 % Fish Survived after 96 hrs. in 100% Effluent	96 % Fish Surviver after 96 krs. in 1001 Conc* Of Treated Effluent	

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD (Note: 2023.06.29)

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

DOCETY HAVE BY STAYMON Penast Date: (IID) 06-29 (IDE) (IL + (II) ID)

Authorized Signatory Dr. (Mes.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	o. STH/TR/23-24/1953 Dt	: 28.06.2023	Your PO No. 4000:	283588-057-1019	Dt: 20.07.202
[a] Name and address of the Customer			NTPC LIMITED BARAUNI THERMA NH 31, BARAUNI BEGUSARAI – 8	L POWER PLANT PROJECT	en.
[b]	Details of Sample		Treated Effinent !	Sample	
[c]	Sample Collected by		Shiva Test House	on 13.06.23	
[d]	Sampling Location		Collected from ETP C		
[e]	Method of Sampling		IS 3025, APHA		
[f]	Sampling Environmental Cond	itisen.	Temp. (°C)	39 Humidity(%)	35
A STATE OF THE STA		mon	Plastic Bottle	39 numbuly(%)	20
[g]	No. & Type of Container				
[h]	Sample Quantity		2 Litres		
[1]	Sample Code		E-1953		
[]]	Sample Condition on Receipt		Fit for Analysis		
[k]	Items required to be tested		As per contract		
[1]	Whether any specific Method of been suggested by the party	No			
[m]	Date of receiving the sample	13.06.23			
[n]	Analysis Start Date / Analysis				
SI. no	Parameters	Unit	Method of Test	Limit as per E (P) Rules	RESULTS
1.	pH at 25° C		IS 3025 (Part-11)	5.5 - 9.00	8.35
2.	Oil & Grease	mg/l.	IS 3025 (Part-39)	10.00 mg/l.	0.70
3.	Ammonical Nitrogen as N	mg/l.	IS 3025 (Part-34)	50.00 mg/l.	9.52
4.	Total Kjeldahl Nitrogen as N	mg/l.	IS 3025 (Part-34)	100.00 mg/l.	13.4
5.	BOD (3 days at 27°C)	mg/l	IS 3025 (Part-44)	100.00 mg/L	12.0
6.	COD	mg/l.	APHA (5220 B)	Not Specified	44.0
7.	Arsenic as As	.Pgm	APHA 3114 B	0.20 mg/l.	< 0.20
8.	Mercury as Hg	mg/l	APHA 3112 B	0.01 mg/l.	< 0.001
9.	Lead as Pb	mg/l.	APHA 3111 B	0.10 mg/l.	<0.1
10.	Cadmium as Cd	mg/l.	APHA 3111 B	2.00 mg/l.	< 0.1
11.	Hexavalent Chromium as Cr ⁺⁶	mg/l.	IS 3025 (Part-52)	0.10 mg/l.	< 0.1
12.	Total Chromium as Cr	mg/l.	IS 3025 (Part-52)	2,00 mg/l.	< 0.1
13.	Copper as Cu	mg/l.	APHA 3111 B	3,00 mg/l.	<3.0
14.	Zinc as Zn	mg/l	APHA 3111 B	5,00 mg/l.	0.08
15.	Iron as Fe	mg/l	IS 3025 (Part-53)	3.00 mg/l.	0.37
16.	Nickel as Ni	mg/l	APHA 3111 B	3.00 mg/l,	< 0.1
17.	Boron as B	mg/l.	APHA 4530 B B	Not Specified	0.08
18,	Fluoride as F	mg/l.	APHA (4500 F D)	2,00 mg/l,	0.39
19.	Dissolved Phosphates as P	mg/l.	IS 3025 (Part-31)	5.00 mg/l.	0.62
20.	Sulphide as S	mg/l,	APHA 4500 S ² F	2.00 mg/l,	< 0.1
21	Sulphate as SO4	mg/L	IS3025(Part-Z4)	Not Specified	46.4

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.29

Verified by : Dr. Shibeshwar Prosad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2021.06.29 11541-39+0530 Authorized Signatory Dr. (Mrs.) Shreyasee Prasad

Quality Manager

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TEST REPORT

Ref.	No. STH/TR/23-24/1953(A)	Dt: 28,06,2023	2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	00283588-057-1019	Dt: 20,07.2022		
[a] Name and address of the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample		Treated Effluent	Sample			
[c]	Sample Collected by		Shiva Test House	e on 13.06.23			
[d]	Sampling Location		Collected from ETP (Outlet Stage #2			
[e]	Method of Sampling		IS 3025, APHA				
III	Sampling Environmental Condition	ner	Temp. (°C)	39 Humidit	v(%) 35		
[g]	No. & Type of Container		Plastic Bottle	ou roman	7(707 00		
[h]	Sample Quantity		2 Litres				
	Sample Code		E-1953				
[i]	Control Contro						
111	Sample Condition on Receipt		Fit for Analysis				
[k] Items required to be tested			As per contract				
 Whether any specific Method of Test has been suggested by the party 			No				
[m] Date of receiving the sample			13.06.23	13.06.23			
[n]	Analysis Start Date / Analysis Co	empletion Dat	e 14.06.23 / 17.06.	23			
SI.	Parameters	Unit	Method of Test	Limit as per E (P) Rules	RESULTS		
1,	Particle size of Suspended Solids	_	-	Shall pass 850 micron IS Sieve	Passes Test (850 micron)		
2	Temperature	oC.	3490	Shall not exceed 5°C above the receiving water large.	22.0		
3.	Colour	Hazen	IS 3025 (Part-4)	Colourless	<5.0		
4	Odour	-	IS 3025 (Part-4)	Odourless	Odourless		
5.	Suspended Solids	mg/l.	IS 3025 (Part-17)	100.00 mg/l.	21.0		
6.	Selenium as Se	mg/l.	APHA 3500 Se	0.05 mg/l.	<0.01		
7.	Free Ammonia as NHo	mg/L	APHA 4500 NHs C	5.0 mg/l.	<1.0		
8.	Percent Sodium	mg/l.	Control of the Contro	Not Specified	10.2		
9.	Residual Sodium Carbonate	me/l.	****	Not Specified	4.34		
10,	Cyanide as CN	mg/l.	IS 3025 (Part-37)	0.20 mg/l	<0.1		
11.	Phenolic Compound as C ₆ H ₅ OH	mg/l.	APHA 6420 B	1.00 mg/l.	<0.001		
12,	Chloride	mg/L	IS3025(Part-32)	Not Specified	102.0		
13,	Total Residual Chlorine	mg/l.	153025(Part-26	1.00mg/l.	<0.1		
14,	Total Dissolved Solids	mg/l.	183025(Fart-16	Not Specified	853.0		
15.	Bio-Assay Test	=	IS 6582 : 1971	90 % Fish Survived after 86 hrs. In 190% Effluent	96 to Fish Survives after 98 fros. in 1001 Conch of Triested Etherst		

SHIBESHW AR PRASAD Date: 2023,06.29

Digitally signed by SHIBESHWAR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:42:08 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prauad Quality Manager

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TEST REPORT

[8]	Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample	Coal Sample				
[c]	Sample Collected by	SHIVA TEST HOUSE on 13.06.23				
[d]	Sampling Location	From Coal Storage Yard				
[e]	Sampling Environmental Condition	Temp. (°C) 39 Humidity(%) 35				
[f]	Details of Sample Container (No. & Type of Container)	Two Poly Bags				
[9]	Sample Quantity	2 kg.				
[h]	Items required to be tested	As per contract				
[1]	Whether any specific Method of Test has been suggested by the customer	No				
	Date of receiving the sample in Laboratory	13.06.23				
[k]	Analysis Start Date / Analysis Completion Date	13.06.23 / 16.06.23				
14.3	Parameters	Results (w/w)				
1.	Mercury as Hg, %	<0.1				
2	Copper as Cu, %	0,23				
3.	Zinc as Zn, %	2.9				
4.	Chromium as Cr. %	0.17				
5.	Magnesium as Mg. %	1.8				
6.	Arsenic as As, %	0.04				
7.	Selenium as Se, %	<0.01				
8.	Nickel as Ni, %	0.17				
9.	Cadmium as Cd, %	<0.1				
10	Lead as Pb, %	0.09				
11.	Cobalt as Co. %	<0.1				
12.	Sulphur Content, %	0.75				

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023,06,29

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11/42/46 +05'38'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Website: newspheratest.com, powershipatesthouse.com



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TEST REPORT

[a] Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI - 851 116				
[b] Details of Sample	Fly Ash Sample				
[c] Sample Collected by	SHIVA TEST HOUSE on 13.06.23				
[d] Sampling Location	Collected from Unit 8				
[e] Sampling Environmental Condition	Temp. (°C) 39 Humidity(%) 35				
[f] Details of Sample Container (No. & Type of Container)	Two Poly Bags				
[g] Sample Quantity	2 kg.				
[h] Items required to be tested	As per contract				
 Whether any specific Method of Test has been suggested by the customer 	No				
(j) Date of receiving the sample in Laboratory	13.06.23				
[k] Analysis Start Date / Analysis Completion Date	13.06.23 / 16.06.23				
Parameters	Results (w/w)				
1. Silica as SiO ₂ , %	50.5				
2. Alumina as Al ₂ O ₃ , %	21.6				
 Iron as Fe₂O₃, % 	4,9				
4. Calcium as CaO, %	1.6				
5. Magnesium as MgO, %	1.2				
6. Titania as TiO ₂ , %	1.0				
7. Potassium as K₂O, %	0.92				
8. Sodium as Na ₂ O ₄ %	0.40				
9. Phosphate as P ₂ O ₅ , %	0:33				
10. Sulphate as SO ₃ , %	0.67				
11. Mercury as Hg, %	<0.01				
12. Arsenic as As, %	<0.01				
13. Lead as Pb. %	0.080				

SHIBESHW Mightally signed by SHIRESHWAR PRASAC AR PRASAD 11:28:54 + 69:307

Verified by : Dr. Shiheshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:43:48 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Praxad Quality Manager

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TEST REPORT

[a] Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116
[b] Details of Sample	Bottom Ash Sample
[c] Sample Collected by	SHIVA TEST HOUSE on 13.06.23
[d] Sampling Location	From Bostom Ash hopper
[e] Sampling Environmental Condition	Temp. (³ C) 39 Humidity(%) 35
[f] Details of Sample Container (No. & Type of Container)	Two Poly Bags
[g] Sample Quantity	2 kg.
[h] Items required to be tested	As per contract
 Whether any specific Method of Test has been suggested by the customer 	No
[j] Date of receiving the sample in Laboratory	13.06.23
[k] Analysis Start Date / Analysis Completion Date	13.06.23 / 16.06.23
Parameters	Results (w/w)
1. Silica as SiO ₂ , %	53.0
2. Alumina as Al ₂ O ₃ , %	23.0
3. Iron as Fe ₂ O ₅ , %	5.6
4. Calcium as CaO, %	1.5
5. Magnesium as MgO, %	1.6
6. Titania as TiOz, %	1.0
7. Potassium as K₂O, %	1.0
8. Sodium as Na ₂ O, %	0.58
9. Phosphate as P ₂ O ₅ , %	0.47
10. Sulphate as SO ₃ , %	0.55
11. Mercury as Hg, %	<0.01
12. Arsenic as As, %	<0.01
13. Lead as Pb, %	0.020

SHIBESHW AR PRASAD Date: 2023.06.29

Digitally signed by SHIBESHWARPRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyesee Prasad Date 2023.06-29 11:44.53 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prusad Quality Manager

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ethpatra Files abon on as . infer@shivatest.com

Website www.shrutest.com., www.sbryatesthussc.com



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TEST REPORT

Ref. No. STH/NN/TR/23-24/42 Dt: 28.06.2023 Your PO	No. 4000283588-057-1019 Dt: 20.07.2022 NTPC LIMITED							
[a] Name and address of the Customer	BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample	Pond Ash Sample							
[c] Sample Collected by	SHIVA TEST HOUSE on 13.06.23							
[d] Sampling Location	From Ash Pond							
[e] Sampling Environmental Condition	Temp. (°C) 39 Humidity(%) 35							
[f] Details of Sample Container (No. & Type of Container)	Two Poly Bags							
[g] Sample Quantity	2 kg.							
[h] Items required to be tested	As per contract							
 Whether any specific Method of Test has been suggested by the customer 	No							
Date of receiving the sample in Laboratory	13.06.23							
[k] Analysis Start Date / Analysis Completion Date	13.06.23 / 16.06.23							
Parameters	Results (w/w)							
1. Silica as SiO ₂ , %	53.1							
2. Alumina as Al ₂ O ₃ , %	19.9							
 Iron as Fe₂O₃, % 	7.2							
4. Calcium as CaO, %	1.4							
Magnesium as MgO, %	1.0							
6. Titania as TiO ₂ , %	1.19							
Potassium as K₂O, %	0.96							
8. Sodium as Na ₂ O, %	0.84							
9. Phosphate as P ₂ O ₅ , %	0.60							
10. Sulphate as SO ₃ , %	0.87							
11. Mercury as Hg, %	<0.01							
12. Arsenic as As, %	<0.01							
13. Lead as Pb, %	0.028							

SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.29

Verified by : Dr. Shibeshwar Prasud Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Frasad Date: 2023.66.29 11:45:24 +05'30"

Authorized Signatory Dr. (Mrs.) Shveyasee Prasad Quality Manager

- END OF TEST REPORT-

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Contact us:

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Milb.: +918676886249; +919431947908 suparmit (Eychoo co.m.; info@shavatest.com

Website uwn shreast com www.shivateshoase.com





SHIVA TEST HOUSE



(Serving since 1988)

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TEST REPORT

Ref. N	io. STH/TR/23-24/2889	DE 02.08.2023	Y	our PO No.	4000283588-0	57-1019 Dt	20.07,202			
[a] 1	Name and address of the Custom	er		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground Water Sample						
-	Sample Collected by				njan Kumar (se on 21.07.2	Lab Representative) 23	of Shiva			
	Sampling Location			Collected j	um Borewell n	ear Mandir, stage 1				
	Nethod of Sampling			IS: 3025,	A STATE OF THE PARTY OF THE PAR					
	Sampling Environmental Condition			Temp (⁰ c		34 Humidity (*	(4) 70			
	Details of Sample Container (No.	& Type of Cont	tainer)		ylene bottle (0	12)	VIII			
	Sample Quantity			2 Liters						
**	Sample Code		BW-2889							
	Sample Condition on Receipt		Fit for analysis							
	tems required to be tested			As per contract						
	Whether any specific Method of To uggested by the customer	est has been		No.						
	ate of receiving the sample in La			22.07.23						
[n] A	nalysis Start Date / Analysis Con	npletion Date		22.07.23	/25.07.23					
					Limit as p					
S.N.	Parameters	Unit	Method	of Test	Limit (mg/l.) Acceptable	Permissible Limit in the absence of alternative source	Results			
	pH at 25°C		IS 3025	(Part-11)	6.5	8.5	7.37			
2	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	280.0			
3.	Conductivity	μmhos/cm	18 3025	(Part-14)	No	Specified	475.0			
4.	Turbidity on NTU	NTU	18 3025	(Part-10)	1.0	5.0	0.8			
5.	Total Alkalinity as CaCO ₃	mg/l.	IS 3025	(Part-23)	200.00	600.00	202.0			
5.	Total Hardness as CaCO ₃	mg/l.	The state of the Auto-Auto-Auto-Auto-Auto-Auto-Auto-Auto-	(Part-21)	200.00	600.00	170.0			
7	Sodium as Na	mg/l	mediated and service project advancing	Part-45)		Specified	40.1			
3.	Sulphate as SO ₄	mg/L		(Part-24)	200.00	400.00	24.3			
9.	Nitrate as NO ₂	mg/l.	THE RESERVE AND ADDRESS OF THE PARTY OF THE	Part-34)	45.00	No relaxation	2.32			

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.08.02

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.08.02 17:47:59 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	io. STH/TR/23-24/2889(A)	Dt: 02.08.2023	3	Your PO N	. 4000283588	-057-1019	D	: 20.	07.202	
[a] h	Name and address of the Custon	mer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground Water Sample						
[c] S	Sample Collected by				injan Kumar (ise on 21.07.2		esentative)	of Sh	iva	
[d] S	Sampling Location			Collected)	row Barewell n	ear Mandir	stage 1			
	Method of Sampling			IS: 3025						
[f] S	Sampling Environmental Conditi	on		Temp (%)	34	Humidity(%	9	70	
[g] [Details of Sample Container (No	ntainer)	Polypropylene bottle (02)							
[h] 8	to the transport of the second				2 Liters					
[] 8	The state of the s				8W-2889					
[] 5	Sample Condition on Receipt			Fit for analysis						
[k] I	tems required to be tested			As per contract						
	Whether any specific Method of suggested by the customer	Test has been		No						
[m] [Date of receiving the sample in L	aboratory		22.07.23						
[n] A	Analysis Start Date / Analysis Co	mpletion Date	()	22.07.23	/25.07.23					
		Ui .		011	Limit as p	er IS 1050	00: 2012			
S.N.	Parameters	Unit	Method	i of Test	Limit (mg/L) Acceptable	Permissit the abser alternative		Re	su/ts	
t.	Dissolved Oxygen	mg/l,	183025	(Part-38)	No	t Specified		- 4	.2	
2.	BOD (3 days at 27°C)	mg/l	153025	(Part-44)	No	t Specified	1	<	0.1	
3,	COD	mg/l		(Part-58)		t Specified			.0	
4.	Total Suspended Solids	mg/l.	-	(Part-17)		t Specified			2.0	



Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.08.02 17:39:38 +05'30'

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad Date: 2023.08.02

Digitally signed by 17:48:17 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	lo. STH/TR/23-24/2890 I	0t: 02.08.2023	Y	our PO No.	4000283588-0	57-1019 Do	20,07,202			
[a] !	Name and address of the Custom	er		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground Water Sample						
[c] 8	Sample Collected by				njan Kumar (se on 21.07.1	Lab Representative) 23	of Shiva			
	Sampling Location			Collected for	rom Hand pump	near ash dyke				
	Method of Sampling			IS: 3025.	APHA	locus III IV mostin	and the second			
	Sampling Environmental Condition			Temp (°c		34 Humidity(5	6) 70			
	Details of Sample Container (No.	Type of Con	tainer)		ylene bottle (i	02)				
	Sample Quantity		- 4	2 Liters		100				
	Sample Code	GW-2890								
	Sample Condition on Receipt	Fit for an	And Breight and Committee							
	tems required to be tested		As per co	entract						
	Whether any specific Method of Transgested by the customer	est nas been		No						
[m] E	Date of receiving the sample in La	boratory		22.07.23						
[n] A	Analysis Start Date / Analysis Con	pletion Date		22.07.23	/25.07.23					
				-507000000	Limit as p					
S.N.	Parameters	Unit	Method	of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Results			
	pH at 25°C		IS 3025	(Part-11)	6.5	8.5	7,05			
2,	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	420.0			
3,	Conductivity	μmhos/cm	IS 3025	(Part-14)	No	t Specified	713.0			
1.	Turbidity on NTU	NTU	IS 3025	(Part-10)	1.0	5.0	0.9			
5.	Total Alkalinity as CaCO ₃	mg/l.	IS 3025	(Part-23)	200,00	600.00	264.0			
5.	Total Hardness as CaCO ₃	mg/l.	IS 3025	(Part-21)	200.00	600.00	222.0			
	Sodium as Na	mg/l	IS3025(F	Part-45)	No	Specified	44.09			
3.	Sulphate as SO ₄	mg/l,	IS 3025	(Part-24)	200.00	400.00	25.32			
2										

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.08.02

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shveyasee Prasad Date: 2023.08.02 17:48:30 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	io. STH/TR/23-24/2890(A)	Dt: 02.08.2023	5	Your PO No	4000283588	-057-1019	Dt: 20	.07.202		
[a] 1	Name and address of the Custon	mer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground V	Vater Sample					
[c] S	Sample Collected by				injan Kumar (ise on 21.07.1	Lab Representativ 23	e) of S	hiva		
[d] S	Sampling Location			Collected J	ow Hand proup	wear ash dyke				
[e] 1	Method of Sampling			IS: 3025,						
[1] 5	Sampling Environmental Conditi	on		Temp (%c)	34 Humidity	(%)	70		
[g] [Details of Sample Container (No	tainer)	Polypropylene bottle (02)							
[h] S	Sample Quantity	2 Liters								
[1] \$	The state of the s				GW-2890					
[] 5	Sample Condition on Receipt			Fit for analysis						
[k] I	tems required to be tested			As per contract						
	Whether any specific Method of suggested by the customer	Test has been		No						
[m] [Date of receiving the sample in L	aboratory		22.07.23						
[n] A	Analysis Start Date / Analysis Co	mpletion Date		22.07.23	/ 25.07.23					
				THE DISTRIBUTION OF THE PARTY.	Limit as p	er IS 10500: 2012				
S.N.	Parameters	Unit	Method	of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of atternative source	R	esults		
1.	Dissolved Oxygen	mg/l. IS3025(I		(Part-38)	No	t Specified	1 0	4.6		
2,	BOD (3 days at 27°C)	mg/l	IS3025	(Part-44)	No	t Specified		< 0.1		
3.	COD	mg/l	IS3025	Part-58)		t Specified		1.0		
4.	Total Suspended Solids	mg/l.	IS 3025	(Part-17)	10/10/	t Specified		16.0		



SHIBESHW Digitally signed by SHIBESHWAR PRASAD Digitally 2023.08.02 17.39:57 +05'30'

Verified by : Dr. Shibeshvar Prasad Technical Manager Shreyasee

Prasad

Digitally signed by Shreyasee Przsad Date: 2023.08.02 17:48:42 +05'30'

Page 1 of 1

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/2892	Dt: 02.08,202	3 Your PO	No. 4000	283588-057-1019	Dt	20.07.2	022	
[a] Name and address of the	Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample			Treated Effluent Sample					
[c] Sample Collected by				tranjan Kumar (Lab Test House on 21.07		ntative)	of	
[d] Sampling Location			ETP O	utlet Stage I				
[e] Method of Sampling	122 m. 125 m.		IS 302	5, APHA		98V		
[f] Sampling Environmenta			Temp.		Humidity	(%)	70	
[g] Details of Sample Conta	iner (No. & Type of	f Container)		opylene Battle (02)				
h] Sample Quantity			2 Litres					
ii Sample Code		E-2892						
Sample Condition on Re				analysis				
[k] Items required to be test			As per	contract				
 Whether any specific Me by the customer 	ethod of Test has b	een suggested	No					
[m] Date of receiving the sar		ý	22.07.23					
[n] Analysis Start Date / An.	alysis Completion D	Date	22.07.23 / 25.07.23					
Parameters	Unit	Method of	Test	Standards as E(P) Rules Sche VI		Resu	ılts	
 pH at 25°C 		IS 3025 (Par	rt-11)	6.5 - 8.5		7.6	7	
2. Conductivity	μmhos/cm.	IS 3025 (Par	rt-14)	Not Specified	d	1588	3,0	
 Total Suspended Solids 	mg/l,	IS 3025 (Par	rt-17)	100		32.	0	
4. Total Dissolved Solids	mg/l.	IS 3025 (Par	rt-16)	Not Specified	d	862	.0	
5. B.O.D. (3 days at 27°C)	mg/l.	IS 3025 (Par		30		16	0	
6. C.O.D.	mg/l.	APHA (522	A STATE OF THE PARTY OF T	250		68.	_	
7. Oil & Gresse	mg/l.	IS 3025 (Par		10		1.1	_	

SHIBESHW Digitally signed by SHIBESHWAR FRASAD AR PRASAD Date: 2023.08.02

Verified by: Dr. Shibeshwar Prasad Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.08.02 17:49:18 +05'30'

Page I of I

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us :

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TEST REPORT

Ref.	No. STH/TR/23-24/2893	Dt: 02.08.2	2023 Your PO	No. 40	00283588-057-1	019	20.07.2	022	
[a]	Name and address of the	Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample			Trea	ted Effluent Sar	nple			
[c]	Sample Collected by			By C	hitranjan Kuma a Test House or	r (Lab Repres	sentative)	of	
[d]	Sampling Location			ETP	Outlet Stage II				
[e]	Method of Sampling			IS 30	25, APHA		Carrier Sur		
[f]	Sampling Environmental	Condition		and the second	p. (°C) 36	1,100,1100	ty (%)	70	
[g]	Details of Sample Conta	iner (No. & Type	of Container)	Poly	propylene Bottle	(02)			
[h]	Sample Quantity		2 Litres						
[1]	Sample Code		E-2893						
Ol .	Sample Condition on Re			Fit for analysis					
[k]	Items required to be test			As p	er contract				
[1]	Whether any specific Me by the customer	thod of Test has	been suggested	No					
[m]	Date of receiving the sar	mple in Laborato	ry	22.07.23					
n	Analysis Start Date / Ana	alysis Completio	n Date	22.0	7.23 / 25.07.23	i seconos y			
Pai	rameters	Unit	Method of Tes	t	Standards as Rules Scho		Resu	ilts	
1.	pH at 25°C		iS 3025 (Part-11	1)	6.5 - 8	8.5	8.1	4	
2.	Conductivity	μmhos/cm.	IS 3025 (Part-14	\$)	Not Spe	cified	1556	0.6	
3.	Total Suspended Solids	mg/l.	IS 3025 (Part-17	7)	100	E CONTRACTOR OF THE PARTY OF TH	25.	0	
4.	Total Dissolved Solids								
5.	B.O.D. (3 days at 27°C)	mg/l.	IS 3025 (Part-44		30		13.	0	
8.	C.O.D.	mg/l.	APHA (5220 B)		250		52.	0	
7.	Oil & Grease	mg/l.	IS 3025 (Part-39	-	10		3.0		

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.08.02

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023/08/02 17:49:55 +05'30"

Authorized Signatory Dr. (Mrx.) Shreyasee Prasad Quality Manager

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Contact us :

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Website: www.shivatest.coch; www.shivatesthouse.com









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TEST REPORT

Ret. N	lo. STH/TR/23-24/3833 D	t: 05.09.2023	Y	our PO No.	4000283588-0	\$7-1019 DE	20.07.202			
[a] P	Name and address of the Custome	et.		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground Water Sample						
[c] S	Sample Collected by				njan Kumar (i se on 21.08.2	Lab Representative) 3	of Shiva			
[d] S	Sampling Location			Collected fi	on Barewell ne	sar Mandir, stage 1				
	Method of Sampling			IS: 3025.						
	Sampling Environmental Condition			Temp (%c		33 Humidity (9	6) 69			
	Details of Sample Container (No. 8	Type of Cont	ainer)		ylene battle (C	12)				
	Sample Quantity			2 Liters	CANDON STORY THAT	10				
	A PARTY OF A PROPERTY OF THE PARTY OF THE PA				BW-3833					
	M provide the provide the second control with the Motor				alysis					
					As per contract					
	Whether any specific Method of To suggested by the customer	st has been		No						
	Date of receiving the sample in La	boratory		23.08.23						
	Analysis Start Date / Analysis Con			23.08.23	/30.08.23	115				
					Limit as per IS 10500: 2012					
S.N.	Parameters	Unit	Method	of Test	Limit (mg/l.) Acceptable	Permissible Limit in the absence of alternative source	Results			
10	pH at 25°C		IS 3025	(Part-11)	6.5	8.5	8.41			
2,	Total Dissolved Solids (TDS)	mg/l.	IS 3025	(Part-16)	500.00	2000.00	353.0			
3.	Conductivity	µmhos/cm	IS 3025	(Part-14)	Not	Specified	671.0			
4.	Turbidity on NTU	NTU	IS 3025	(Part-10)	1.0	5.0	0,9			
5.	Total Alkalinity as CaCO ₃	mg/l.	IS 3025	(Part-23)	200.00	600.00	282.0			
3.	Total Hardness as CaCO ₃	mg/l.	IS 3025	(Part-21)	200.00	600.00	250.0			
7,	Sodium as Na	mg/l	183025(Part-45)	No	Specified	43.1			
	Sulphate as SO₄	mg/l.	IS 3025	(Part-24)	200.00	400.00	26.2			
8.	Calpitale as COE									



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023 09:05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Digitally signed by Shreyasee Prasad Shreyasee Pratad Date: 2023.09.05 11:40:52 +05'30'

> Authorized Signatory Dr. (Afrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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athpamal@vahoo.co.in : info@shivatest.com

Website: www.shivatest.com; www.shivatesthouse.com





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TEST REPORT

Ref. N	lo. STH/TR/23-24/3833(A)	Dt: 05,09.2023	3	Your PO No	, 4000283588	-057-1019	Dr: 20.07.2			
[a] N	Name and address of the Custo	mer		NH 31, B	THERMAL PO	WER PLANT PROJECT	t			
[b] [Details of Sample			Ground Water Sample						
[c] S	Sample Collected by				injan Kumar (ise on 21.08.)	Lab Representative 23	e) of Shiva			
[d] S	Sampling Location			Collected J	rom Borewell n	ear Mandir, stage 1				
[e] A	Method of Sampling			IS: 3025			we like the			
[1] 5	Sampling Environmental Condition)	33 Humidity	(%) 6			
[9] [Polypropylene bottle (02)					
	Sample Quantity		O ACMINICAL	2 Liters						
[1] 5	Sample Code			GW-3833						
[1] 5	Sample Condition on Receipt			Fit for analysis						
[k] I	tems required to be tested			As per contract						
	Whether any specific Method of suggested by the customer	Test has been		No						
[m] [Date of receiving the sample in I	Laboratory		23.08.23	i					
[n] A	Analysis Start Date / Analysis Ci	ompletion Date		23.08.23	/30.08.23					
			1	II ISSUEDO CONTRACTO	Limit as p	er IS 10500: 2012	1			
S.N.	Parameters	Unit	Method	d of Test	Limit (mg/L) Acceptable	Parmissible Limit in the absence of alternative source	Result			
1.	Dissolved Oxygen	mg/L	IS3025	(Part-38)	No	t Specified	4.8			
2.	BOD (3 days at 27°C)	mg/l	IS3025	(Part-44)	No	t Specified	< 0.1			
	the second secon			The state of the s						

IS3025(Part-58)

IS 3025 (Part-17)



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.09,05

Verified by: Dr. Shiheshwar Prasad Technical Manager

Shreyasee Digitally signed by Shreyasee Prasad Prasad

Not Specified

Not Specified

Date: 2023,09.05 11:41:10+05'30'

1.0

13.0

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT-

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mg/l

mg/l.

Contact us:

3.

4.

COD

Total Suspended Solids

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Website: nww.shrutest.com; www.shrutesthusse.com





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TEST REPORT

Ref. N	io. STH/TR/23-24/3834	0: 05.09.2023	Y	sur PO No.	4000283588-0	57-1019 Do	20.07.202			
[a] t	Name and address of the Custom		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] [Details of Sample			Ground V	Vater Sample					
[c] S	Sample Collected by				njan Kumar (se on 21.08.2	Lab Representative) 23	of Shiva			
	Sampling Location			Collected fi	on Hand pump	near ash dyka				
	Method of Sampling			IS: 3025,		OBCUMBON COM.				
	Sampling Environmental Condition		e est to Unit	Temp (°c		33 Humidity (5	6) 69			
	Details of Sample Container (No. of Sample Quantity	& Type of Cont	tainer)	Polyprop 2 Liters	ylene bottle (0	02)	A 31 75			
[i] S	Sample Code		GW-3834							
01 5	Sample Condition on Receipt		Fit for analysis							
					As per contract					
	Whether any specific Method of To suggested by the customer		No							
	Date of receiving the sample in La	boratory		23.08.23						
[n]. /	Analysis Start Date / Analysis Con	npletion Date		23.08.23	/30.08.23					
	2.9				Limit as p					
S.N.	Parameters	Unit	Method	of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Results			
1.	pH at 25°C	*****	IS 3025	(Part-11)	6.5	8.5	7.59			
2.	Total Dissolved Solids (TDS)	mg/L	IS 3025	(Part-16)	500.00	2000.00	391.0			
3.	Conductivity	µmhas/cm	IS 3025	(Part-14)	No	t Specified	735.0			
4.	Turbidity on NTU	NTU	18 3025	(Part-10)	1.0	5.0	1.0			
5.	Total Alkalinity as CaCO ₃	mg/L	IS 3025	(Part-23)	200.00	600,00	336.0			
5.	Total Hardness as CaCO ₂	mg/l.	IS 3025	(Part-21)	200.00	600.00	282.0			
7.	Sodium as Na	mg/l	IS3025(Part-45)	No	Specified	44.09			
C+	THE RESERVE OF THE PARTY OF THE	-	10.0005	(D-104)	200.00	400.00	06.49			
8.	Sulphate as SO ₄	mg/l.	15.3025	(Part-24)	200.00	400,00	25,17			



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023,09.05

Verified by: Dr. Shibeshear Prasad Technical Manager

Shreyasee Prasad Shreyasee Prasad Date: 2023.09.05

Digitally signed by 11:41:20 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	o. STH/TR/23-24/3834(A)	Dt: 05.09.2023	3	Your PO No	. 4000283588	-057-1019	Dt:	20.07.20		
[a] N	Name and address of the Custor	ner		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] [Details of Sample			Ground Water Sample						
[c] S	Sample Collected by				njan Kumar (se on 21.08.2	Lab Represer 23	itative) o	f Shiva		
[d] S	Sampling Location			Collected j	roor Hand pump	moor ash dyke				
	Method of Sampling			IS: 3025,	APHA.	arronachusian				
	Sampling Environmental Condition			Temp (⁶ c			nicity (%)	65		
[g] [Details of Sample Container (No	rtainer)	Polypropylene bottle (02)							
	Sample Quantity	2 Liters								
[1] \$					GW-3834					
[] 5	Sample Condition on Receipt			Fit for analysis						
	tems required to be tested	11011		As per contract						
	Whether any specific Method of suggested by the customer	Test has been		No						
	Date of receiving the sample in L	aboratory		23.08.23						
[n] A	Analysis Start Date / Analysis Co	mpletion Date		23,08,23	/30.08.23					
					Limit as p	er IS 10500: 2	2012			
S.N.	Parameters	Unit	Method	i of Test	Limit (mgf.) Acceptable	Permissible Li the absence o alternative sou	f	Result		
1.	Dissolved Oxygen	mg/l. IS3025((Part-38)	No	t Specified		4.5		
2.	BOD (3 days at 27°C)			(Part-44)	No	t Specified		< 0.1		
3.	COD	mg/l	IS3025	(Part-58)	No	t Specified		1.0		
4.	Total Suspended Solids	ma/l.	IS 3025	(Part-17)	No	t Specified		20.0		



SHIBESHW Digitally signed by SHIBESHIWAR PRASAD AR PRASAD THE 2023 09:05

Verified by: Dr. Shibeshear Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.09.05 11:41:34 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

	(o. STH/TR/23-24/3835 I	0: 05.09.2023		rour PO %o. 4	000283588-057-1	019 1)	20,07.207			
[a] N	ame and address of the Custome	r		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b]	Details of Sample			Surface Water Sample						
[c]	Sample Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Test House on 21.08.23						
[d]	Sampling Location			Collected from Near raw water pump house						
[e]	Method of Sampling			IS: 3025, A	PHA.	Total and the	W - W - GOV			
f	Sampling Environmental Condition			Temp (Gc)	33	Humidity (9	() 69			
g]	Details of Sample Container (No.	& Type of Cont	lainer)		ne bottle (02)					
[h]	Sample Quantity	CONTRACTOR OF THE	-at/2-025	2 Liters						
	Sample Code			SW-3835						
	Sample Condition on Receipt			Fit for analy	4.54624					
[k]	Items required to be tested			As per cont	ract					
	Vhether any specific Method of Te	st has been sug	gestea	No						
D	y the customer		CIN CITY OF	Cisaco						
[m]	Date of receiving the sample in L			23.08.23						
[m]	f				price that note the foreign that of the first of the firs					
	Date of receiving the sample in L Analysis Start Date / Analysis Co			23.08.23	30.08.23 Limit as pe		***************************************			
[m] [n]	Date of receiving the sample in L		Meth	23.08.23	Limit as pe		Results			
[m] [n] S.N.	Date of receiving the sample in L Analysis Start Date / Analysis Co	mpletion Date	1	23.08.23	Limit as per 19. Tolerance Limit as per 18 2296-1982 for Class '4"	7 olesunce Limit as per 18 1296- 1987 for Class	Results			
[m] [n] S.N.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters	mpletion Date Unit	IS 302	23.08.23 23.08.23 / 3 od of Test	Limit as per 19. Tolerance Limit as per 18 2296-1982 for Chas '4" (mg/L)	7 strange Llock as per 18 2296- 1987 for Class C (ough)	SHOOTHAN			
m] [n] S.N.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen	Unit	IS 302 IS302	23.08.23 23.08.23/3 od of Test 25 (Part-11)	Limit as per 192 Tolerance Lostr as per IS 2296-1982 for Class '4" (mg/L) 6.5 - 8.5	### ##################################	7.75			
[m] [n] S.N.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C	Unit mg/l.	IS 302 IS302 IS302	23.08.23 23.08.23 / 3 od of Test 25 (Part-11) 25(Part-38)	Limit as per 19. Folerance Linit as per IX 2295-1982 for Chas '4" (mg/L) 6.5 - 8.5 6.0	### ### ##############################	7.75 7.5			
m] in] S.N.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C)	Unit mg/l.	IS 302 IS302 IS302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25(Part-44)	Limit as per 19. Folerance Limit as per IX 2295-1982 for Chas 4" (mg/L) 6.5 - 8.5 6.0 2.0	82 7 stermer Floor as per IS 2196- 1987 for (3am X** (ang/L) 6.5 = 8.5 4.0 3.0 ecified	7.75 7.5 1.8			
[m] [n] S.N. 1. 2. 3. 4.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C) COD	Unit Unit mg/l mg/l	IS 302 IS302 IS302 IS302 IS 302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25(Part-44) 25(Part-58)	Limit as per 19 Tolerance Lostr as per IS 2296-1982 for Class '4" (equil) 6.5 - 8.5 6.0 2.0 Not Sp	82 7 stermer Floor as per IS 2196- 1987 for (3am X** (ang/L) 6.5 = 8.5 4.0 3.0 ecified	7.75 7.5 1.8 20.0			
[m] [n] S.N. 1. 2. 3. 4. 5.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C) COD Total Suspended Solids	mpletion Date Unit mg/l. mg/l. mg/l. mg/l.	IS 302 IS302 IS302 IS302 IS 302 IS 302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25(Part-44) 25(Part-58) 25 (Part-17)	Limit as per 19 Tolerance Lostr as per IS 2296-1982 for Class '4" (equil) 6.5 - 8.5 6.0 2.0 Not Sp	### ### ### ### #### #################	7.75 7.5 1.8 20.0 102.0			
[m] [n] S.N. 1. 2. 3. 4. 5. 6.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C) COD Total Suspended Solids Total Dissolved Solids (TDS) Conductivity	mpletion Date Unit mg/l. mg/l. mg/l. mg/l. mg/l.	IS 302 IS 302 IS 302 IS 302 IS 302 IS 302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25(Part-44) 25(Part-58) 25 (Part-16) 25 (Part-16)	Limit as per 19. Folimina Limit as per IX 2395-1982 for Chas '4" (mg/L) 6.5 = 8.5 6.0 2.0 Not Sp Not Sp	### ### ### ### #### #################	7.75 7.5 1.8 20.0 102.0 296.0			
[m] [n] S.N. 1. 2. 3. 4. 5. 6. 7.	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C) COD Total Suspended Solids Total Dissolved Solids (TDS)	mpletion Date Unit mg/l. mg/l mg/l. mg/l. mg/l. mg/l. pmhos/cm. NTU	IS 302 IS302 IS302 IS 302 IS 302 IS 302 IS 302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25(Part-44) 25 (Part-58) 25 (Part-17) 25 (Part-16)	Limit as per 19. Folenance Limit as per IX 2295-1982 for Chan '4" (equil.) 6.5 - 8.5 6.0 2.0 Not Sp Not Sp	### ### ### ### ### ### #### #########	7.75 7.5 1.8 20.0 102.0 296.0 554.0			
[m]	Date of receiving the sample in L Analysis Start Date / Analysis Co Parameters pH at 25°C Dissolved Oxygen BOD (3 days at 27°C) COD Total Suspended Solids Total Dissolved Solids (TDS) Conductivity Turbidity on NTU	mpletion Date Unit mg/l. mg/l. mg/l. mg/l. mg/l. mg/l. umhos/cm.	IS 302 IS302 IS302 IS 302 IS 302 IS 302 IS 302 IS 302	23.08.23 23.08.23/3 od of Test 25 (Part-11) 25(Part-38) 25 (Part-44) 25 (Part-58) 25 (Part-16) 25 (Part-16) 25 (Part-14) 25 (Part-10)	Limit as per 19 Following Limit as per 18 2 296 1982 for Chair 4" (equil) 6.5 - 8.5 6.0 2.0 Not Sp Not Sp Not Sp 1.0	### ### ### ### ### ### #### #########	7.5 1.8 20.0 102.0 296.0 554.0 4.10			

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date 2023:09:05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.09.05 11:41:46 + 05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	(o. STH/TR/23-24/3835(A)	Dt: 05.09.202	2.3	Your PO No.	4000283588-057	-1019 I	0: 20.07.20		
[a] N	ame and address of the Custom	Br		NTPC LIMITE BARAUNI THE NH 31, BARA BEGUSARA	RMAL POWER PL	ANT PROJECT			
[b] D	etails of Sample			Surface Water Sample					
[c] S	ample Collected by			By Chitranja House on 21	n Kumar (Lab Ré .08.23	presentative) o	of Shiva To:		
[d] S	ampling Location			Collected from	Near raw water p	ump house			
	lethod of Sampling			IS: 3025, AP	HA	to the order			
[f] S	ampling Environmental Condition	Υ.		Temp (°c)	33	Humidity (%) 69		
	etails of Sample Container (No.		ainer)	Polypropylen	e bottle (02)				
	ample Quantity	100000000000000000000000000000000000000		2 Liters					
[] S	ample Code			SW-3835					
[] S	ample Condition on Receipt			Fit for analys	is				
[k] Ite	ems required to be tested			As per contract					
	Whether any specific Method of To aggested by the customer	est has been		No					
	ate of receiving the sample in La	boratory		23.08.23					
	nalysis Start Date / Analysis Cor			23.08.23 / 30	0.08.23	Chercusterion - 1 1			
		100000000000000000000000000000000000000			Limit as per	The state of the s			
S.N.	Parameters	Unit	Met	hod of Test	Tolerance Limit as per IS 2296-1942 for Class (A= (mg/L)	Tolerance Lindl as par 18 2296- 1982 for Class (C** (mg/L)	Results		
1.	Total Alkalinity as CaCO ₃	mg/l.	IS 3	025 (Part-23)	Not Sp	ecified	156.0		
2.	Total Hardness as CaCO ₃	mg/l.	IS 30	025 (Part-21)	Not Sp	ecified	166.0		



SHIBESHW Digitally signed by SHIBESHWARI PRASAD AR PRASAD (1) 23:47 +05:30*

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally upwell by Province President Company (Company Company Com

Page 1 of 1

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Website: www.shivatest.com: www.shivatestfronse.com





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TEST REPORT

Ref.	No. STH/TR/23-24/3836	Dt: 05.09.202.	3 Your PO	No. 4000	283588-057-1019	Di:	20.07.	2022	
[a]	Name and address of the C	ustomer		BARAU NH 31,	LIMITED INI THERMAL POWER BARAUNI SARAI – 851 116	R PLANT P	ROJECT	Ē	
[b]	Details of Sample			Treated Effluent Sample					
[c]	Sample Collected by				ltranjan Kumar (Lai Test House on 21.		entative	of	
[d]	Sampling Location			ETP 0	utlet Stage I				
[e]	Method of Sampling			IS 302	5, APHA				
[1]	Sampling Environmental	Condition		Temp.	(°C) 33	Humidity	(%)	- 69	
[g]	Details of Sample Contain	ner (No. & Type of	Container)		opylene Bottle (02)				
[h]	Sample Quantity			2 Litre					
[i]	Sample Code	11525		E-3838	Total Control of Contr				
ii)	Sample Condition on Rec				analysis				
[k]	Items required to be teste			As per	contract				
[1]	Whether any specific Met by the customer	hod of Test has be	een suggested	No					
[m]	Date of receiving the sam			23.08.					
[n]	Analysis Start Date / Ana	lysis Completion D	ate	23.08.	23 / 30.08.23				
Pa	rameters	Unit	Method of	Test	Standards as E(P) Rules Sci VI		Res	ults	
1.	pH at 25°C	-	IS 3025 (Par	rt-11)	6.5 - 8.5		7	.58	
2.	Conductivity	μmhos/cm.	IS 3025 (Pa	rt-14)	Not Specifi	ed	16	0.80	
3.	Total Suspended Solids	mg/l.	IS 3025 (Par	rt-17)	100		4	6.0	
4.	Total Dissolved Solids mg/l.		IS 3025 (Par	rt-16)	Not Specified		87	4.0	
5.	B.O.D. (3 days at 27°C)	IS 3025 (Part-44)				1	4.0		
6.	C.O.D.	mg/l, mg/l,	APHA (522	(5220 B) 250				2.0	
7.	Oil & Grease	mg/l,	IS 3025 (Pa		10		0	.80	



SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.09.05

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.09.05 11:42:10 +05'30'

Page 1 of I

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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sthpunul @vahoo on is : info@shiratest.com

Website: www.shingtent.com; swww.shingtesthogos.com









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TEST REPORT

Ref.	No. STH/TR/23-24/3837	Dt: 05.09.2	2023 Your PO	No. 40	00283588-0	057-1019	D	€ 20.07.	2022
[a]	Name and address of the (Customer		BAR NH 3	C LIMITED AUNI THERM 11, BARAUN SUSARAI	11	R PLANT F	PROJECT	
[b]	Details of Sample				ted Effluer				
[c]	Sample Collected by				hitranjan k a Test Hou			entative)	of
[d]	Sampling Location			ETP	Outlet Sta	ge II			
[e]	Method of Sampling				025, APHA				
[f]	Sampling Environmental				p. (°C)	33	Humidit	ty (%)	68
[9]	Details of Sample Contain	ner (No. & Type	of Container)		propylene	Bottle (02))		
[h]	Sample Quantity	710000000000000000000000000000000000000		2 Lit					
	Sample Code			E-38					
	Sample Condition on Re			Fit for analysis					
[k]	Items required to be test			As per contract					
[1]	Whether any specific Me by the customer	thod of Test has	s been suggested	No					
[m]	Date of receiving the san	nple in Laborato	ry	23.08.23					
[n]	Analysis Start Date / Ana	lysis Completio	n Date	23.0	8.23 / 30.0				
Pa	rameters	Unit	Method of Tes	it	Standar Rules	ds as per Schedule	E(P)	Res	ults
1.	pH at 25°C		IS 3025 (Part-1)	1)		6.5 - 8.5		7.7	8
2.	Conductivity	μmhos/cm.	IS 3025 (Part-1-	4)	No	t Specified	i	156	7.0
3.	Total Suspended Solids	mg/l.	IS 3025 (Part-1)	7)		100		43	.0
4.	Total Dissolved Solids	mg/l,	IS 3025 (Part-1)	6)	No	t Specified	1	B44	1.0
5.	B.O.D. (3 days at 27°C)	mg/l.	IS 3025 (Part-4-	4)		30		10	.0
6.	C.O.D.	APHA (5220 B				48	.0		
7.	Oil & Grease	mg/l,	IS 3025 (Part-3)	1000				6	



Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.09.05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Digitally signed by Shreyasee Prasad Prasad

Date: 2023,09,05 11:42:21 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT

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TEST REPORT

Ref. N	o. STH/TR/23-24/4409	Dr: 05.10.2023	Your J	O No. 40002835	88-057-101	9	Dr. 20.07.20		
[a] N	ame and address of the Custom	er		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
b] D	etails of Sample			Ground Water Sample					
[c] S	ample Collected by			By Chitranjan Kumar (Lab Representative) of Shive To House on 15.09.23					
d] S	ampling Location			Collected from	Hand pum	water Near	mandir		
THE PARTY OF	lethod of Sampling			IS: 3025, APH			100000		
in the same of	ampling Environmental Condition	1		Temp (%c)	33	Humidity	(%) 75		
	etails of Sample Container (No.		neri	Polypropylene b	4.4	150111010	1.77		
-	ample Quantity	1700 01 000		2 Liters	reone (sur)				
_	ample Code			GW-4409					
Contract Contract	ample Condition on Receipt			Fit for analysis					
	ems required to be tested			As per contract					
The State of the S	hether any specific Method of Te	not have been sure	applied by the	As per contract					
- 01	ustomer		gested by the	No					
	ate of receiving the sample in La			16.09.23					
[n] A	nalysis Start Date / Analysis Con	npletion Date		16.09.23 / 23.0	09.23				
				Limit as	per IS 10500	: 2012			
S.N.	Parameters	Unit	Method of Test	Limit (mgf.) Acceptable	Permissit the abser	100.00, 101	Results		
1.	pH at 25° C		IS 3025 (Part-11)	6.5		8.5	7.11		
2, .	Total Dissolved Solids (TDS)	mg/L	15 3025 (Part-16)	500.00	20	00.00	662.0		
3.	Conductivity	µmhos/cm	IS 3025 (Part-14)	1	lot Specified		1351.0		
4.	Turbidity on NTU	NTU	IS 3025 (Part-10)	1,0	1	5.0	0.86		
5.	Total Alkalinity as CaCO ₃	mg/L	IS 3025 (Part-23)	200.00	- 6	00.00	330.0		
à	Total Hardness as CaCO ₃	mg/t.	15 3025 (Part-21)	200.00	6	00.00	264.D		
7	Sulphate as SO _a	mg/L	IS 3025 (Part-24)	200.00	- 4	00.00	27.2		
8	Nitrate as NO ₃	mgð.	IS3025(Part-34)	45.00	No n	elaxation	3.04		
9	Sodium as Na	mg/l	183025(Part-45)	1	Not Specified	v	41.1		
10.	Iron as Fe	mg/l	APHA3500 FeB	1.00		elaxation	0.27		
11.	Copper as Cu	mg/l	APHA (31118)	0.05		1.50	< 0.05		
12:	Manganese as Mn	mg/l.	APHA3111B	0.1		0.3	< 0.01		
13.	Mercury as Hg	mg/l,	APHA31118	0.001	1,745,77	elaxation	< 0.001		
14.	Cadmium as Cd	mg/l	APHA3111B	0.003	-	elaxation	< 0.01		
15.	Total Arsenic as As	mgd	APHA (3114B)	0.01		0.05	<0.01		
16.	Lead as Pb	mgđ.	APHA3111B	0.01		elaxation	<0.01		
17.	Zinc as Zn	mg/l,	APHA (3111B)	5.00		5.00	0.09		
18.	Chromium as Cr	mg/l.	APHA (31118)	0.05		elaxation	< 0.05		
19.	Aluminium as Al	mg/L.	APHA3111 D	0.03		0.2	<0.03		
20.	Boron as B	mg/l.	APHA4500BB	0.5	1	1.0	<0.5		

SHIBESHW SHBESHWARPRASAD AR PRASAD 1241:46+0530

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad Digitally signed by Shreyasee Fraiad Date: 2023:10,05 03:50:50 = 05:30*

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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TEST REPORT

Ref. N	io. STH/TR/23-24/4409(A)	Dt: 05.10.2	023	Your Po	O No. 400028.	3588-057-10	19	Dt: 20	0.07,202	
[a] N	ame and address of the Cus	tomer		BAR NH 3	C LIMITED AUNI THERMA 31, BARAUNI SUSARAI – 81		ANT PROJEC	T		
[b] D	etails of Sample			Ground Water Sample						
[c] S	ample Collected by				hitranjan Kumi se on 15.49.23	ar (Lab Repre	esentative) of	Shiva	7est	
	ampling Location			Colle	ected from Ha	and pump wa	ter Near man	dir		
[e] N	lethod of Sampling			IS: 3	025, APHA					
	ampling Environmental Cond				p (°c)	33	Humidity	(%)	75	
	etails of Sample Container (N	No. & Type of	Container)		propylene bo	ttle (02)	H Vinena	7. 3027	1444	
	ample Quantity			2 Lite						
	ample Code			GW-4409						
	ample Condition on Receipt			Fit for analysis						
	ems required to be tested			As per contract						
	Whether any specific Method o uggested by the customer	of Test has be	en	No						
	ate of receiving the sample in			16.0	9.23					
[n] A	nalysis Start Date / Analysis	Completion D)ate	16.0	9.23 / 23.09.	23				
					Limit as	per (\$ 10500.	2012			
8.N.	Parameters	Unit	Method of T	est	Limit (mg/L) Acceptable	Permissib the absen- alternative	ce of	9	Results	
1.	B00 (3 days at 27 ⁰ G)	mg/l	153025 (Part	(-44)	0	Not Specified			<0.01	
2	COD	mg/l	153025 (Part	-58)	1	Not Specified			1.0	
3.	Dissolved Oxygen	mg/L	153025(Part-	-38)	15	Not Specified			1.4	
4.	Total Suspended Solids	mg/L	IS 3025 (Par	1-17)		Not Specified			15.0	
5.	Selenium as Se	mg/l.	APHA3111	В	0.01	No Re	laxation		<0.01	
6.	Cyanide as CN	mg/l.	IS3025(Par	1-27)	0.05	No Re	slaxation		< 0.01	



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.10.05

Verified by : Dr. Shibeshwar Prasad Technical Manager

Prasad

Shreyasee Digitally signed by Shreyasee Presed Date: 2023.10.05 03:51:12 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT

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TEST REPORT

Ref. No.	STH/TR/23-24/4409	(Mch) Di	: 05.10.2023	our PO No. 400	0283588-057-	1019 DE	20.07.202		
[a] Nan	ne and address of t	he Customer	6	PROJECT NH 31, BA	THERMAL	POWER PLAN	т		
[b] Det	ails of Sample			Ground Wate	er Sample				
[c] San	nple Collected by			By Chitranjan House on 15.0		epresentative) of Shi	va Test		
[d] San	npling Location		Collected from	t Hand pump v	vater Near mandir				
[e] Met	hod of Sampling			IS 1622					
(f) San	pling Environment	al Condition		Temp (0c)	33	Humidity (%)	75		
[g] No.	& Type of Contain	er		One Sterilized Glass Bottle					
[h] San	pie Quantity			250 ml					
[i] San	nple Code			GW-4409					
[] San	ple Condition on R	eceipt		Fit for analysis					
And the second	is required to be ter	Acceptation and the second		As per contract					
	ether any specific M gested by the custo		t has been	No					
[m] Date	e of receiving the sa	ample in Lab	oratory	16.09.23					
[n] Ana	lysis Start Date / Ar	nalysis Comp	etion Date	16.09.23 / 17	7.09.23				
S.N.	Parameters	Unit	Method of Test	Limit as per 201	Charles and the part of the control	Result	s		
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det	SCHOOL STATE	Not Detected	/ 100 ml		
E coli / 100 ml IS 1622:1981			Shall not be detectable in 100 Not Detected / 100 ml.						



Authorized Signatory Mr. Vishal Sharma Deputy Quality Manager (DQM)

- END OF TEST REPORT

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TEST REPORT

Ref. N	o. STH/TR/23-24/4410	Dr: 05.10.2023	Your I	O No. 40002835	88-057-1019	Dr. 20.07,202			
[o] N	ame and address of the Custom	er		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[p] D	etails of Sample			Ground Water Sample					
3775	ample Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Te House on 15.09.23					
r) S	ampling Location			Collected from	Hand pump water Near	Vinod bhewen			
	ethod of Sampling			IS: 3025, APH	The second secon				
	ampling Environmental Condition	1		Temp (°c)	33 Humidity	(%) 75			
	etails of Sample Container (No.		ner)	Polypropylene b		1,00			
	ample Quantity		12.4	2 Liters	70 500 700				
	ample Code			GW-4410					
ACCURATE AND ADDRESS.	ample Condition on Receipt			Fit for analysis					
And Section 1	ems required to be tested			As per contract					
[z] W	hether any specific Method of Trustomer	est has been sug	gested by the	No.					
laal D	ate of receiving the sample in La	bocatory		16.09.23					
	nalysis Start Date / Analysis Con			16.09.23 / 23.0	19.23				
100	The state of the s	gird a girl as dive		and experience of the second second second	per IS 10500: 2012				
S.N.	Parameters	Unit	Method of Test	Limit (mg/L) Acceptable	Permissible Limit in the absence of alternative source	Results			
t.	pH at 25° C		IS 3025 (Part-11)	6.5	8.5	7.14			
2.	Total Dissolved Solids (TDS)	mg/l.	IS 3025 (Part-16)	500.00	2000.00	647.0			
3	Conductivity	jumhos/om	IS 3025 (Part-14)	N .	at Specified	1335.0			
4.	Turbidity on NTU	NTU	IS 3025 (Part-10)		8.0	0.92			
5.	Total Alkalinity as CaCO ₁	mg/l.	IS 3025 (Part-23)	And the second	600.00	278.0			
6.	Total Hardness as CaCO ₃	mg/l.	IS 3025 (Part-21)		600.00	248.0			
7.	Sulphate as SO ₄	mg/L	IS 3025 (Part-24)		400.00	25.1			
8.	Nitrate as NO-	mg/l.	IS3025(Part-34)	45.00	No relaxation	2.69			
9.	Sodium as Na	mgd	IS3025(Part-45)		lot Specified	37.1			
10.	fron as Fe	mgd	APHA3500 FeB	1.00	No relaxation	0.14			
11.	Copper as Cu	mgd	APHA (3111B)	0.05	1.50	<0.05			
12.	Manganese as Mn	mg/l	APHA3111B	0.1	0.3	<0.01			
13.	Mercury as Hg	mg/l.	APHA3111B	0.001	No Relaxation	< 0.001			
14.	Cadmium as Cd	mg/l.	APHA3111B	0.003	No Relaxation	< 0.01			
15.	Total Arsenic as As	mgA.	APHA (3114B)	0.01	0.05	< 0.01			
16.	Lead as Pb	mg/l.	APHA31118	0.01	No Relaxation	<0.01			
17.	Zinc as Zn	mg/l.	APHA (3111B)	5,00	15.00	0.09			
18.	Chromium as Cr	mg/l.	APHA (3111B)	0.05	No Relaxation	<0.05			
19.	Aluminium as Al	mgA,	APHA3111 D	0.03	0.2	< 0.03			
-	Boron as B	mgd.							

R PRASAD

SHIBESHWA Digitally signed by SHIBESHWAR PRASAD Date: 2023-10:05 12:42:19 +05'30'

Verified by:

Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Frasad Dine: 2023,10.05 03.51.23 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prusad Quality Manager

- END OF TEST REPORT

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TEST REPORT

Ref. N	lo. STH/TR/23-24/4410(A)	Dt: 05.10.2	023	Your F	O No. 4006283	588-057-1015		h: 20.0	07.2023	
[o] N	ame and address of the Cust	omer		BAF	PC LIMITED RAUNI THERMAL 31, BARAUNI GUSARAI – 85		NT PROJEC	T.		
[p] D	etails of Sample			Ground Water Sample						
[q] S	ample Collected by				Chitranjan Kuma se on 15.09.23	r (Lab Repres	entative) of	Shiva 7	est	
	ampling Location			Col	lected from Ha	nd pump wate	r Near Vino	d bhaw	977	
	lethod of Sampling				3025, APHA	150 000000000	POCCODE SOLO	CINO 7	571	
	ampling Environmental Condi				np (°c)	33	Humidity	(%)	75	
	etails of Sample Container (N	 a. 8 Type of 	Container)		ypropylene bot	tle (02)		A		
	ample Quantity			-	ters					
	ample Code			-	-4410					
_	ample Condition on Receipt			the state of the later of	or analysis					
	ems required to be tested			As per contract						
	Whether any specific Method o uggested by the customer	flest has be	en	No						
	ate of receiving the sample in	Laboratory	S 10	16.0	09.23	41-7-				
bb]A	nalysis Start Date / Analysis (Completion D	ate	16.0	09.23/23.09.2	3				
					Limit as	per IS 10500: 2	2012			
S.N.	Parameters	Unit	Method of T	est	Limit (mg/l.) Acceptable	Permissible the absence alternative s	b of	Re	sults	
t,	BOD (3 days at 27 ⁰ C)	mg/l	153025 (Part	44)	- N	lot Specified		<(0.01	
2	COD	mg/l	153025 (Part	-58)	N	lot Specified		3	0.3	
	Dissolved Oxygen	mg/L	IS3025(Part-	38)	- N	lot Specified		(0,9	
1,	Total Suspended Solids	mg/L	1S 3025 (Par	(-17)	- N	lot Specified		1	2.0	
5.	Selenium as Se	mg/l.	APHA3111	8	0.01	No Rela	exation	<	0.01	
6.	Cyanide as CN	mg/l.	IS3025(Par	1-27)	0.05	No Rela	exation	<(0.01	



SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023:10:05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 03:51:33 +05'30"

Authorized Signatory Dr. (Mrs.) Shrevosee Prasad Quality Manager

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Contact us :

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TEST REPORT

[a] Nan	ne and address of t	he Customer		NTPC LIMI BARAUNI PROJECT NH 31, BAI BEGUSAR	THERMAL RAUNI	POWER PLAN	Г		
[b] Deta	ails of Sample			Ground Wate	r Sample				
[c] San	ple Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15.09.23					
[d] San	pling Location			Collected from	Hand pump w	rater Near Vinod bha	NEWE		
[e] Met	hod of Sampling			IS 1622					
[f] San	pling Environment	al Condition		Temp (0c)	33	Humidity (%)	75		
[g] No.	& Type of Contain	er		One Sterilize	d Glass Bottle	3			
[h] San	ple Quantity			250 ml					
[i] San	ple Code			GW-4410					
[j] San	ple Condition on R	teceipt		Fit for analysis					
	is required to be te			As per contra	ect				
M 8	ether any specific M gested by the custo		t has been	No					
	of receiving the sa		oratory	16.09.23					
[n] Ana	lysis Start Date / A	nalysis Comp	letion Date	16.09.23 / 17	.09.23				
S.N.	Parameters	Unit	Method of Test	Limit as per 201		Result	5		
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det		Not Detected	/ 100 ml		
2	E coli	/ 100 ml	IS 1622:1981	Shall not be det		Not Detected	/ 100 ml		



Authorized Signatory Mr. Vishal Sharma Deputy Quality Manager (DQM)

- END OF TEST REPORT

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TEST REPORT

Ref.	No. STH/TR/23-24/4413	Dr. (95.10.2023		Your	PO No. 4	000283588	057-1019	Dr	20.07.202		
[1]	Name and address of	the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[b]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by				Chitranjan 99.23	Kumar (L	ab Represe	ntative) of	Shiva Test Ho	ouse on		
[d]	Sampling Location			Collected from Colony Pond near mandir side								
e	Method of Sampling			IS 3025, APHA								
f	Sampling Environmen			Temp. (°C) 33 Humidity(%) 75								
8	No. & Type of Contai	ner		One poly Jar								
h	Sample Quantity			2 Liters								
[1]	Sample Code			SW-4413								
il.	Sample Condition on	Receipt		Fit for Analysis								
[k]	Items required to be to	ested		As per contract.								
[1]	Whether any specific been suggested by the		has	No								
ml	Date of receiving the			16.09.23								
[n]	Analysis Start Date / /		etion Date	16.09.23 / 23.09.23								
	Parameters	Unit	Method of	Tolerance Limit as per IS 2296-1982								
	Parametera	One	- Wiethod of	1.081	Class 'A'	Class '8'	Class 'C'	Class 'D'	Class 'E'	Results		
1.	pH at 25 ^I C	-	IS 3025 (Pa	nt-11)	6,5 to 8.5	6.5 to 8.5	6.0 to 9.0	6.5 to 8.5	6.0 to 8.5	7.28		
1	Dissolved Oxygen	mg/L	IS 3025 (Pa	rt-38)	6.0	5.0	4.0	4.0	2	6.5		
1	BOD (3 days at 27 °C)	mg/L	IS 3025 (Pa	nt-44)	2	3	3	-	-	2.8		
6.	Total Suspended Solids	mg/l.	IS 3025 (Pa	nt-17)	*	+:		#		40.0		
50	Total Dissolved Solids	IS 3025 (Pa	rt-16)	500.00		1500		2100	362.0			
i.	Conductivity	µmhosiom.	IS 3025 (Pa	nt-14)	-	2.45	-	-	2250	672.0		
7,	Turbidity	NTU	IS 3025 (Pa	nt-10)	-		-	-	77.	3.5		
8.	Sodium as Na	mgd.	IS 3025 (Pa	int-45)	-	141	5-3	7		41.1		
9.	Sulphate as SO ₄ mg/l. IS 3025 (P		18 3025 (Pa	ut-24)	400.00		400.00	2	1000	32,8		
10.	Sulphate as SO ₁ mg/l. IS 3025 Nitrate as NO ₂ mg/l. APHA 4				20.00		50.0	-	-	0.64		



SHIBESHW SHIBESHWAR PRASAD AR PRASAD 12:43:41:405

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10:05 03:52:27 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT

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Contact us:

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Website: nawashamest.com awarahitatesthome.com





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TEST REPORT

Ref. N	o. STH/TR/23-24/4413(A) Dt. (15.10.2023	_	Tour Pt	7 No. 4000.	283588-05	7-1019	DE	20.07.202		
[a]	Name and address of the	Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[6]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by			By Chitrarijan Kumar (Lab Representative) of Shiva Test House (15.09.23								
[d]	Sampling Location			Collected from Colony Pand near mandir side								
[c]	Method of Sampling			IS 3025, APHA								
[1]	Sampling Environmental	Condition		Te	mp. (°C)		33		Humidity((6) 75		
[g]	No. & Type of Container			Or	e poly Jar							
[h]	Sample Quantity			2 Liters								
01	Sample Code			SW-4413								
61	Sample Condition on Rec	eipt		Fit for Analysis								
[k]	Items required to be tested			As per contract.								
[1]	Whether any specific Met been suggested by the par		No									
[m]	Date of receiving the sam	ple		16	.09.23							
[n]	Analysis Start Date / Ana		n Date	16	.09.23 / 23	3.09.23						
0.7		Unit		Tolerance Limit as per IS 2296-1982								
	Parameters		Method of Te	est	Class 'A'	Class 'B'	Class 'C'	Class 'D'	Class E	Results		
1. Iron	n as Fe	mg/L	APHA 3500 F	e B	0.3	-	0.5,	-	-	0.26		
2. Co	pper as Cu	mg/L	APHA (3111	B)	1.5		1.5	-	-	< 0.05		
3. Ma	inganese as Mn	mg/l.	APHA 3111	В	0.5	·	-	in.	100	<0.1		
	rcury as Hg	mg/l.	APHA 3112	В	0.001			-	-	< 0.00		
	dmium as Cd	mg/L	APHA 3111	-53.77	0.01	-	0.01	-	-	<0.003		
	tenium as Se	mg/L	APHA 3114	В	0.01	4	0.05	00.	-	< 0.01		
7. Tot	tal Arsenic as As	mg/l.	APHA (3114	Bi	0.05	0.2	0.2	177	-	< 0.01		
	anide as CN	mg/l.	18 3025 (Part		0.05	0.05	0.05	-	-	< 0.05		
-	ad as Pb	mg/L	APHA 3111		0.1	-	0.1	199	-	< 0.01		
10. Zin	ic as Zn	mg/L	APHA (3111	B)	15		15	-	- 12	0.06		
	tal Chromium as Cr.	mg/L	APHA (3111		0.05	-	0.05	- 141	-	< 0.05		
	minum as Al	mg/L	APHA 3111	D	0.03	-	0.02	. 99	-	×0.01		
	ron as B	mg/L	APRA 4500 I	-	-		-		2.0	< 0.01		
14. CO	77	mg/L	IS 3025 (Part		-		-		-	32.0		
	The second secon		18 3025 (Part	_	-				-	228.0		
 Tot 	tal Hardness as CaCO:	mg/L	18-3025 (Part	-21)	200	-	1 - 2	. 440	-	236.0		

SHIBESHW SHBESHWARPRASAD AR PRASAD Date: 2023,10:05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.10.05 03:52:37 +05'30"

> Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT

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TEST REPORT

Ref. No.	STH/TR/23-24/4413	Mcb) Di:	05.10.2023	Your PO No. 40	00283588-057	-1019 Dr.	20.07.2022	
[a] Nan	Name and address of the Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Deta	Details of Sample				Surface Water Sample			
[c] Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shive Test House on 13.09.23				
[d] Sampling Location				Collected from Colony Pond near mandir side				
[e] Method of Sampling				IS 1622				
[f] Sampling Environmental Condition				Temp (°c)	33	Humidity (%)	75	
[g] No. & Type of Container				One Sterilized Glass Bottle				
[h] Sample Quantity				250 ml				
[i] Sample Code				SW-4413				
[j] Sample Condition on Receipt				Fit for analysis				
[k] Items required to be tested				As per contract				
 Whether any specific Method of Test has been suggested by the customer 				No				
[m] Date of receiving the sample in Laboratory				16.09.23				
[n] Analysis Start Date / Analysis Completion Date				16.09.23 / 17.09.23				
S.N.	Parameters	Unit	Method of Test	Limit as per		Result	8	
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det		Detected / 100 ml		
2	E coli / 100 ml		IS 1622:1981	Shall not be detectable in 100 Detected / 100		00 ml		



Authorized Signatory Mr. Vishal Sharma Deputy Quality Manager (DQM)

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TEST REPORT

Ref.	No. STH/TR/23-24/4414	Dr. 6	95.10.2023	ig .	Your	PO No. 4	000283588-	057-1019	Dr.	20.07.202		
[n]	Name and address of	the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[b]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by			By Chitranjan Kumar (Lab Representative) of Shive Test House on 15:09:23								
[d]	Sampling Location			Collected from Calony Pand near railway line side								
[0]	Method of Sampling			IS 3025, APHA								
[1]	Sampling Environmen	ntal Condition		Temp. (°C) 33 Humidity(%) 75								
[g]	No. & Type of Conta	ner			e poly Ja	r	- 1	- "	AKTADO			
[h]	Sample Quantity			2 Liters								
[i]	Sample Code			SW-4414								
UI.	Sample Condition on	Receipt		Fit for Analysis								
[k]	Items required to be to	Items required to be tested										
01	Whether any specific been suggested by the	has	No									
[m]	Date of receiving the			16	09.23							
[n]	Analysis Start Date /	Analysis Comple	etion Date	16	09.23/2	3.09.23			- 70			
	Parameters	Unit	Method of Tes		Tolerance Limit as per IS 2296-1982				1982	Results		
	Farameters	Unit	Method of	I ESI	Class 'A'	Class 'B'	Class 'C'	Class 'D'	Class E	POSSULES		
1.	pH at 25 °C	1722	1\$ 3025 (Pa	nt-11)	6.5 to 8.5	6.5 to 8.5	6.0 to 9.0	6.5 to 8.5	6.0 to 8.5	7.31		
2	Dissolved Oxygen	mg/l.	IS 3025 (Pa	nt-38)	6.0	5.0	4.0	4.0	=	6.7		
3 3	BOD (3 days at 27 °C)	mgd.	IS 3025 (Pa	nt-44)	2	3	3	Ε.		2.9		
4.	Total Suspended Solids	mg/l.	IS 3025 (Pa	nt-17)	-	0.55	-	===	35	45.0		
5.	Total Dissolved Solids	mg/l.	IS 3025 (Pa	nt-16)	500.00		1500	- 1	2100	367.0		
n.	Conductivity	μmhos/cm.	IS 3025 (Pa	nt-14)	2	- 22		-	2250	684.0		
7.	Turbidity	NTU	IS 3025 (Pa	nt-10)	-	-	14	-	-	3,7		
8.	Sodium as Na	mg/l.	IS 3025 (Pa	nt-45)	-	***	-	-	14	43.1		
9,	Sulphate as SO ₊	mg/l.	15 3025 (Pa	rt-24)	400:00	-	400.00	=	1000	33,5		
10.	Nitrate as NO ₁	mg/l.	APHA 4500	N03	20.00		50.0			0.85		



Digitally signed by SHBESHWAR FRASAD SHIBESHW AR PRASAD Date: 2023.10.05

Verified by : Dr. Shibeshwar Prasod Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 03:52:49 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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TEST REPORT

Ref. N	o. STH/TR/23-24/4414(A)	Dr; 6	15.10.2023		Your PC	7 No. 4000.	283588-05	7-1019	DC	20.07,202		
[a]	Name and address of the t	Customer		BAR	31, BARA	RMAL POW		T PROJEC	т			
[6]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by			By Chitranjan Kumar (Lab Representative) of Shive Test House of 15.09.23								
[d]	Sampling Location			Collected from Colony Pond near railway line side								
[c]	Method of Sampling			IS 3025, APHA								
[1]	Sampling Environmental	Condition		Ten	np. (°C)		33	Hs	umidity(%)	75		
[g]	No. & Type of Container			One	e poly Jar							
[b]	Sample Quantity			2 Liters								
[1]	Sample Code			SW-4414								
(i)	Sample Condition on Rec	cipt		Fit f	for Analysi	8						
[k]	Items required to be tested			As per contract.								
[1]	Whether any specific Method of Test has been suggested by the party											
[m]	Date of receiving the same		16.	09.23								
[n]	Analysis Start Date / Anal	16.	09.23 / 23	3.09.23								
	72	Unit	Taxaa aa			Tolerance Li		2296-1982		55 50		
	Parameters		Method of Te	rst	Class 'A'	Class &	Class	Class 'D'	Class E	Results		
1. tron	ras Fe	mg/L	APHA 3500 F	eВ	0.3	1-01	0.5	() () () () () () () () () ()		0.27		
Coj	operas Cu	mg/L	APHA (3111	B):	1.5	-	1,5	-	-	<0.05		
. Ma	nganese as Mn	.P.gm	APHA 3111	В	0.5	-	-	17	17	<0.1		
t. Me	roury as Ho	mg/L	APHA 3112	В	0.001	-	11	-	-	< 0.001		
	dmium as Cd	mg/L	APHA 3111	В	0.01	-	0.01	-	-	<0.000		
Sel	enium as Se	mg/L	APHA 3114	В	0.01		0.05	77	7.7	< 0.01		
7. Tot	al Arsenic as As	mg/L	APHA (3114	B)	0.05	0.2	0.2	12	-	< 0.01		
B. Cys	anide as CN	mg/L	IS 3025 (Part-	-	0.05	0.05	0.05	-		< 0.05		
e. Les	od 86 Pb	mg/L	APHA 3111	В	0.1	1991	0.7	1		< 0.01		
10. Zin	c as Zn	mg/L	APHA (3111	B)	15	-	15	- 44	-	0.07		
11. Tot	al Chromium as Cr	mg/L	APHA (3111	B)	0.05	077.	0.05	-	-	< 0.05		
12. Alu	minum as Al	mg/l	APHA 3111	D	0.03	100	0.02	- PH		< 0.01		
THE RESIDENCE PROPERTY.	on as B	mg/L	APHA 4500 B	Accesses to	-	100		144	2.0	< 0.01		
14. CO	THE STATE OF THE S	mg/L	IS 3025 (Part-	-		The last	- 44	144		36.0		
	al Alkalinity as CaCO ₁	mg/L	IS 3025 (Part-		-	-	-			230.0		
ifi. Tot	Total Hardness as CaCO ₁ mg/L IS 3025 (Par			21)	200			-	-	240.0		

SHIBESHW Digitally signed by SHBESHWAR PRASAD AR PRASAD Date: 2023.10.05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.10.05 03:53:00 + 05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us :

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TEST REPORT

Ref. No.	STH/TR/23-24/4414	(Mch) Di	: 05.10.2023	our PO No. 400	0283588-057-	1019 Dt:	20.07.2022			
[a] Nan	ne and address of t	he Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] Deta	ails of Sample			Surface Water	Sample					
[c] San	nple Collected by			By Chitranjan i House on 15.0		presentative) of Shi	va Test			
[d] San	npling Location			Collected from Colony Pond near railway line side						
[e] Met	hod of Sampling			IS 1622						
[f] San	npling Environment	al Condition		Temp (°c) 33 Humidity (%) 75						
[g] No.	& Type of Contain	er		One Sterilized Glass Bottle						
[h] San	nple Quantity			250 ml						
[i] San	nple Code			SW-4414						
[] San	nple Condition on R	teceipt		Fit for analysis						
	is required to be te	2000		As per contract						
	other any specific N gested by the custo		t has been	No						
[m] Date	e of receiving the sa	ample in Lab	oratory	16.09.23						
[n] Ana	lysis Start Date / A	nalysis Comp	letion Date	16.09.23 / 17	.09.23					
S.N.	Parameters	Unit	Method of Test	Limit as per 201		Result	S			
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det		Detected / 10	00 ml			
2	E coli	/ 100 ml	IS 1622:1981	Shall not be det		Detected / 10	0 ml			



Authorized Signatory Mr. Vishal Sharma Deputy Quality Manager (DQM)

END OF TEST REPORT

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TEST REPORT

Ref	No. STH/TR/23-24/4415	Dr.	05.10.2023		Four	PO No. 4	000283588	-057-1019	Di	20.07.202		
[a]	Name and address of	the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[b]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by				Chitranjar 99.23	Kumar (L	ab Represe	intative) of	Shiva Tost H	DU50-0/1		
[d]	Sampling Location			Collected from Ganga water from raw Water pump house								
[e]	Method of Sampling			IS 3025, APHA						V. — —		
[1]	Sampling Environme				mp. (PC)		33	F 3	Humidity(%)	75		
[g]	No. & Type of Conta	iner			e poly Ja	r		- 707	785			
[h]	Sample Quantity			2 L	iters							
	Sample Code			SW-4415								
[]	Sample Condition on	Receipt		Fit for Analysis								
[k]	Items required to be to	ested		As	per conti	ract.						
III		Whether any specific Method of Test has been suggested by the party										
m]	Date of receiving the			16.	09.23							
n	Analysis Start Date /	Analysis Comple	ction Date	16.	09.23/2	3.09.23						
	Parameters	Unit	Method of	Tank	Tolerance Lir		imit as per	IS 2296-1	1982	Results		
	raidificiers	Ont	weenou or	1681	Class 'A'	Class 'B'	Class 'C'	Class 'D'	Class E'	Kesuits		
17	pH at 25 °C	-	IS 3025 (Pa	rt-11)	6.5 to 8.5	6.5 to 8.5	5.0 to 9.0	6.5 to 8.5	6.0 to 8,5	7.68		
2	Dissolved Oxygen	mg/l.	1S 3025 (Pa	rt-38)	6.0	5.0	4.0	4.0		7.2		
1	BOD (3 days at 27 °C)	mg/l.	IS 3025 (Pa	(1-44)	2	3	3	-		1.7		
4.	Total Suspended Solids	mg/L	IS 3025 (Pa	rt-17)		-			-	24.8		
5.	Total Dissolved Solids	mg/L	IS 3025 (Pa	rt-16)	500.00		1500		2100	305.0		
6.	Conductivity	µmhos/am.	IS 3025 (Pa	rt-14)	-	-	-	45_	2250	562.0		
7.	Turbidity	NTU	IS 3025 (Pa	rt-10)	-	-		4	-	3.2		
8.	Sodium as Na	m as Na mg/t. IS 3025 (Part-		rt-45)	-				- 4	32.1		
9.	Sulphale as SO ₄	mg/t.	IS 3025 (Pa	rt-24)	400.00	-	400.00	C 195	1000	24.8		
10.	Ntrate as NO ₂ mg/l. APHA 4500		NO3	20.00		50.0	100		0.77			



SHIBESHW Digitally signed by SHIBESHWAR PRASAD

AR PRASAD Date: 2023.10.05

Verified by: Dr. Shibeshear Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023:10:05 03:53:13 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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sthpetrial @yahoo.co.in : info@shivatest.com



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TEST REPORT

Ref. A	o. STH/TR/23-24/4415(A)	Dr. (95.10.2023		Your PC) Na. 4000.	283588-03	57-1019	Dr.	20.07,202			
[a]	Name and address of the 0	Customer		BA NE	PC LIMITE RAUNI THE 131, BARA EGUSARA	RMAL POV		T PROJEC	т				
[b]	Details of Sample			Surface Water Sample									
[c]	Sample Collected by			By Chitrarijan Kurnar (Lab Representative) of Shive Test House of 15.09.23									
[d]	Sampling Location			Collected from Ganga water from raw Water pump house									
[e]	Method of Sampling			IS 3025, APHA									
[f]	Sampling Environmental (Condition		Te	rnp. (°C)		33		Humidity(96) 75			
[g]	No. & Type of Container			Or	ne poly Jar				-	2			
[h]	Sample Quantity			2 Liters									
[1]	Sample Code			SW-4415									
103	Sample Condition on Reco	eipt		Fit for Analysis									
[k]	liems required to be tested			As per contract.									
[1]	Whether any specific Method of Test has been suggested by the party				No								
[m]	Date of receiving the samp		16	.09.23									
[n]	Analysis Start Date / Analysis Completion Date				09.23/2	3 09 23							
	Taxasan Sana	Unit	Salaria de la composición del composición de la	-		Yolerance Li	mit as per li	2295-1982		1200 30			
	Parameters	Oth	Method of Te	IST.	Class 'A'	Class 'B'	Class	Class 'D'	Class 'E'	Results			
t. Iro	n as Fe	mg/L	APHA 3500 F	eВ	0.3	***	0.5	-	-	0.25			
2. Co	pper as Cu	mg/l.	APHA (3111	B)	1.5	i -	1.5	8		< 0.05			
. Ma	nganese as Mn	mg/l.	APHA 3111	н	0.5	77		-88	-	<0.1			
4. Me	scury as Hg	mg/L	APHA 3112	В	0.001	1 1		-2		< 0.001			
i. Ca	dmium as Cd	mg/l.	APHA 3111	В	0.01		0.01		-	< 0.003			
5. Sel	lenium as Se	mg/l.	APHA 3114	B	0.01		0.05	-	-	< 0.01			
7. To	tal Arsenic as As	mg/L	APHA (3114	B)	0.05	0.2	0.2	12	-	< 0.01			
	anide as CN	mg/l.	IS 3025 (Part	na management	0.05	0.05	0.06		_	< 0.05			
	ed as Ph	mg/L	APHA 3111		0.1	_	0.1	mi	-	< 0.01			
0. Zin	c as Zn	mg/l.	APHA (3111	B)	15	74	15	- 2	-	0.07			
t. Tot	al Chromium as Cr	mg/L	APHA (3111		0.05	-	0.06	- 2	-	< 0.05			
	iminum as Al	mg/L	APHA 3111	D	0.03	1.00	0.02	-	-	< 0.01			
ment minorization in	ron as B	mg/L	APHA 4500 E	8.8	136	-	94	94	2.0	< 0.01			
4. CO	emphasement of the control of the co	mg/L	IS 3025 (Part-		+	-		**	-	16.0			
	al Akalinity as CaCO ₃	mg/L	IS 3025 (Part-	The state of the s	77.		-99		-	164.0			
fi. Tot	Total Hardness as CaCO, mg/l. IS 3025 (Part		21)	200	-		-	-	174.0				

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.10.05

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 03:53:25+05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us :

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TEST REPORT

Ref. No.	STH/TR/23-24/4415	(Mcb) Di	: 05.10.2023	our PO No. 400	0283588-057-	1019 Dt:	20.07,2022			
[a] Nan	ne and address of t	he Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] Deta	ails of Sample			Surface Water	Sample	-				
[c] San	nple Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15.09.23						
[d] San	npling Location			Collected from	Ganga water	from raw Water pun	np house			
[e] Met	hod of Sampling			IS 1622						
[f] San	npling Environment	al Condition		Temp (%) 33 Humidity (%) 75						
[g] No.	& Type of Contain	er		One Sterilized Glass Bottle						
[h] San	nple Quantity			250 ml						
[i] San	nple Code			SW-4415						
[] San	nple Condition on R	teceipt		Fit for analysis						
* *	ns required to be ter	47,772,000		As per contract						
	ether any specific N gested by the custo		t has been	No						
[m] Date	e of receiving the sa	ample in Lab	oratory	16.09.23						
[n] Ana	lysis Start Date / Ar	nalysis Comp	letion Date	16.09.23 / 17	.09.23					
S.N.	Parameters	Unit	Method of Test	Limit as per 201		Result	s			
1	Total Coliform	/ 100 ml	IS 1622;1981	Shall not be detectable in 100 De		Detected / 10	00 ml			
2	E coli	/ 100 ml	IS 1622;1981	Shall not be detectable in 100 Detected / 100 ml			0 ml			



Authorized Signatory Mr. Vishal Sharma Deputy Quality Manager (DQM)

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TEST REPORT

Ref	No. STH/TR/23-24/4416	De t	95.10.2023		Your	PO No. 4	1000283588	-057-1019	Dt	20.07.202		
[a]	Name and address of the	ne Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[6]	Details of Sample			Surface Water Sample								
[c]	Sample Collected by				Chitranjan 19.23	Kumar (L	.ab Represe	intative) of	Shiva Test Ho	ouse on		
d	Sampling Location			Collected from Awrs sample from Ash dyke								
[e]	Method of Sampling				3025, AP	HA.		- 70				
[f]	Sampling Environment				mp. (°C)		33) E	łumidity(%)	75		
g	No. & Type of Contain	er		-	e poly Ja	r			2000.00			
h	Sample Quantity			2.1	iters							
	Sample Code			SW-1416								
31	Sample Condition on R	teceipt		Fit for Analysis								
[k]	Items required to be tes	aed		As	per contr	act.						
(1)	Whether any specific M been suggested by the	No										
[m]	Date of receiving the sa			16	09.23							
n	Analysis Start Date / A	nalysis Comple	etion Date	16.	09.23/2	3.09.23						
		1127	10 17 17 15 25 15		Tolerance Limit as per IS 2296-1982					22 37		
	Parameters	Unit	Method of	rest	Class 'A'	Class 'B'	Class 'C'	Class 'D'	Class E'	Result		
t/	pH at 25 °C	-	IS 3025 (Pa	ri-11)	6.5 to 8.5	6.5 to 8.5	6.0 to 9.0	6.5 to 8.5	6.0 to 8.5	6.82		
2	Dissolved Oxygen	Jagm	IS 3025 (Pa	rl-38)	6.0	5.0	4.0	4.0	-	5.6		
1.	BOD (3 days at 27 ¹ C)	mg/l.	IS 3025 (Pa	r1-44)	2	3	3		+:	2.30		
1.	Total Suspended Solids	mg/L	IS 3025 (Pa	rt-17)	-	-	170	+		47.0		
5.	Total Dissolved Solids	mg/l.	IS 3025 (Pa	rt-16)	500.00		1500		2100	27.9		
8.	Conductivity	µmhas/on.	IS 3025 (Pa	rt-14)	=	-	42		2250	812,0		
7.	Turbidity	NTU	IS 3025 (Pa	rt-10)	-	-	- 00	+	-	2.5		
8	Sodium as Na	mg/L	IS 3025 (Pa	rt-45)	F6.	+	-	+		44.1		
		11.59	IN AGAIN IN	1 44.	400.00		400.00	-	1000	27.9		
	Sulphate as SO ₄	mg/L	IS 3025 (Pa	11-24	400.00		400.00		1000	27.9		

SHIBESHW SHIBESHWAR PRASAD Date: 2023.10.05
AR PRASAD Date: 2023.10.05

Verified by : Dr. Shibeshwar Proxad Technical Manager



Shreyasee Prasad Date: 2023.10.05

Digitally signed by 03:53:51 +05'30'

Authorized Signatory Dr. (Mrx.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. A	o. STH/TR/23-24/4416(A) Dt. (95.10.2023		Your Po	2 No. 4000.	283588-057	-1019	Dr.	20.07.202	
[a]	Name and address of the	Customer		BA	PC LIMITE RAUNI THE 131, BARA GUSARA	RMAL POV	VER PLANT I	PROJEC	Т		
[b]	Details of Sample			Su	rface Wate	r Sample					
[c]	Sample Collected by			By Chitrarijan Kumar (Lab Representative) of Shiva Test House of 15.09.23							
[d]	Sampling Location			Co	illected from	n Awrs san	nple from As	h dyke			
[e]	Method of Sampling			IS 3025, APHA							
[f]	Sampling Environmental	Condition		Te	mp. (°C)		33	H	umidity(%)	75	
[g]	No. & Type of Container				e poly Jar						
[h]	Sample Quantity			2 Liters							
fil	Sample Code			SW-4416							
b)	Sample Condition on Rec	cipt		Fit for Analysis							
[k]	Items required to be testes			As per contract,							
m	Whether any specific Method of Test has been suggested by the party				1						
[m]	Date of receiving the same	pie		16	.09.23						
[n]	Analysis Start Date / Anal		n Date	-	.09.23 / 23	3.09.23					
	roma Marian missa	Unit	- con-consumb				mit as per IS 2			200000	
	Parameters	20000000	Method of Te	st	Class 'A'	Class 'B'	Class 'C'	Class	Class E	Results	
, Iro	n as Fe	mg/l.	APHA 3500 Fe	еВ	0.3	-	0.5	-	- 22	0.27	
. Co	pper as Cu	mg/L	APHA (3111	B).	1.5	-	1.5	-		<0.05	
. Ma	inganose as Mn	mg/L	APHA 3111	В	0.6		-	11.00	7.4	<0.1	
Me	rcury as Hg	mg/l.	APHA 3112	R.	0.001	-	-	-		< 0.001	
	dmium as Cd	mg/L	APHA 3111		0.01	-	0.01	-	-	<0.003	
. Se	lenium as Se	mg/L	APHA 3114	В	0.01	-	0.06	-	-	< 0.01	
. To	tal Arsenic as As	mg/L	APHA (3114	Bi	0.05	0.2	0.2	(+)	-	< 0.01	
. Cy	anide as CN	mg/L	1S 3025 (Part-		0.05	0.05	0.05		-	< 0.05	
. Le	ad as Pb	mg/L	APHA 3111	В	0.1	-	0.1	+	-	< 0.01	
o, Zir	ic as Zn	mg/l.	APHA (3111		15	-	15			0.06	
	tal Chromium as Cr	mg/L	APHA (3111	B):	0.05	(4)	0.05		14	< 0.05	
	minum as Al	mg/L	APHA 3111	-	0.03	-	0.02		-	< 0.01	
	ron as B	mg/L	APHA 4500 B	-	-	-		- 77	2.0	<0.01	
14, CC		mg/L	IS 3025 (Part-	_		- 14		-		40.0	
	tal Alkalinity as CaCO _s	mg/l.	IS 3025 (Part)		=	-	7.74	-	-	252.0	
6. Te	tal Hardness as CaCO ₁	mg/L	18 3025 (Part-)	21)	200		deal.	- 44		386.0	

Digitally signed by SHIBESHWAR PRASAD SHIBESHW AR PRASAD Date: 2023.10.05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreywee Prasad Date: 2023.10.05 03:54:26 +05'50"

Authorized Signatory Dr. (Mrs.) Shreyasee Prosad Quality Manager

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Website: www.shivatest.com . www.shivatesibouse.com

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TEST REPORT

Ref. No.	STH/TR/23-24/4416	(Mcb) Di	05.10.2023	our PO No. 400	0283588-057-	1019 Dr.	20.07.2022			
[a] Nan	ne and address of t	he Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b] Deta	ails of Sample			Surface Water Sample						
[c] San	nple Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15.09.23						
[d] San	pling Location			Collected from	. Awrs sample	from Ash dyke				
[e] Met	hod of Sampling			IS 1622						
[f] San	pling Environment	al Condition		Temp (°c)	33	Humidity (%)	75			
[g] No.	& Type of Contain	er		One Sterilized Glass Bottle						
[h] San	nple Quantity			250 ml						
[i] San	nple Code			SW-4416						
[] San	ple Condition on R	leceipt		Fit for analysis						
	ns required to be ter	mira/min		As per contract						
	ether any specific N gested by the custo		t has been	No						
[m] Date	e of receiving the sa	ample in Lab	oratory	16.09.23						
[n] Ana	lysis Start Date / Ar	nalysis Comp	letion Date	16.09.23 / 17	.09.23					
S.N.	Parameters	Unit	Method of Test	Limit as per IS 10500: 2012		Result	s			
1	Total Coliform	/ 100 ml	IS 1622:1981	Shall not be det ml		Detected / 10	00 ml			
2	E coli	/ 100 ml	IS 1622:1981	Shall not be detectable in 100 Detected / 100 ml						



Mr. Vishal Sharma Deputy Quality Manager (DQM)

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TEST REPORT

Re	f. No. STH/TR/23-24/441	7 D	1: 05.10.2023		Your PO No. 4000283	588-057-1019	Dr. 20.07,202					
[a]	Name and address of	the Custo	mer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b]	Details of Sample				Ground Water							
[c]	Sample Collected by				By Chitrarijan Kumar (Lab Representative) of Shive Test Hous on 15:09.23							
[d]	Sampling Location				Collected from Hand pur Village)	mp water Near ash o	tyke (Chakballi					
[e]	Method of Sampling				IS 3025, APHA							
[1]	Sampling Environment				Temp. (°C)	33 Hu	midity(%) 75					
[g]	the contract of the contract o	ner (No. &	Type of Contai	ner)	Polypropylene Bottle							
[h]					2 Litres							
0	Sample Code				BW-4417							
0	Sample Condition on F				Fit for analysis							
[k]				As per contract								
M	Whether any specific I suggested by the cu		Test has bee	No								
[m	Date of receiving the s	ample in L	aboratory		16.09.23							
[n]	Analysis Start Date / A	malysis Co	ompletion Dat	te	16.09.23 / 23.09.23							
			Require	ment a	as per IS10500:2012	2010/E010860/01						
Pa	rameters.	Unit	Acceptable Limit	17,000	ermissible Limit in the nce of alternative SOURCE	Method of Test	Results					
1,	Iron as Fe	mg/l.	1.0		No relaxation	APHA3500	0.2					
2	Copper as Cu	mg/l.	0.05		1,50	APHA (3111B)	<0.0					
3.	Cadmium as Cd	mg/l.	0.003		No Relaxation	APHA3111B	<0.00					
4.	Hexavalent ChromiumasCr ⁺⁸	mg/l.	***			IS 3025 (P-62)	<0.0					
5.	Chromium as Cr	mg/l.	0.05		No Relaxation	APHA(31118)	<0.0>					
6.	Lead as Pb	mg/l.	0,01		No Relaxation	APHA31118	<0.0					
7.	Total Arsenic as As	mg/l.	0.01		0.05	APHA(3114B)	<0.0					
8.	Mercury as Hg	mg/l.	0.001		No Relaxation APHA3111B <0.00							



SHIBESHW AR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date; 2023.10.05 04:05:04 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad-Quality Manager

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Contact us :

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TEST REPORT

Ref. N	o. STH/TR/23-24/4418 Dt:	05.10.2023	Your PO No. 400	0283588-057-1019	Dt: 20.07.202					
[a]	Name and address of the Custon	ser	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI 851 116							
[b]	Details of Sample		Treated Effluer	Treated Effluent Sample						
[e]	Sample Collected by		By Chitranjan Kurnar (Lab Representative) of Shive Test Hot on 15.89.23							
[d]	Sampling Location		Callected from ETP	Outlet Stage #1						
[e]	Method of Sampling		IS 3025, APHA							
[f]	Sampling Environmental Condit	ion	Temp. (^c C)	33 Humidity(%	6) 75					
[g]	No. & Type of Container	1011	Plastic Bottle	oo mannany(/	70					
(h)	Sample Quantity		2 Litres							
	Sample Code		E-4418							
[i]										
[i]	Sample Condition on Receipt		Fit for Analysis							
[k]	Items required to be tested		As per contract							
[1]	Whether any specific Method of been suggested by the party	Test has	No							
[m]	Date of receiving the sample		16.09.23							
[n]	Analysis Start Date / Analysis C	ompletion Dat	16.09.23 / 23.09	.23						
SI. no	Parameters	Unit	Method of Test	Limit as per E (P) Rules	RESULTS					
1.	pH at 25° C		IS 3025 (Part-11)	5.5 - 9.00	7.36					
2.	Oil & Grease	mg/l	IS 3025 (Part-39)	10.00 mg/l.	0.9					
3.	Ammonical Nitrogen as N	mg/L	IS 3025 (Part-34)	50.00 mg/l.	6.7					
4.	Total Kjeldahl Nitrogen as N	mg/l.	IS 3025 (Part-34)	100.00 mg/l,	9.5					
5.	BOD (3 days at 27°C)	mg/L	IS 3025 (Part-44)	100.00 mg/l,	13:0					
ŝ	COD	mg/L	APHA (5220 B)	Not Specified	56.0					
7.	Arsenic as As	mg/L	APHA 3114 B	0.20 mg/l.	< 0.01					
8.	Mercury as Hg	mg/l.	APHA 3112 B	0.01 mg/l	< 0.001					
9.	Lead as Pb	mg/l.	APHA 3111 B	0.10 mg/l.	<0.1					
10.	Cadmium as Cd	mg/L	APHA 3111 B	2,00 mg/l.	< 0.1					
11.	Hexavalent Chromium as Cr+5	mg/l.	IS 3025 (Part-52)	0,10 mg/l.	<0.1					
12,	Total Chromium as Cr	mg/l.	IS 3025 (Part-52)	2.00 mg/l.	<0.1					
13.	Copper as Cu	mg/l.	APHA 3111 B	3.00 mg/l.	<3.0					
4.	Zinc as Zn	mg/l.	APHA 3111 B	5.00 mg/l.	< 0.1					
15.	Iron as Fe	mg/l.	IS 3025 (Part-53)	3.00 mg/l.	0.11					
16.	Nickel as Ni	mg/L.	APHA 3111 B	3.00 mg/l.	< 0.1					
17,	Boron as B	mg/L	APHA 4500 B B	Not Specified	0.08					
18,	Fluoride as F	mg/l.	APHA (4500 F D)	2.00 mg/l.	0.50					
19,	Dissolved Phosphates as P	mg/l.	IS 3025 (Part-31)	5.00 mg/l.	0.84					
20.	Sulphide as S	mg/L	APHA 4500 S ² F	2.00 mg/l.	0.064					
	Sulphate as SO4	mg/l	1S3025(Part-24)	Not Specified	44.40					

Digitally signed by SHIBESHAVAR PRASAD SHIBESHW AR PRASAD Date: 2023,10.05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:05:17 +0530

Authorized Signatory Dr. (Mrs.) Shreyasee Praxad Quality Manager

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Contact us:

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Website: www.shirutest.com; www.shirutesthopse.com





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TEST REPORT

Ref.	No. STH/TR/23-24/4418(A) D	1: 05.10.2023	Your PO No. 400	0283588-057-1	019	Du	20.07.2022			
[a]	Name and address of the Custome	≑T	NTPC LIMITED BARAUNI THERMA NH 31, BARAUNI BEGUSARAI – 8		NT PROJECT					
[b]	Details of Sample		Treated Effluer	t Sample						
[c]	Sample Collected by		By Chitranjan Kum on 15.09.23	ar (Lab Repres	entative) of \$	Shiva T	est House			
[d]	Sampling Location		Collected from ETP	Outlet Stage #1						
[e]	Method of Sampling		IS 3025, APHA							
[f]	Sampling Environmental Condition	on	Temp. (°C)	33	Humidity(963	75			
[g]	No. & Type of Container		Plastic Bottle							
[h]	Sample Quantity		2 Litres							
[i]	Sample Code		- T-							
61	Sample Code Sample Condition on Receipt		E-4418							
			Fit for Analysis							
[k]	Items required to be tested		As per contract							
	Whether any specific Method of been suggested by the party	No								
[m]	Date of receiving the sample		16.09.23							
[n]	Analysis Start Date / Analysis Co	mpletion Date	16.09.23 / 23.09	23						
Si.	Parameters	Unit	Method of Test	Limit as per Rules	E (P)	RI	ESULTS			
1;	Particle size of Suspended Solids	220	100	Shall pass 8 IS Sie	eve		sses Test 0 micron)			
2.	Temperature	oC.	1 7777 .	Shall not asceed the receiving v			24.0			
3.	Colour	Hazen	IS 3025 (Part-4)	Colour			<5.0			
4.	Odour		IS 3025 (Part-4)	Odorl		0	dorless			
5.	Suspended Solids	mg/l.	IS 3025 (Part-17)	100.00	mg/l.		28.0			
6.	Selenium as Se	mg/l.	APHA 3500 Se	0.05 n	ng/L	- 8	< 0.01			
7.	Free Ammonia as NH ₃	mg/l.	APHA 4500 NH₂ C	5.0 m			<1.0			
8.	Percent Sodium	mg/l.	1	Not Spe			11.29			
9,	Residual Sodium Carbonate	me/l.	-	Not Spe	With those and the same and the		3.88			
10.	Cyanide as CN	mg/l.	IS 3025 (Part-37)	0.20 n			<0.1			
11.	Phenolic Compound as C ₆ H ₅ OH	mg/l.	APHA 6420 B	1,00 n			< 0.001			
12.	Chloride	mg/l.	IS3025(Part-32)	Not Spe			92.0			
13.	Total Residual Chlorine	mg/l.	IS3025(Part-26)	1.00m			<0.1			
14.	Total Dissolved Solids	mg/l.	IS3025(Part-16)	Not Spe	cifed	-	824.0			
15.	Bio-Assay Test	-	IS 6582 : 1971	90 % Fish Su 96 hrs. in 100		after 9 Cond	Fish Survived 6 hrs. in 1009 1 Of Treated Effluent			

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.10.05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by: Shreyasee Prasad Date: 2023,10.05 04:05:29 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. N	ko. STH/TR/23-24/4419. D	t; 05.10.2023	Your PO No. 400	0283588-0	57-1019	Dt: 20.07,202	
[a]	Name and address of the Custo	omer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI 851 116				
[b]	Details of Sample	Treated Efflue	nt Sampli	8	A THE STATE OF		
[c]	Sample Collected by		By Chitranjan Kur on 15.69.23	nar (Lab Ri	epresentative) of	Shiva Test Hous	
[d]	Sampling Location		Collected from ETP	Outlet Stag	e #2		
[e]	Method of Sampling		IS 3025, APHA		Contract of the Contract of th		
[f]	Sampling Environmental Con-	lition	Temp. (°C)	33	Humidity(%)	75	
g	No. & Type of Container		Plastic Bottle	00	Thermosty (70)	//	
[h]	Sample Quantity		2 Litres				
[i]	Sample Code		E-4419				
[1]	Sample Condition on Receipt		Fit for Analysis				
[k]:			The state of the s				
A	Items required to be tested	ere a b	As per contract				
[1]	Whether any specific Method been suggested by the party	of Test has	No				
m	Date of receiving the sample	16.09.23					
[n]	Analysis Start Date / Analysis	Completion Dat	e 16.09.23 / 23.09	23	26205441		
SI. no	Parameters	Unit	Method of Test	Limit	as per E (P) Rules	RESULTS	
1.	pH at 25° C		IS 3025 (Part-11)	5	5-9.00	8,19	
2.	Oil & Grease	mg/L	IS 3025 (Part-39)	10).00 mg/l.	0.60	
3.	Ammonical Nitrogen as N	mg/l.	IS 3025 (Part-34)).00 mg/l.	5.6	
1	Total Kjeldahi Nitrogen as N	mg/l.	IS 3025 (Part-34)		0.00 mg/l,	8.4	
5.	BOD (3 days at 27°C)	mg/l.	IS 3025 (Part-44)		0.00 mg/l.	11.0	
3.	COD	mg/l.	APHA (5220 B)	No	Specified	40.0	
7.	Arsenic as As	mg/l.	APHA 3114 B	.0	.20 mg/l.	< 0.01	
3.	Mercury as Hg	mg/l.	APHA 3112 B	0	.01 mg/l.	<0.001	
9.	Lead as Pb	mg/l.	APHA 3111 B	0	.10 mg/l.	< 0.01	
10.	Cadmium as Cd	mg/l.	APHA 3111 B	2	.00 mg/l.	< 0.1	
11,	Hexavalent Chromium as Cr*8	mg/L	IS 3025 (Part-52)		.10 mg/l.	< 0.1	
12	Total Chromium as Cr	mg/l.	IS 3025 (Part-52)		.00 mg/l,	< 0.1	
13.	Copper as Cu	mg/l.	APHA 3111 B		.00 mg/l.	<0.1	
14.	Zinc as Zn	mg/l.	APHA 3111 B		.00 mg/l.	0.08	
15.	Iron as Fe	mg/l.	IS 3025 (Part-53)		.00 mg/l.	0.35	
16.	Nickel as Ni	mg/l.	APHA 3111 B		.00 mg/L	< 0.1	
17.	Boron as B	mg/L	APHA 4500 B B		Specified	0.06	
18.	Fluoride as F	. Rem	APHA (4500 F D)		.00 mg/l.	0.40	
	Dissolved Phosphates as P	mg/l.	IS 3025 (Part-31)		.00 mg/l.	0.64	
19.	Dissulved Filosphates as F	71154714					
	Sulphide as S	mg/l.	APHA 4500 S2 F		.00 mg/l.	0.048	

SHIBESHW SHBESHMARPRUSAD AR PRASAD Date 2023-10-05 12-45-57 +05-30

Verified by :

Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasacl Date: 2021.10.05 04:05:42 +05/30

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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TEST REPORT

Ref.	No. STH/TR/23-24/4419(A)	Dt: 05.10.2023	Your PO No. 40	000283588-057-1019	Dt:	20,07,2022	
[a]	Name and address of the Custon	ner	NTPC LIMITED BARAUNI THERM, NH 31, BARAUNI BEGUSARAI		īΤ		
[b]	Details of Sample		Treated Effluer	nt Sample			
[c]	Sample Collected by		nar (Leb Representative) or	Shive 1	Test House		
[d]:	Sampling Location		Collected from ETP	Outlet Stage #2			
[c]	Method of Sampling		IS 3025, APHA	and the first of t			
[f]	Sampling Environmental Condit	ion	Temp. (°C)	33 Humidit	130%	75	
[g]	No. & Type of Container		Plastic Bottle	Tionson.	71,307	A.U.	
[h]	Sample Quantity		2 Litres				
-	The contract of the contract o		100,000,000				
[1]	Sample Code		E-4419				
[j]	Sample Condition on Receipt		Fit for Analysis				
[k]	Items required to be tested	As per contract					
[1]	Whether any specific Method of been suggested by the party	No	No				
[m]	Date of receiving the sample	16.09.23					
[n]	Analysis Start Date / Analysis C	ompletion Date	16.09.23 / 23.09	23			
SI. no.	Parameters	Unit	Method of Test	Limit as per E (P) Rules	R	ESULTS	
1.	Particle size of Suspended Solids	-	122	Shall pass 850 micron IS Sieve		sses Test 0 micron)	
2.	Temperature	°C	****	Shall not exceed 5°C above		25.0	
3.	Colour	Hazen	IS 3025 (Part-4)	the receiving water temp. Colourless		<5.0	
4.	Odour	700	IS 3025 (Part-4)	Odourless	0	dourless	
5.	Suspended Solids	mg/L	IS 3025 (Part-17)	100.00 mg/l.		19.0	
6.	Selenium as Se	mg/l,	APHA 3500 Se	0.05 mg/l.		< 0.01	
7.	Free Ammonia as NH ₃	mg/L	APHA 4500 NH ₃ C	5.0 mg/l.		<1.0	
8.	Percent Sodium	mg/l,		Not Specified		9.63	
9.	Residual Sodium Carbonate	me/l.	mint .	Not Specified		3.44	
10.	Cyanide as CN	mg/l.	IS 3025 (Part-37)	0.20 mg/L		<0.1	
11.	Phenolic Compound as C _t H ₅ OH	mg/L	APHA 6420 B	1.00 mg/l.		<0.001	
12.	Chloride	mg/l,	IS3025(Part-32)	Not Specified		82.0	
13.	Total Residual Chlorine	mg/l.	IS3025(Part-26)	1,00mg/l.		<0.1	
14.	Total Dissolved Solids	mg/l.	183025(Part-16)	Not Specified	22.5	772.0	
15.	Bio-Assay Test	-	IS 6582: 1971	90 % Fish Survived after 96 hrs. in 100% Efficient	after 6	Fish Survived 6 hrs. in 100% Cliffrealed Effluent	

SHIBESHW Digitally signed by SHIBESHAAR PRASAD AR PRASAD Deta 2023, 10,06

Verified by a Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreywise Prosed Date: 2923.10.05 04:05:57 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Ref. No. STH/TR/22-23/4420	Dt: 05.10.2023 Your I	O No. 4000283588-057-	1019 Dt: 20.0	7,2022		
[a] Name and address of the Custo	mer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample		Untreated Effluent S	ample			
[c] Sample Collected by		By Chitranjan Komer (L Test House on 15.09.23	ab Representative) of	Shive		
[d] Sampling Location		Collected from STP	Inlet (Stage 2)			
[e] Method of Sampling		IS 3025, APHA				
 Sampling Environmental Condit 		Temp. (°C) 33	Humidity(%)	75		
[g] Details of Sample Container (No	& Type of Container)	Polypropylene Bottle	(02)			
[h] Sample Quantity		2 Litres				
[i] Sample Code		E-4420				
Sample Condition on Receipt		Fit for analysis				
[k] Items required to be tested		As per contract				
 Whether any specific Method of by the customer 		No				
[m] Date of receiving the sample in	Laboratory	16.09.23				
[n] Analysis Start Date / Analysis C	ompletion Date	16.09.23 / 23.09.23				
Parameters	Unit	Method of Test	Results	3		
1. pH		IS 3025 (Part-11)	6,19			
2. Conductivity	μmhos/cm.	IS 3025 (Part-14)	1764.0	į.		
Total Suspended Solids	Total Suspended Solids mg/l.		38.0			
4. Total Dissolved Solids	Total Dissolved Solids mg/l.		IS 3025 (Part-17) 38.0 IS 3025 (Part-16) 1088.0			
 B.O.D. (3 days at 27°C) 	mg/l.	IS 3025 (Part-44)	0.08			
6. C.O.D.	mg/l.	APHA (5220 B) 240.0				
7. Oil & Grease mg/l.		IS 3025 (Part-39) 1.0				



SHIBESHW Digitally signed by AR PRASAD 0ete: 2023,10.05

SHIBESHWAR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 0406:11+05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Ref. No. STH/TR/22-23/4421	Dt: 05.10.	2023 Your P		1000283583	3-057-101	9	Dt: 20.0	7,202
[a] Name and address of the	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample			Trea	ted Effluer	nt Sample	9		
[c] Sample Collected by				hitranjan Ki House on I		Represent	tative) of	Shiva
[d] Sampling Location			Colle	ected from	STP Out	let (Stage	2)	
[e] Method of Sampling	2 720		ed estimated whereigh	025, APHA		- W		
[f] Sampling Environmental Condition				p. (°C)	33	Humidi	ty(%)	75
[g] Details of Sample Contain	er (No. & Type	of Container)		propylene	Bottle (0)	2)		
[h] Sample Quantity	2 Litres							
Sample Code	E-4421							
Sample Condition on Rec				r analysis				
[k] Items required to be tester		100000000000000000000000000000000000000	As per contract					
 Whether any specific Methods by the customer 	nod of Test has	been suggested	No					
[m] Date of receiving the sam	ple in Laborator	y	16.09.23					
[n] Analysis Start Date / Analy	ysis Completion	Date	16.0	9.23/23.0				
Parameters	Unit	Method of Tes	st	Standar Rules	ds as pe Schedu	r E(P) le VI	Res	ults
1, pH	**	IS 3025 (Part-1	1)	6	5 - 8.5		7.2	5
2. Conductivity	μmhos/cm.	IS 3025 (Part-1	4)	No	Specifie	d	684	.0
Total Suspended Solids	ids mg/l, IS 3025 (Part-1		7) 100		14	.0		
4. Total Dissolved Solids	Total Dissolved Solids mg/l. IS 3025 (Part-1)		6)	No	Specifie	d	411	.0
 B.O.D. (3 days at 27°C) 	mg/l.	IS 3025 (Part-4	4)		30		.11	.0
6, C.O.D.	mg/l.	APHA (5220 B	THE STREET STREET				.0	
7. Oil & Grease	mg/l.	IS 3025 (Part-3	9)		10		0.	7



SHIBESHW SHIBESHWAR PRASAD Date 2023 (803 AR PRASAD 12:46:37 +05:30

Verified by : Dr. Shiheshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:06:24 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/4426 Dt:	95.10.2023	Your PO No. 400	00283588-057-101	9 Dt:	20.07,2022	
[a] Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b] Details of Sample	Monitoring of	Ambient Noise L	.evel			
[c] Sample Collected By	By Chitranjan House on 15/1	Kumar (Lab Rej 6.09.23	oresentative)	of Shiva Ti		
[d] Sampling Location		Within Premises	0			
[e] Sampling Environmental Condition		Temp. (ⁿ C)	33	Humidity(%)	75	
[f] Sample Code		N-1936				
[g] Items required to be tested		Day & Night time	e Noise Level			
 Whether any specific Method of Test has suggested by the customer 	No					
[i] Date of receiving the sample in Laborate		16.09.23				
	Unit	*****		Standards		
Sampling Point			Voise Level	Industria	Industrial Area	
		Day Time (6.6am to 10.6pm)	Night Time (10,0pm to 6.0am)	Day Time	Night Time	
Near CHP Crusher House Stage 1	dB(A)	58.4	47.2	75.00	70.00	
2. Near CHP Crusher House Stage 2	dB(A)	59.2	47.3	da	do	
Near cooling tower stage 2	dB(A)	68.2	55,2	do	do	
4. NTPC Hospital (silence Zone)	dB(A)	42.3	38.1	50	40	
5. Polish Hostel	dB(A)	53.8	46.8	do	do	
6. Ash Dyke Area	dB(A)	61.7	44.7	do	do	
7. Malhipur Chowk Area (Commercial area)	dB(A)	64.8	51,2	65	55	
8. CW Pump House	dB(A)	65.1	56.2	da	do	
	dB(A)	72.8	60.5	do	do	
Boiler Area Stage	100000000000000000000000000000000000000					

Digitally signed by SHIBESHWAR PRASACI SHIBESHW AR PRASAD 04.18.56 +05'30'

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally a greatly Sirryson 7414E Dide 2023 (ROLEN | BILLEY - DE SE

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Ref. No. STH/NN/TR/23-24/118 Dt: 05.10.2023 Your PC	NO. 4000283588-057-1019 Dt: 20.07.2022 NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI - 851 116				
[b] Details of Sample	Pond Ash Sample				
[c] Sample Collected by	By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15.09.23	af			
[d] Sampling Location	From Ash Pond				
[e] Sampling Environmental Condition	Temp. (°C) 33 Humidity(%)	75			
[f] Details of Sample Container (No. & Type of Container)	Two Poly Bags				
[g] Sample Quantity	2 kg.				
[h] Items required to be tested	As per contract				
 Whether any specific Method of Test has been suggested by the customer 	No				
Date of receiving the sample in Laboratory	16.09.23				
[k] Analysis Start Date / Analysis Completion Date	16.09.23 / 23.09.23				
Parameters	Results (w/w)				
1. Silica as SiOz, %	52.8				
2. Alumina as Al ₂ O ₃ , %	19.7				
 Iron as Fe₂O₃, % 	7.4				
4. Calcium as CaO, %	1.6				
Magnesium as MgO, %	1.1				
6. Titania as TiO ₂ , %	1.16				
7. Potassium as K ₂ O, %	0,94				
8. Sodium as Na₂O, %	0.88				
9. Phosphate as P ₂ O ₅ , %	0.66				
10. Sulphate as SO ₃ , %	0.81				
11. Mercury as Hg, %	<0.01				
12. Arsenic as As, %	<0.01				
13. Lead as Pb, %	0.024				

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023,10.05

Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:19:05 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT-

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Contact us :

122-C. Aastha, Road No. 5A, Patliputra Colony, Patria - 800 013 (Bihari

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Website: www.shivatest.com / new shivatesthouse.com





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TEST REPORT

[a] Name and address of the Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Sample	Coal Sample				
[c] Sample Collected by	By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15.09.23				
[d] Sampling Location	From Coal Storage Yard				
[e] Sampling Environmental Condition	Temp. (°C) 33 Humidity(%) 75				
[f] Details of Sample Container (No. & Type of Container) Two Poly Bags				
[g] Sample Quantity	2 kg.				
[h] Items required to be tested	As per contract				
[i] Whether any specific Method of Test has been suggested by the customer	No				
Date of receiving the sample in Laboratory	16.09.23				
[k] Analysis Start Date / Analysis Completion Date	16,09,23 / 23,09.23				
Parameters	Results (w/w)				
1. Mercury as Hg, %	<0.1				
2. Copper as Cu, %	0.21				
3. Zinc as Zn, %	3.2				
4. Chromium as Cr, %	0.19				
5. Magnesium as Mg, %	1,6				
6. Arsenic as As, %	0.06				
7. Selenium as Se, %	<0.01				
8. Nickel as Ni, %	0.19				
9. Cadmium as Cd, %	<0.1				
10. Lead as Pb, %	0.07				
11. Cobalt as Co, %	<0.1				
12, Sulphur Content, %	0.81				

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.10.05

Verified by: Dr. Shibeshwar Prasad Technical Manager



Prasad

Shreyasee Streyasee Prasad Date: 2023,10.05 04:19:16 +05'30"

> Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Website: www.shivarest.com; www.shivaresthouse.com







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TEST REPORT

Re	f. No. STH/TR/23-24/43	2 Dt: 2	6.04.2023	Your PO No.	40002835	588-057-1019	Dt: 20.07.202	
[8]	Name and address of	the Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample					ring of Ambient		
[c]	Sample Collected by			est House on 1				
[d]	Sampling Location		Collecte	d from Near Mair	Gate (Stage 1)			
[e]	Method of Sampling	-the /foretopes		(Part - 14)				
(f)	Details of Sample Con	tainer (No. &	Type of Contain	ner)	Filter Pa	aper; Glass Imp	pinger	
[9]	Instrument ID				RDS-1.			
[h]	Sample Quantity				30 ml x	6 (for each NC)2, SO2)	
DI.	Sample Code				A-432			
[]	Sample Condition on I	Receipt			Fit for	Analysis		
[k]	Items required to be to					contract		
[I]	Whether any specific I the customer		No					
[m]	Date of receiving the s	ample in Lab		18.04.23				
				18.04.23 / 19.04.23				
						emperature	42.0°C	
222					Min" Temperature 34.0 °C		120000000000000000000000000000000000000	
[0]	Meteorological Data				Relative Humidity 30% Wind Direction W			
					Wind Dr Wind Sp	and and in contrast of the con	6.0 Km /hr:	
			1200/ 200	Standard as	ANEIG OD		g Station	
	Parameters	Unit	Method of	per NAAQS				
	_0100.01000000553.	1910/000	Test	2009	RESULTS			
1.	Particulate Matter (PM ₁₂)	(µg (m²)	IS 5182 (Part-23)	100.0	76.5 74.5 71.4	Avg. value:	74.1	
2	Particulate Matter (PM _{2,6})	(ag / m²)	CPCB (GMAAP Vol. I)	60.0	44.4 35.5 41.8	Avg. value:	40.6	
1	Sulphur Dickide as SO ₂	(ug (m²)	(5 6182 (Part-2)	80.0	15.6 21.9 8.8 10.7 13.7 17.6	Avg. value:	14.7	
4	Oxides of Nitrogen as NO ₂	(sg i m²)	IS 5182 (Part-6)	80.0 TEST	37.2 38.0 27.2 25.9 29.9 36.5	Avg. value:	32.4	

AR PRASAD Date: 2023.04.27

Technical Manager

SHIBESHW Digitally signed by SHIBESHWAR PRASAD

Verified by :

- END OF TEST REPORT -

Patria

800013

Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:51:37 +05'30'

> Authorized Signatory Quality Manager

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Contact us: 122-C, Aastha, Road No. 5A, Patliputra Colony, Patria -- 800 013 (Bihar)

> Moh : +918676886249 ; +919431047908 sihpatna1siyahoo.co.in : inforg shivatest com

Website: www.shivatest.com; www.shivatesthorse.com







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TEST REPORT

R	f. No. STH/TR/23-24/433	D	1: 26.04.2023	Your PO N		5588-057-1019	D1: 20.07.202	
[a]	Name and address of the	e Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample		Monitor	ing of Ambient	Air Quality			
	Sample Collected by			est House on 1				
[d]	Sampling Location						d Bhawan (Township)	
0	Method of Sampling					(Part - 14)		
ŋ	Details of Sample Contai	ner (No. & T	vpe of Container	0		per; Glass Imp	inger	
gj	Instrument ID			-	RDS-2			
h]	Sample Quantity				and the second s	6 (for each NC	b. SO ₂)	
1	Sample Code				A-433	or from season tree	2,2)	
n i	Sample Condition on Red	ceint			Fit for A	malveie		
k]	Items required to be teste				As per o			
ŋ	Whether any specific Me customer		No	onti dot				
[m]	Date of receiving the san	nole in Labor	18.04.23					
[n]	Analysis Start Date / Ana				18.04.23 / 19.04.23			
	raidiyala alast bate i raid	ayou compi	VIIO17 LP 01.0			mperature	42.0°C	
					Min ^{rs} Temperature 34.0 °C			
0	Meteorological Data				Relative Humidity 30%			
					Wind Direction W			
			TON DECEMBER	-	Wind Spr		8.0 Km Ay	
	Parameters	Unit	Method of	Standard as per NAAQS	_		ng Station	
	1 ararretore	Oint.	Test	2009	Near Vinod Bhawan (Township) Results			
			IS 5182		76.1	1		
1.	Particulate Matter (PM10)		(Part-23)	100.0	65.2	Avg. value:	76.4	
-5		(μg / m ³)		100.0	88.0	100	17731	
			anan		48.0			
2.	Particulate Matter (PM _{2.5})		CPCB (GMAAP Vol. I)	60.0	36.6	Avg. value:	42.5	
	r drocalate (walse) (r M2.5)	(μg / m ³)	(Oliver vol. 1)	3000	43.0	rivg. value.	76.3	
		28.31510000	400404	80.0	16.8 16.0			
3.	Sulphur Dioxide as SO ₂	(µg / m ³)	IS 5182 (Part-2)	V4300	9.4 10.5 13.6 17.8	Avg. value:	14.0	
4.	Oxides of Nitrogen as NO ₂	(μg / m³)	IS 5182 (Part-6)	80.0	41.3 37.8 22.8 24.2	Avg. value:	34.4	
			13	TEST	37.5 42.7			

SHIBESHW AR PRASAD Date: 2023.04.27

Digitally signed by SHIBESHWAR PRASAD

Verified by : Technical Manager Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:51:55 +05'30'

> Authorized Signatory Quality Manager

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TEST REPORT

Re	f. No. STH/TR/23-24/434	D	t: 26.04.2023	Your PO N	age on the behavior to be proportion.	3588-057-1019	Dt: 20.07.202	
[a]	Name and address of the	Customer	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample		Monitor	ring of Ambient	Air Quality			
[c]	Sample Collected by					est House on 1		
[d]	Sampling Location				Collecte	d from Near Ash	Dyke	
[8]	Method of Sampling	SET OFFICE PERSON	C Appelo people that		IS 5182	(Part - 14)		
[1]	Details of Sample Contain	ner (No. & T	ype of Container)			aper; Glass Imp	inger	
[9]	Instrument ID		***************************************			FPM-3		
h	Sample Quantity				30 ml x	6 (for each NO)2, SO2)	
[i]	Sample Code				A-434		With an according to	
[]	Sample Condition on Rec	ceipt			Contract State of Sta	Analysis		
[k]	Items required to be teste					contract		
M	Whether any specific Met customer		No					
[m]	Date of receiving the sam	ple in Labor	ratory		18.04.23			
	The state of the s				18.04.23 / 19.04.23			
					Max" Te	emperature	42.0°C	
						imperature	34.0 °C	
	Meteorological Data				Relative Humidity 30% Wind Direction W			
					Wind Sp	Na Burlin Spek Advances	6.0 Km./hr	
		· ·	88-35-47-48	Standard as	111111111111111111111111111111111111111		ng Station	
	Parameters	Unit	Method of Test	per NAAGS		Near A	Ish Dyke	
			Lear	2009	-	RE	5UL7S	
1-	Particulate Matter (PM ₁₀)	(µg / m³)	IS 5182 (Part-23)	100.0	81.2 69.9	Avg. value:	75.3	
	3.00.100.000	APRIL TOTAL	. 10.0000,00000.		74.8	3,0,40,0,000,000,000		
2	Particulate Matter		CPCB	200.00	43.0	0207201012275000	7002723	
77.	(PM2.5)	(µg / m³)	(GMAAP Vol. I)	60.0	39.2	Avg. value:	40.9	
_		1,0	(A)		40.5			
3.	Sulphur Dioxide as SO ₂	(μg / m ³)	IS 5182 (Part-2)	80.0	25.2 11.3 9.1 10.1 11.1 22.1	Avg. value:	14.8	
4.	Oxides of Nitrogen as NO ₂	(μg / m³)	IS 5182 (Part-6)	80.0	38.3 35.6 32.1 28.7 32.8 41.7	Avg. value:	40.9	

AR PRASAD Date: 2023.04.27

SHIBESHW Digitally signed by SHIBESHWAR PRASADI

Verified by : Technical Manager Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:52:12 +05'30'

Authorized Signatory Quality Manager

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Mob.: +918676886249; +919431047908 Email sthutral ligyation co in infergishivatest com

Website: www.shrvatest.com; www.shrvatesthouse.com



Patna

800011

Wha Ross

- END OF TEST REPORT -





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TEST REPORT

Ref. No. STH/TR/2	3-24/435	D	t: 26.04.2023	Your PO N	and the second second	3588-057-1019	Dt: 20.07.202			
Name and address of the Customer						NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b] Details of Samp	ole		and the contract of the contract of	ing of Ambient						
	to contract the contract of th						7.04.23			
d Sampling Loca					Collecte	d from Near CW.	Pump House-(Stage-2)			
e) Method of Sam						(Part - 14)				
[] Details of Samp	ple Container	(No. & T	ype of Container)		Filter Pa	aper, Glass Imp	inger			
g] Instrument ID					RDS-4,	FPM-4				
h] Sample Quanti	ty				30 ml x	6 (for each NO	2, SO ₂)			
i] Sample Code					A-435		-			
Sample Condit	on on Receip	t			Fit for a	Analysis				
k) Items required		-				contract				
	Whether any specific Method of Test has been suggested by the									
	m) Date of receiving the sample in Laboratory						18.04.23			
n] Analysis Start [18.04.23 / 19.04.23					
					Max" Te	emperature	42.0 °C			
					The state of the s		34.0 °C			
o Meteorological Dat	8				Relative Humidity 30% Wind Direction W					
					Wind Sp	0.000	6.0 Km /hr.			
			Method of	Standard	100000000000000000000000000000000000000	Samplin	g Station			
Parameter	s U	nit	Test	as per NAAQS	Near CW, Pump House-(Stage-2)					
			1001	2009		Res	SULTS			
 Particulate Mat (PM₁₀) 	777.	ıg / m³)	IS 5182 (Part-23)	100.0	76.6 68.4 84.4	Avg. value:	76.5			
	20.55		amon		42.8					
Particulate Mat		and the same	CPCB	60.0	35.3	Avg. value:	39.5			
(PM _{2.5})	(P	ig / m³)	(GMAAP Vol. I)	1500000	40.3	100 Text (80 200 -				
 Sulphur Dioxide 	e as SO ₂ (µ	ig / m³)	IS 5182 (Part-2)	80.0	22.7 17.1 11.9 8.9 12.8 18.8	Avg. value	15.4			
4. Oxides of Nitro NO ₂	gen as (µ	ig / m²)	IS 5182 (Part-6)	80,0	43.0 34.3 30.2 25.5 39.6 44.3	Avg. value:	36.1			

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.04.27

Verified by: Technical Manager Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.04.27 14:52:37 +05'30"

Page 1 of I

Authorized Signatory Quality Manager

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Contact us :

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TEST REPORT

Re.	No. STH/TR/23-24/1205	Di:	26.05.2023	Your PO No	. 4000283	588-057-1019	Dt: 20.07.202			
[n]	Name and address of the	e Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116						
[b]	Details of Sample					ing of Ambient				
[c]	Sample Collected by			est House on 1						
[d]	Sampling Location				Collecter	d from Near Mair	Gate (Stage 1)			
[0]	Method of Sampling		IS 5182	(Part - 14)						
UI.	Details of Sample Conta	iner (No. & 1	Type of Contain	er)	Filter Pa	aper; Glass Imp	inger			
[9]	Instrument ID			en to a	RDS-1,	FPM-1				
[h]	Sample Quantity				30 ml x	6 (for each NC) ₂ , SO ₂)			
0	Sample Code				A-1205		V. STILL			
m.	Sample Condition on Re	ceipt			Fit for /	Analysis				
[k]	Items required to be test	ed	royal was a second	sections and the t	As per o					
[1]	Whether any specific Me the customer		has been sugg	gested by	Na					
[m] Date of receiving the sample in Laboratory						13.05.23				
Ini	Analysis Start Date / Ana				13.05.23 / 14.05.23					
						emperature	39.0 °C			
					Min* Temperature		30.0 °C			
[0]	Meteorological Data				Reletive Humidity 42%					
					Wind Sp Wind Sp		ENE 6.0 Km/hr			
				Standard as	ANI IS OD		g Station			
	Parameters	Unit	Method of	per NAAQS	The second secon					
			Test	2009	Resurs					
1.	Particulate Matter (PMro)	(µg / m³)	IS 5182 (Part-23)	100.0	83.0 71.9 78.2	Avg. value:	77.1			
2.	Particulate Matter (PM _{2.5})	(µg / m³)	CPCB (GMAAP Vol.1)	80.0	41.8 32.0 39.4	Avg. value:	37.7			
3.	Sulphur Dioxide as SO ₃	(µg / m²)	15 5 (III2 (Part-2)	0.08	21.2 15.5 9.1 12.1 14.2 16.2	Avg. value:	14.7			
4.	Oxides of Nitrogen as NO ₂	(µg / m³)	(\$ 5182 (Part-0)	80.0	43.3 39.3 33.7 26.1 35.1 37.8	Avg. value:	35.9			

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date 2023.06.01

> Verified by : Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prased Date: 2023.06.01 14:11:14 ±05'30'

> Authorized Signatory Quality Manager

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Contact us:

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TEST REPORT

Re	No. STH/TR/23-24/1206	T	t: 26.05,2023	Your PO N	-	83588-057-1019	Dt: 20.07.202
[a]	Name and address of the	Customer			NH 31,	Section 1. Section	VER PLANT PROJECT
[b]	Details of Sample				AND DESCRIPTION OF PERSONS	ing of Ambient	
	Sample Collected by					est House on 1	
[0]	Sampling Location				Collecte	d from Near Ash	Dyke
[e]	Method of Sampling					(Part - 14)	10.60101
ij.	Details of Sample Contain	ner (No. & T	ype of Container)		Filter Pa	aper, Glass Imp	inger
[0]	Instrument ID		11		RDS-3,	FPM-3	
[6]	Sample Quantity				30 ml x	6 (for each NO	2, SO ₂)
[1]	Sample Code				A-1206		
61	Sample Condition on Rec	ceipt			Fit for	Analysis	
[k]	Items required to be teste	ed				contract	
M	Whether any specific Met customer	thod of Test	has been suggeste	ed by the	No		
[m]	Date of receiving the sam	ple in Labor	ratory		13.05.2	3	
	Analysis Start Date / Ana				13.05.2	Tarabara -	
					Max ^e : Temperature		39.0 °C
r=1	No. 10 control of the last					mperature.	30.0 °C
[o]	Meteorological Data				Relative Wind Di	42% ENE	
					Wind Sp		6.0 Km./kr.
	_		Method of	Standard sa			ng Station
	Parameters	Unit	Test	per NAAQS 2000			lsh Dyke
_			103:270%	25,055	36.0	RE	SUL75
1.	Particulate Matter (PM ₁₀)	(μg / m ³)	IS 5182 (Part-23)	100.0	76.8 70.4 73.0	Avg. value:	73.4
	Walter Conference in the Conference			10000	41.0		
2.	Particulate Matter	901070880	CPCB	60.0	34.5	Avg. value:	36.5
	(PM _{2.5})	(Jug / m ³)	(GMAAP Val. I)		38.5		5.600
3.	Sulphur Dioxide as SO ₂	(µg / m³)	IS 5182 (Part-2)	80.0	15.2 13.5 9.1 8.1 14.2 15.2	Avg. value:	12.6
4.	Oxides of Nitrogen as NO ₂	(µg / m³)	IS 5182 (Part-6)	80.0	34.5 34.5 30.3 26.2 28.9 38.6	Avg. value:	36.5

SHIBESHW SHIBESHWAR PRASADI AR PRASAD Date: 2023.06.01

> Verified by : Technical Manager



Prasad

Shreyasee Digitally signed by Shreyasee Prasad Date: 2023,06.01 14:11:41 +05'30'

Authorized Signatory Quality Manager

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Contact us :

122-C, Aastha, Road No. 5A, Patlipuna Colony, Panar - 800 013 (Bibur)

Mob.; +918676886249; +919431047908 Email:

affigurus l'égyaluse co in l'inforg shevatest com

Website: www.shirutest.com//n/ny.shivutesthouse.com





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TEST REPORT

Ref. No. STH/TR/23-24/1	207 D	t: 26.05.2023	Your PO N	The second control with the se	3588-057-1019	Dt: 20.07.202	
[a] Name and address of	the Customer			NH 31,	The state of the s	VER PLANT PROJECT	
(b) Details of Sample					ing of Ambient		
[c] Sample Collected by					est House on 1		
[d] Sampling Location						Pump House-(Stage-2)	
[e] Method of Sampling					(Part - 14)		
fi Details of Sample Co	ntainer (No. & T	ype of Container)			aper, Glass Imp	inger	
[g] Instrument ID		***************************************		RDS-4,			
[h] Sample Quantity				30 ml x	6 (for each NO)2, SO2)	
[i] Sample Code				A-1207		30-140000	
II Sample Condition on	Receipt			The Second Control of	Analysis		
[k] Items required to be t					contract		
 Whether any specific customer 		has been suggeste	d by the	No			
[m] Date of receiving the	sample in Labor	ratory		13.05.2	3		
[n] Analysis Start Date /					3 / 14.05.23		
					emperature	39.0 °C	
					mperature	30.0 °C	
[o] Meteorological Data				Wind Dir	Humidity	42% ENE	
				Wind Sp	A CONTRACTOR OF THE PARTY OF TH	6.0 Km./hr.	
0.000.00.000.0000	7000	Madhad of	Standard	711100		ng Station	
Parameters	Unit	Method of Test	NAAQ5	Near CW, Pump House-(Stage-2)			
		1691	2000		RE	SULTS ,	
 Particulate Matter (PM₁₀) 	(µg / m²)	IS 5182 (Part-23)	100.0	76.5 69.3 72.9	Avg. value:	72.9	
 Particulate Matter (PM_{2.6}) 	(µg / m³)	CPCB (GMAAP Vol. I)	60.0	39.8 31.1 36.1	Avg. value:	35.7	
 Sulphur Dioxide as S 	O ₃ (µg / m³)	IS 5182 (Part-2)	80.0	19.2 17.6 11.1 6.1 13.1 15.2	Avg. value:	13.7	
 Oxides of Nitrogen as NO₂ 	s (μg / m³)	IS 5182 (Part-6)	80.0	42.6 33.7 31.6 28.2 33.0 35.7	Avg. value:	35.7	

SHIBESHW AR PRASAD Deta: 2023.06.01

Digitally signed by SHBESHWAR PRASAD

Verified by: Technical Manager END OF TEST REPORT

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.01 14:11:58 +05'30'

Authorized Signatory Quality Manager

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122-C; Aastha, Road No. 5A, Patliputta Colony, Patria - 800 013 (Bihar) Contact us:

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Website: www.shrvates.com, units shrvatesthouse.com

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TEST REPORT

Ref. No. STH/TR/23-24/120	E P	26.05.2023	Your PO N	o. 4000283	588-057-1019	De: 20.07.202
[a] Name and address of th	e Customer			NH 31, E	THERMAL POW	VER PLANT PROJECT
(b) Details of Sample					ng of Ambient	
[c] Sample Collected by					est House on 1	
[d] Sampling Location				Collected	from Near Vino	d Bhawan (Township)
(e) Method of Sampling					(Part - 14)	Name and Address of the Owner o
 Details of Sample Conta 	iner (No. & T	ype of Container	1		per; Glass Imp	inger
(g) Instrument ID	- 5 5			RDS-2		72-0-
[h] Sample Quantity				30 ml x	6 (for each NO	2, SO ₂)
[i] Sample Code				A-1208	NATE OF	
Sample Condition on Re	ceipt			Fit for A	nalysis	
[k] Items required to be test	ed			As per c		
 Whether any specific Me customer 	ethod of Test	has been sugge	sted by the	No		
[m] Date of receiving the sai	mple in Labor	ratory		13.05.23	3	
[n] Analysis Start Date / An					3/14.05.23	
	A.C. To all the	The second			mperature	39.0°C
to) Material Pote					nperature	30.0°C
[o] Meteorological Data				Relative Wind Dire		42% ENE
				Wind Spr		6.0 Km /hr
		Method of	Standard as		Samplin	g Station
Parameters	Unit	Test	per NAAQS			awan (Township)
	-	976560	2009	-	RE	SULTS
1. Particulate Matter (PM ₁₀)	(µg / m ^b)	#5 5182 (Part-23)	100.0	75.0 67.7 72.9	Avg. value:	7,1.9
		CPCB		38.6		
2. Particulate Matter (PM _{2.6})	Q000000080	(GMAAP Vol. I)	60.0	31.1	Avg. value:	34.4
101110011000000000000000000000000000000	(μg / m³)	NOTES OF STREET	1.000	33.5		MAGE.
3. Sulphur Dioxide as SO ₂	(µg/m³)	\$\$ 5182 (Part-2)	80.0	19.2 17.6 11.1 8.1 13.1 15.2	Avg. value:	14.1
 Oxides of Nitrogen as NO₂ 	(µg / m³)	IS 5182 (Part-6)	80.0	42.6 33.7 31.6 28.2 33.0 35.7	Avg. value:	34.4

SHIBESHW

Digitally signed by SHIBESHWAR PRASAD AR PRASAD (040e: 2023.06.01)

Verified by: Technical Manager



Shreyasee Prasad

Digitally signed by Shreyesee Prasad Date: 2023.06.01 14:12:14 +05:30

Authorized Signatory Quality Manager

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Contact us :

122-C. Assiths, Read No. 5A, Parlipuna Colony, Parsa - 800 013 (Bihar)

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TEST REPORT

Ref. No. STH/TR/23-24/19	926 13	28.06.2023			588-057-1019	Dt: 20.07.2022				
[2] Name and address of the	e Customer		BA	31, BARAI	RMAL POWER I	PLANT PROJECT				
[b] Details of Sample				Monitoring of Ambieut Air Quality						
[c] Sample Collected by			SHI	VA TEST	HOUSE on 1	2 06 22				
[d] Sampling Location				SHIVA TEST HOUSE on 12.06.23 Premises of NTPC, Barauni						
[o] Method of Sampling				IS 5182 (Part - 14)						
[f] Details of Sample Conta	ainer (No. &	Type of Container)	Filts	r Paner (Glass Impinge	or .				
[g] Instrument ID		A	RDS	S-2. FPM-	2					
[h] Sample Quantity			-	CONTRACTOR STATES AND ADDRESS.	each NO2, 50	2.3				
[i] Sample Code			A-1		CONTRACT 4557 CM	J1)				
[] Sample Condition on Re	trint			and the second second second second	Tue'					
[k] Items required to be test				for Analys						
[i] Whether any specific Me	athod of Test	has been suggested	AB I	per contra	A.					
by the customer			No							
[m] Date of receiving the sar	mple in Labo	ratory	13.0	6.23						
(n) Analysis Start Date / An.	alysis Comp	letion Date		6.23/16.	06.23					
		CONTRACTOR OF THE TAX	Max	* Temperat	ure	41.0°C				
[o] Meteorological Data			Min	* Temperatu	ine .	33.0 °C				
Tot mereorenancer para				tive Humidit d Direction	y	35%				
				d Speed		4.0 Km Ar				
ADM 807 508 AV 807 55 AV	DAWE	Method of	Standard	1000	Samo	ling Station				
Parameters	Unit	Test	NAAQS			Gate (Stage - 1)				
		roat	2009		R	RSULTS				
Particulate Matter	100 00000	IS 5182	86.00	77.5	1 25000 0	120000				
(PM ₁₀)	(µg / m ³)	(Part-23)	100.0	73.6	Avg	74.6				
SOUTH STATE OF THE	10000	(Fair-25)		72.8	valve:	1.00				
				44.2						
Particulate Matter	(µg / m³)	CPCB	60.0	40.4	Ava	1722-2				
(PM2:6)	that carry	(GMAAP Vol. I)	90.0	A STATE OF	value	42.1				
				41.7						
				19.9						
		IS 5182	80.0	17.1						
3. Sulphur Dioxide as SO ₂	(µg / m ³)	(Part-2)		17.8	Avg.	45.5				
	1000 177	fi more and		9.4	value:	16.5				
				13.6	A. A					
				21.0						
				41.3						
an appearance processing		18.8755	80.0	34.2						
4. Oxides of Nitrogen as	(µg/m³)	IS 5182	2.00	34.2	Aura					
NO ₂	The state of	(Part-6)		29.2	Avg. value:	35.1				
				6.475.00	Time.					
		REE	THO	34.9						
SHIBESHWA Guidally stored by		120-7	100	37.0						

RPRASAD

HIRESHWAR PRASAD Owner 2023 05:29 11.19:18 +05:30

Verified by :

Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Strayaure Prasad Date: 2023.06.29 11:01:02 +05'50'

Authorized Signatory Dr. (Mrs.) Shreyosee Prasad Quality Manager

This report applies only to sample tested as above.

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Website: www.shivatest.com . www.shivatesthouse.com





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TEST REPORT

Ref. No. STH/TR/23-24/1928(Dc: 28.6 	06,2023	Yes	ir PO No. 4	000283588-0	57-1019	Dc: 20,67,202			
[a] Name and address of the Cu	stomer		BAR	C LIMITED TAUNI THER 31, BARAU GUSARAI	MAL POWER	PLANT PROJ	ECT			
(b) Details of Sample			Monitoring of Ambient Air Quality							
[c] Sample Collected by			SHI	VA TEST	HOUSE on	12.06.23				
(d) Sampling Location			Pre	mises of N	TPC, Baraur	i .				
[e] Method of Sampling			-	182 (Part -1	4)					
[f] Sampling Environmental Co			Ten	1p.(°C)	41	Humidity(%)	35			
[g] Details of Sample Container	(No. & Type of Co	intainer)	-		ass Impiriger					
[h] Instrument ID			RD	S-2, FPM-2						
[i] Sample Code			-	928						
Sample Condition on Receipt			-	or Analysis						
[k] Items required to be tested	4 -4		Asp	er contract						
 Whether any specific Metho by the customer 	d or rest has bee	n suggested	No							
[m] Date of receiving the sample	in Laboratory		13.0	6.23						
[n] Analysis StartDate/Analysis	Completion Date		13.0	6.23 / 18.0	6.23		colocida anticolocida con colocida colo			
	Unit	Method o	,	Standard	as per NAA	QS .	Sampling Station			
Parameters.		Test			2009	Near Ma	ain Gate (Stage – 1			
Carbon Monoxide(CO)	mg /m³	IS 5162 (Pa	rt-10)	104	mg/m ³		0.34			
2. Lead (Pb)	μg/m ³	IS 5182 (Pa	rt-22)		tμg/m²		0.09			
3. Ammonia as NH ₃	μg /m²	IS 5182 (P	art-5)	- 4	00 μg/m²		6.6			
 Ozone (O₃) 	ug /m³	IS 5162 (P	art-9)	1	80 μg/m ⁸		22.6			
5. Benzene(CuHu)	µg /m ⁹	IS 5182 (Pa	rt-11)		5 μg/m²	100	0.11			
6. Benzo (a) Pyrene	Benzo (a) Pyrene ng/ m ⁹ 18 5182 (P				t ng/m [†]		0.17			
7. Arsenic (As)	Arsenic (As) ng /m ^d AAS M				ethod 6 ng/m ⁸ 0,21					
B. Nickel as Ni	ng /m ³	:AAS Me	thod	2	9 ng/m²		3.48			

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023.06.29

Verified by ; Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:31:23 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us:

122-C. Aistin; Road No. 5A, Padipura Celony, Patra - 860 013 (Bihar)

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TEST REPORT

	Ref. No. STH/TR/23-24/19	29 Dt:	28.06.2023	Your PO No.	400028358	88-057-1019	Dt: 20.07,2022			
[a]	Name and address of the	e Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample				Monitoring of Ambient Air Quality					
[c]	Sample Collected by					EST HOUSE				
[d]	Sampling Location				Premises of NTPC, Barauni					
[e]	Method of Sampling				15 5182	(Part - 14)				
0	Details of Sample Contain	ner (No. & 7	ype of Container	1		per, Glass Imp	inger			
[g]	Instrument ID	I I I I I I I I I I I I I I I I I I I	Antonia distribution — n		RDS-3, F	FPM-3				
[h]	Sample Quantity				30 ml x ((for each NO)2, SO ₂)			
[1]	Sample Code				A-1929		KOUVO M			
[]]	Sample Condition on Re-	ceipt			Fit for A	nalysis				
[k]	Items required to be teste	ed			As per co					
(II)	Whether any specific Me customer	thod of Test	has been sugger	sted by the	No					
[m]	Date of receiving the san	nple in Labo	ratory		13.06.23					
[n]	Analysis Start Date / Ana		13.06.23 / 16.06.23							
			Ogen Waldrell		Max* Tan	45.0°C				
ran i	Meteorological Data					Min* Temperature 33.0 °C Relative Humidity 35%				
[0]	meteorological Data				Vrind Dire		3576 F			
					Wind Spe		4.0 Km.hr.			
	(a-50) (15) (15)	Topesoes 1	Method of	Standard as	peratura di sa		g Station			
	Parameters	Unit	Test	per NAAQS			Dyke Area			
			1000	2009	10000	RE	SULTS			
1.	Particulate Matter (PM ₁₀)	(µg / m²)	IS 5182 (Part-23)	100.0	76.8 76.9 76.6	Avg velve	76.8			
2.	Particulate Matter (PM _{2.5})	(µg / m³)	CPCB (GMAAP Vol. I)	60.0	40.5 44.3 40.5	Avg volve:	41.8			
3.	Sulphur Dioxide as SO ₂	(µg / m³)	IS 5182 (Part-2)	80.0	22.1 13.4 5.0 18.1 15.1 21.1	Avg vehre	15.8			
4.	Oxides of Nitrogen as NO ₂	(rg / m ³)	IS 5182 (Part-6)	80.0	41.7 34.2 32.8 30.8 36.2	Avg value	35.7			

SHIBESHW AR PRASAD 11:1946-10530

Digitally signed by SHIBESHWAR PRASAD

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:31:45 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Pranad Quality Manager

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Contact us:

122-C, Aastha, Road No. 5A, Pathputra Colony, Patria - 800 D13 (Bibur)

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Website: nww.ahvanat.com : naw.ahvatesthouse.com



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Patna

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TEST REPORT

Ref. No. STH/TR/23-24/1929(A)	Dt: 28.06.	2023	Year	PO No. 400	0283588-05	7-1019	D	20.07.20			
[s] Name and address of the Cu	stamer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[b] Details of Sample			Monitoring of Ambient Air Quality								
[c] Sample Collected by			SHI	VA TEST I	HOUSE on	12.06	23				
[d] Sampling Location	reform to the reform Supervisor Const.										
[e] Method of Sampling	1.00	182(Part -1-	1):								
 Sampling Environmental Co 	A SHIP OF THE REAL PROPERTY AND ADDRESS OF THE PARTY AND ADDRESS OF THE		Tem	p.(°C)	41	Hun	nidity(%)	35			
[g] Details of Sample Container	(No. & Type of Co	ntainer)	Filte	r Paper, Gla	iss Impinger						
[h] Instrument ID			RDS	5-3, FPM-3							
[i] Sample Code			A-1								
Sample Condition on Receipt			Fit fo	or Analysis							
[k] Items required to be tested			As per contract								
 Whether any specific Metho by the customer 	d of Test has been	n suggested	No								
[m] Date of receiving the sample	in Laboratory		13.06.23								
[n] Analysis StartDate/Analysis (Completion Date		13.06	3.23/16.00	5.23		- serione	ave. Lawrence			
	Unit	Method	W		as per NAA	AQS	Samples	g Station			
Parameters		Test			2009		Near Ash	Dyke Area			
Carbon Menoxide(CO)	ing /m²	IS 5182(Pa	rt-10)	- 4	mg/m ³		0.3	34			
2. Lead (Pb)	µg/m³	IS 5182/Pa	rt-22)		t μg/m ⁴		0.0	09			
3. Ammonia as NH ₁	μg /m³	IS 5182(P	art-5)	-40	00 µg/m³		7.	3			
4. Ozone (O ₃)	μg /m³	IS 5182(P	art-9)	.39	30 µg/m²		21	.7			
5. Benzene(C ₆ H ₆)	5. Benzene(C₅H₅) µg /m ¹ IS 5182/F				5 μg/m ^e		0.	11			
6. Benzo (a) Pyrene	ng/ m²	IS 5182/Pa	rt-12)		t ng/m²		0,	16			
7. Arsenic (As)	ng /m ¹	AAS Me	hod	-	i ng/m ¹		0.2	20			
8. Nickel as Ni	ng /m²	AAS Mo	bort	2	0 ngm³		2.5	80			



Verified by : Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Shreyusee Prasad Date: 2023,06.29 11:33:23 +05'30"

Digitally signed by

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us:

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TEST REPORT

R	ef. No. STH/TR/23-24/1930	C E	1: 28.06.2023	Your PO N	CONTRACTOR AND ADMINISTRATION OF THE PARTY O	588-057-1019	Di: 20.07.2022		
aj	Name and address of the	: Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
b]	Details of Sample				Monitori	ng of Ambien	t Air Quality		
cj.	Sample Collected by						on 12.06.23		
d	Sampling Location					s of NTPC,			
ej.	Method of Sampling					(Part - 14)			
f]	Details of Sample Contain	ner (No. & 1	ype of Container	1		per; Glass In	noinger		
9]	Instrument ID	The state of the s	<u> </u>		RDS-4, F	And the last three descriptions and the second property of the second contract of the secon	A. A		
h]	Sample Quantity					6 (for each N	(Os. SOs)		
1	Sample Code				A-1930	V TIME PROPERTY.	201.5001		
1	Sample Condition on Res	ceipt			Fit for A	nalysis			
k]	Items required to be teste				As per co	native scand and included an arrangement			
IJ	Whether any specific Mer customer		has been sugges	sted by the	No				
mi	Date of receiving the san	ple in Labo	ratory		13.06.23				
	Analysis Start Date / Ana				13.06.23	/16.06.23			
-						mperature	41.0 °C		
					Min* Ten		33.0 °C		
0	Meteorological Data				Relative F	Contract of the Contract of th	35%		
					Wind Dire VAnd Spe		E 4.0 Km /hr		
				Standard as	Vieta Ope		ling Station		
	Parameters	Unit	Method of	per NAAQS			np House-(Stage-2)		
	5.01.0700.0700.07001		Test	2009			tesut 18		
			IS 5182		81.2	23.0			
1.	Particulate Matter (PM ₁₀)	(µg / m³)	(Part-23)	100.0	75.4	Avg.	76.8		
	0.00	(h8 x m.)	2 17		73.8	yature.			
			CPCB		44.1				
2	Particulate Matter (PM _{2.5})	004000000000	(GMAAP Vol. I)	60.0	39.1	Avg	41.2		
	desirate inclusion in mg/9/	(μg / m³)	Contract State II	11 10000	40.3	ya(ye:	3.7(4)		
					20.7				
				80.0	18.2	1			
			IS 5182	40.0	200000				
3.	Sulphur Dioxide as SO ₂	(µg / m²)	(Part-2)		14.8	Avg	16.2		
			107500000		12.8	: Walland			
					11.9				
					18.8				
					36.3				
	THE REPORT OF SAME OF SAME		10.6100	80.0	33.6				
4.	Oxides of Nitrogen as	(pg / m²)	IS 5182		38.3	Ave	34.0		
	NO ₂	Colorado de Carreson	(Part-S)		30.9	value:	34.8		
51.0					- Car 2 h 1				
54.05					30.9				

AR PRASAD Date: 2023.05.29

SHIBESHW Digitally signed by SHIBESHWAR PRASAD

Verified by : Dr. Shibesheav Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.05.29 11:33:39 +05'30'

Authorized Signatory Dr. (Afrs.) Shreyasee Proxad Quality Manager

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Contact us:

122-C, Aastha, Road No. 5A, Pattiputta Colony, Patra - 800 013 (Bihar)

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TEST REPORT

Ref. No. STH/TR/23-24/1930/A) Dt. 28	.06.2023	You	PO No. 400	0283588-	057-1	019	Dr. 20.07.202			
[a] Name and address of the Cu	stomer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116								
[b] Details of Sample			Mai	uitoring of A	mbient Ai	r Que	iller				
[c] Sample Collected by			SHI	VA TEST H	OUSE o	n 12.0	6.23				
[d] Sampling Location			Prei	mises of NT	C, Barat	mi					
[e] Method of Sampling				182(Part -14							
[f] Sampling Environmental Co			-	(p.(°C)	41		umidity(%)	35			
[g] Details of Sample Container	Filte	r Paper, Glas	is Impinge	97							
[h] Instrument ID			RD:	S-4, FPM-4							
[i] Sample Code			A-1	930							
Sample Condition on Receipt			_	or Analysis							
(k) Items required to be tested			As p	er contract							
 Whether any specific Metho by the customer 	d of Test has bee	n suggested	No								
[m] Date of receiving the sample	in Laboratory		13.06.23								
[n] Analysis Start Date/Analysis	Completion Date		13.06.23 / 16.06.23								
	Unit			Standard asp	andard asper NAAQS2009		Sampling Station				
Parameters		Method of Te	si				Near CW, Pump Hous (Stage-2)				
Carbon Manoxide(CO)	mg./m³	IS 6162(Pa	rt-10)	4	mg/m ¹			0.46			
2. Lead (Pb)	μg / m²	IS 5182(Pa	1-22)	1	µg/m²			0.09			
3. Ammonia as NH ₃	μg /m³	IS 5182(P)	art-5)	400	jugim"			7.4			
4. Ozone (O ₃)	μg /m ³	IS 5182(P:	at-0)	180	pgim ³		28	21.9			
5. Benzene(C ₀ H ₀)	IS 5182[Fa	rt-11) 6 µg/m³					0.13				
6. Benzo (a) Pyrene	rt-12)	1	ng/m³		1	0.18					
7. Arsenic (As)	Arsenic (As) ng km² AAS Ma					Method 6 ng/m ¹ 0.20					
B. Nickel as Ni	ng/m ³	AAS Me	thad	20	ng/m³		33	5.80			

SHIBESHW Digitally signed by SHIBESHWAR PRASAU AR PRASAD 11:20:22 +05:30

Verified by : Or. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.06.29 11:33:56 +05'30"

Authorized Signatory Dr. (Mrs.) Shrevasee Prasad Quality Manager

- END OF TEST REPORT -

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122-C., Aastha, Road No. 5A., Putiputra Colony, Patris - 800 013 (Bittar) Contact us:

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Website: yow shoutest com, www.shouteshouse.com









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TEST REPORT

	ef. No. STH/TR/23-24/1931		28,06,2023	7 OHF 147-50	goreno en	588-057-1019	Dt 20.07.202		
[a]	Name and address of the	e Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample				Monitori	ng of Ambient	Air Quality		
[0]	Sample Collected by					EST HOUSE			
d]	Sampling Location				Premise	es of NTPC, I	Barauni		
0]	Method of Sampling					(Part - 14)			
ij	Details of Sample Conta	iner (No. &	Type of Containe	r)		per, Glass Im	pinger		
91	Instrument ID	Section of the latest service and	***************************************	-for	RDS-1	Biologica City and beautiful protection becomes	for the same of th		
ηJ	Sample Quantity				30 ml x	6 (for each N	O1, SO3)		
1	Sample Code				A-1931				
1	Sample Condition on Re	ceint			Fit for A	nalysis			
k]	Items required to be test	on and an arrangement of			As per c				
1	Whether any specific Me		t has been sugge	ested by the	No	ST ST STUT			
mi	Date of receiving the san	nple in Labo	ratory		13.06.23	3			
n]	Analysis Start Date / Ana					7/16.06.23			
		-	National Control			mperature	41,07C		
						nperature	33.0 °C		
[0]	Meteorological Data				Relative	35% E			
					Wind Dire		4 0 Km Air.		
			a entre romanie	Standard so	yvere ope		ng Station		
	Parameters	Unit	Method of	per NAAQS			nawan (Township)		
			Test	2009			SULTS		
	SECURE AND COMPLETE AND COMPANY		IS 5182	100.0	81.4	1000	10000000		
1.	Particulate Matter (PM10)	(µg / m³)	(Part-23)	100.0	83.5 73.2	Avg. value:	78.9		
1.	Particulate Matter (PM ₁₀)	(µg / m³)	Cottoning	100.0	2277	1.00	78.9		
000		Difference (C.)	CPCB	60.0	73.2	1.00	A Control		
000 014	Particulate Matter (PM ₁₀) Particulate Matter (PM _{2.5})	(µg / m³)	Cottoning		73.2 35.5 39.3	varive:	78.9		
000		Difference (C.)	CPCB		73.2 35.5 39.3 41.8	value: Avg.			
2.		Difference (C.)	CPCB	60.0	73.2 35.5 39.3 42.8 24.4	value: Avg.	1.Text.00		
000	Particulate Matter (PM2.4)	(ug / m²)	CPCB		73.2 35.5 39.3 41.8 24.4 13.0	Avg. value:	.Come		
2	Particulate Matter (PM2.5)	Difference (C.)	CPCB (GMAAP Vol. I)	60.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6	Avg. value:	.Come		
	Particulate Matter (PM2.4)	(ug / m²)	CPCB (GMAAP Vol. I) IS 5182	60.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8	Avg. value:	38.9		
	Particulate Matter (PM2.4)	(ug / m²)	CPCB (GMAAP Vol. I) IS 5182	60.0 80.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7	Avg. value:	38.9		
2.	Particulate Matter (PM2.4)	(ug / m²)	CPCB (GMAAP Vol. I) IS 5182	60.0 80.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7 21.5	Avg. value:	38.9		
2.	Particulate Matter (PM2.4)	(ug / m²)	CPCB (GMAAP Vol. I) IS 5182	40.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7 21.5 34.5	Avg. value:	38.9		
2.	Particulate Matter (PM2.4) Sulphur Dioxide as SO2	(ug / m²) (µg / m²)	CPCB (GMAAP Vol. I) IS 5182 (Part-2)	60.0 80.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7 21.5 34.5 33.2	Avg. value. Avg. value:	38.9		
2.	Particulate Matter (PM2.5) Sulphur Dioxide as SO2 Oxides of Ntrogen as	(ug / m²)	CPCB (GMAAP Vol. I) IS 5182 (Part-2)	40.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7 21.5 34.5 33.2 29.9	Avg. value: Avg. value:	38.9		
2.	Particulate Matter (PM2.4) Sulphur Dioxide as SO2	(ug / m²) (µg / m²)	CPCB (GMAAP Vol. I) IS 5182 (Part-2)	40.0	73.2 35.5 39.3 41.8 24.4 13.0 15.6 8.8 10.7 21.5 34.5 33.2	Avg. value. Avg. value:	38.9 15.7		

SHIBESHW AR PRASAD Date: 2023.06.29

Digitally signed by SHIBESHWAR PRASAD

Verified by: Dr. Shibeshwar Prasad Technical Manager

Patrial 8000013

Shreyasee

Digitally signed by Shreyasee Prasad Date: 2023.06.29 Prasad 11:34:12 +05'30"

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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Website: www.shivatest.com: nowashivatesthesse.com





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TEST REPORT

Ref. No. STH/TR/23-24/1931(A) De 28.	06.2023	Your	PO No. 4000	1283588-0	57-1019	1	00: 20:07.202		
[a] Name and address of the Cu	stomer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample			Monitoring of Ambient Air Quality							
[c] Sample Collected by			SHI	VA TEST H	OUSE of	12.06	3.23			
[d] Sampling Location										
[e] Method of Sampling	_	182 Part -14)			100				
[f] Sampling Environmental Co			-	p.(°C)	41		midity(%)	35		
[g] Details of Sample Container	_	r Paper, Gla	ss Impings	1						
[h] Instrument ID			RDS	S+1, FPM-1						
[i] Sample Code			A-1							
[i] Sample Condition on Receipt			Fit for Analysis							
 Items required to be tested Whether any specific Metho 	el of Tost has box	e superstad	As p	er contract						
by the customer	O OF FROILIBB DEE	n suggested	No							
[m] Date of receiving the sample	in Laboratory		13.00	5.23						
[n] Analysis Start Date/Analysis	Completion Date		13.00	5.23 / 16.06	.23			- e-cross-s		
	Unit		Standard asper NAAQS		2009	Sampling Station				
Parameters	1,500	Method of Test					4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	od Bhawan mship)		
Carbon Monoxide(CO)	rng /m ³	IS 5182 (Pa	rt-10)	4	mg/m²		2	.57		
2. Lead (Pb)	μg/m²	IS 5182 (Pa	rt-22)	1	μg/m ⁰			,12		
3. Ammonia as NH ₃	μg /m³	IS 5182 (P	art-5)	40	0 μg/m²		- 1	7.0		
4. Ozone (O ₁)	μg im ³	IS 5182 (P	art-9)	18	0 µց/m³		22.2			
 Benzene(C₆H₆) 	IS 5182 (Pa	rt-11)	5	µg/m ³		0.13				
6. Benzo (a) Pyrene	15 5182 (Pa	rt-12)	.1	ng/m³			.22			
7. Arsenic (As)	Arsenic (As) ng /m ³ AAS Me					Method 6 rg/m ³ 0.24				
8. Nickel as N	ng./m³	AAS Me	trod	20	I ng/m ²		- 2	.99		



SHIBESHW Digitally signed by SHIBISHWARPRASAD

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date 2023.66.29 11:34:27 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyusee Prasad Quality Manager

- END OF TEST REPORT -

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TEST REPORT

Re	f. No. STH/TR/23-24/2894	Dt: 0	2.08.2023	Your PO No.	4000283	588-057-1019	Dt: 20.07.2022			
[a]	Name and address of th	e Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample					ring of Ambient	993.0			
[0]	Sample Collected by				By Chitranjan Kumar (Lab Representative) Shiva Test House on 21.07.23					
[d]	Sampling Location				Collected from Near Main Gate (Stage 1)					
[c]	Method of Sampling				IS 5182	2 (Part - 14)				
M	Details of Sample Cor	ntainer (No. o	& Type of Conta	ainer)	Filter P	aper; Glass Imp	pinger			
[g]	Instrument ID		200		STH/E	quip/97,391-DT	H-2022			
[h]	Sample Quantity				30 ml x	6 (for each NO	O2, SO2)			
[1]	Sample Code				A-2894					
[i]	Sample Condition on I	Receipt			Fit for	Analysis				
(k)	Items required to be to					contract				
[1]	Whether any specific Metho		een suggested by t	the customer	No					
[m]	A Lance and Control of the Control o				22.07.2	23				
[n]	Analysis Start Date / A				22.07.23 / 23.07.23					
					Max** Temperature		34.0 °C			
	V24/00/00/04/04/04/04/04/04/04/04/04/04/04					emperature	30.0 °C			
[0]	Meteorological Data				three lands with a later than the land	Humidity	66%			
					Wind Di	ESE 15 Km /hr				
				Standard as	Villio op		g Station			
	Parameters	Unit	Method of	per NAAQS	7		Sate (Stage 1)			
		2527.00	Test	2009			UL7S			
1,	Particulate Matter (PMro)	(µg / m³)	IS 5182 (Part-23)	100.0	77.4 68.7	Avg. value:	72.5			
_		0-2-0000	Decreases.	72.131741	71.4	Cong. Commer.				
2.	Particulate Matter (PM _{2.5})	(µg / m³)	IS 5182 (Part-24)	60.0	49.3 35.4 45.5	Avg. value:	43.4			
3.	Sulphur Dioxide as SO ₂	(µg / m³)	IS 5182 (Part-2)	80.0	19.1 11.3 8.1 9.1 12.1 21.1	Avg. value	13.5			
4.	Oxides of Nitrogen as NO ₂	(µg / m³)	IS 5182 (Parl-6)	80.0	39.0 39.1 28.7 26.0 34.9 39.7	Avg. value	34.6			
					-					

SHIBESHW AR PRASAD Date: 2023.08.02

Digitally signed by SHIBESHWAR PRASAD

Verified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.08.02 17:50:08 +0530

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

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Contact us:

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TEST REPORT

5550	No. STH/TR/23-24/2895	Dt:	02.08.2023	Your PO No	The second secon	Married State of the Control of the	Dt: 20.07,2022		
al	Name and address of th	e Customer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116					
[b]	Details of Sample				Monitoring of Ambient Air Quality				
[c]	Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shiva Test House on 21,07,23				
d	Sampling Location					om Near Ash	According to the Colonian Colonia Colonian Colon		
[e]	Method of Sampling				IS 5182 (P				
[1]	Details of Sample Cor	tainer (No. & T	vpe of Containe	er)		r; Glass Imp	pinger		
[9]	Instrument ID		A Comment of the Comm			/98,392-DT			
[h]	Sample Quantity					for each NO			
0	Sample Code				A-2895	Total Careta 111	23 4 4 4 2 7		
ij.	Sample Condition on I	Receipt			Fit for Ana	lveie			
k]	Items required to be to				As per con	The state of the s			
II.	Whether any specific Metho		supposted by the o	uetomer	No.	LI GIUS			
[m]	Date of receiving the s	ample in Labo	ratory	distance .	22.07.23				
[n]	Analysis Start Date / A				22.07.23 /	23 07 23			
-	Throng Grow Crost Court F	mary star compr	Citari Data		Max Temp		34.0 °C		
				1	Min* Temperature 30.0 °C				
0	Meteorological Data					nidity	66%		
					Wind Direction		ESE		
				1	Wind Speed		15 Km.hr.		
	Parameters	Unit	Method of	Standard oa - per NAAGS	Sampling Station Near Ash Dyke				
		10000	Test	2009	RESULTS				
	Destinates Matter		10.5400		76.1	5.0	1,250		
le-	Particulate Matter	2700000000	IS 5182	100.0	62.7	Avg.	69.4		
	(PM1a)	(μg / m ³)	(Part-23)	0.22000	69.4	value:			
					03.4				
120	A25132400 military (A352		0.6288300		47.5	180			
2.	Particulate Matter		IS 5182	60.0		Avg.	41.7		
2.	Particulate Matter (PM _{2.5})	(µg / m²)	IS 5182 (Part-24)	60.0	47.5 33.8	Avg. value:	41.7		
2.		(µg / m³)		60.0	47.5 33.8 43.8		41,7		
2.		(µg / m²)	(Part-24)		47.5 33.8 43.8 41.8		41.7		
	(PM _{2.5})		(Part-24)	80.0	47.5 33.8 43.8 41.8 38.6	value:	41.7		
	(PM _{2.5}) Sulphur Dioxide as	(µg / m³)	(Part-24)		47.5 33.8 43.8 41.8 38.6 23.2	value:	41.7		
	(PM _{2.5})		(Part-24)		47.5 33.8 43.8 41.8 38.6 23.2 26.5	value:			
	(PM _{2.5}) Sulphur Dioxide as		(Part-24)		47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5	value:			
	(PM _{2.5}) Sulphur Dioxide as		(Part-24)		47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5 18.6	value:			
	(PM _{2.5}) Sulphur Dioxide as		(Part-24) IS 5182 (Part-2)	80.0	47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5 18.6 41.8	value:			
3.	(PM _{2.5}) Sulphur Dioxide as SO ₂	(µg / m³)	(Part-24) IS 5182 (Part-2)		47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5 18.6 41.8 38.6	Avg.			
3.	(PM _{2.5}) Sulphur Dioxide as SO ₂ Oxides of Nitrogen as		(Part-24) IS 5182 (Part-2)	80.0	47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5 18.6 41.8 38.6 23.2	Avg. value:			
3.	(PM _{2.5}) Sulphur Dioxide as SO ₂	(µg / m³)	(Part-24) IS 5182 (Part-2)	80.0	47.5 33.8 43.8 41.8 38.6 23.2 26.5 36.5 18.6 41.8 38.6	Avg.	14.2		

SHIBESHW AR PRASAD Date: 2023.08.02

Digitally signed by SHIBESHWAR PRASADI

Verified by: Dr. Shibeslovar Prasad Technical Manager

Patna 100013 to Real

- END OF TEST REPORT -

Shreyasee Prasad

Digitally signed by Shreymee Prased Date: 2023.08.02 17:50:23

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Page 1 of 1

Contact us :

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TEST REPORT

Rel. N	o. STH/TR/23-24/2896	DE:	02.08.2023	Your PO	NTPC I	3588-057-1019 BMTED	Dt: 20.07,202		
[a] Na	ame and address of the	e Customer			BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
(b) I	Details of Sample				Monitoring of Ambient Air Quality				
	Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shi Test House on 21.07.23				
[d] :	Sampling Location				Collected from Near CW, Pump House-(Stage-2)				
	Method of Sampling				IS 5182	(Part - 14)			
	Details of Sample Con	tainer (No. & Ty	ype of Container	0	Filter P	aper; Glass Imp	oinger		
[g]	Instrument ID		Marancoan sale	7.1	STH/E	uip/85,STH/Eq	ui/40		
[h] 5	Sample Quantity				30 ml x	6 (for each NC	O2, SO2)		
0 3	Sample Code				4-2896				
	Sample Condition on F	Receipt			Fit for	Analysis			
	Items required to be te	2000 CALAND TO CO.				contract			
	Whether any specific Metho		suggested by the cu	ustomer	No				
	Date of receiving the s				22.07.23				
	Analysis Start Date / A				22.07.23 / 23.07.23				
5.00	-250					emperature	34.0 °C		
tot i				Min" Temperature 30.0 °C Relative Humidity 86%		30.0°C			
[0]	Meteorological Data		Wind Direction ESE						
			Wind Speed 15 Km./kr.						
	Marks Marks and Provinces	Method of		Standard as per	Constructing Sciences				
	Parameters	Unit	Test	NAAQS	Near CW, Pump House-(Stage-2)				
	and the second second		1000	2009	20.00	RE	SULTS		
	articulate Matter M ₁₀)	(µg / m²)	IS 5182 (Part-23)	100.0	73.1 62.4 69.9	Avg. value:	68.5		
	articulate Matter M2.5)	(µg / m³)	IS 5182 (Part-24)	60.0	45.1 33.8 42.6	Avg. value:	40.5		
3. Su SC	alphur Dioxide as D ₂	(µg / m³)	IS 5182 (Part-2)	80.0	13.8 11.1 9.9 8.9 10.9 15.8	Avg. value:	11.7		
4. Ox	xides of Nitrogen as O ₃	(μg / m³)	IS 5182 (Part-6)	80.0	41.6 38.4 23.5 22.2 32.2 38.9	Avg. value:	32.8		

SHIBESHW AR PRASAD Date: 2023.08.02

Digitally signed by SHBESHWAR PRASAD

Verified by: Dr. Shiheshwar Prasad Technical Manager



Digitally signed by Shreyasee Prasad Shreyasee Prasad 17:50:37 +05'30"

> Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Email

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TEST REPORT

a) Name and address of the	Customer				THERMAL POV	VER PLANT PROJECT	
Traine and add on the	- Gabierner			NH 31, BARAUNI BEGUSARAI – 851 116			
b] Details of Sample				Monitoring of Ambient Air Quality			
c] Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shin Test House on 21.07.23			
d] Sampling Location						d Bhawan (Township)	
e] Method of Sampling					(Part - 14)		
Details of Sample Con	tainer (No. &	Type of Contain	ner)	Filter Pa	per Glass Imp	inger	
g] Instrument ID			200.00	STH/Eq	uip/84,390-DH	-2022	
h] Sample Quantity				30 ml x	6 (for each NC) ₂ , SO ₂)	
Sample Code				A-2897	- 2000000000000000000000000000000000000	T-01570	
Sample Condition on F	Receipt			Fit for A	Analysis		
k] Items required to be te				As per o	ELECTRICAL PROPERTY AND ADMINISTRATION AD		
Whether any specific Metho		en suggested by the	e customer	No			
m] Date of receiving the s				22.07.23			
n] Analysis Start Date / A				22.07.23 / 23.07.23			
				Max** Te	34.0 °C		
1 Material Date				Min" Temperature		30.0 °C	
o] Meteorological Data				Relative Humidity 66% Wind Direction ESE			
				Wind Speed 15 Km./hv.			
	[]	Method of	Standard as	Sampling Station			
Parameters	Unit	Test	per NAAQS	Near Vinod Bhawan (Township)			
000000000000000000000000000000000000000	15 - 200.00	3,885.4	2009	RESULTS			
an and the state of the state o		IS 5182	2010/10/22	77.5	CARLES VIDEOUS	(2-960)	
Particulate Matter (PM ₁₀)	(µg / m²)	(Part-23)	100.0	62.6	Avg. value:	70.2	
				70.6			
8 - 320 MONOCO DO 62266 - DO		IS 5182	2202	45.4	100	2000	
 Particulate Matter (PM_{2.5}) 	(µg / m²)	(Part-24)	60.0	33.9	Avg. value:	41.4	
	Waster Co.			43.9			
				15.8			
	(µg / m ²)	IS 5182	ASST. 2	7.9	2.5 47		
 Sulphur Diaxide as SO₂ 	(ag / ms)	(Part-2)	80.0	8.9	Avg. value:	12.2	
				10.9			
				17.8			
				40.3			
		1027250001		38.4			
Oxides of Nitrogen as	(µg / m²)	IS 5182	80.0	26.2	Avg. value	34.0	
NOz	122 1 1	(Part-6)	60.0	24.8	Avg. value	34.0	
				34.9			
				39.6			

SHIBESHW Digitally signed by AR PRASAD Date: 2023.08.02

SHIBESHWAR PRASAD

Verlified by: Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shreyusee Prasad Date: 2023.08.02 17:50:51 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT

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Contact us :

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TEST REPORT

Re	. No. STH/TR/23-24/3838	Dt: 0:	5.09.2023	Your PO No.	A things in the territory makes	88-057-1019	Dt 20.07.2022		
[a]	Name and address of th	e Customer	0		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample				Monitoring of Ambient Air Quality				
(c]	Sample Collected by				By Chitranjan Kumar (Lab Representative) Shive Test House on 21.08.23				
[d]	Sampling Location				Collecte	d from Near Ma	in Gate (Stage 1)		
(e)	Method of Sampling				IS 5182	(Part - 14)			
[1]	Details of Sample Con	tainer (No. 8	3 Type of Conta	ainer)		aper; Glass Imp			
[9]	Instrument ID	CONTRACTOR OF THE PARTY		manusi.	STH/Ed	uip/97,391-DT	H-2022		
[h]	Sample Quantity				30 ml x	6 (for each NC	O2, SO2)		
[1]	Sample Code				1-3838		707 7070		
UI	Sample Condition on I	Receipt			Fit for	Analysis			
[k]	Items required to be to					contract			
[1]	Whether any specific Metho	d of Test has b	een suggested by t	the customer	No				
[m]	Date of receiving the s				23.08.23				
[n]	Analysis Start Date / A				23.08.23 / 30.08.23				
					Max ⁱⁿ Ti	33.0°C			
26			Min* Temperature 30.0 °C Relative Humidity 69%						
[0]	Meteorological Data						69%		
					Wind Direction ESE Wind Speed 15 Km./hr.				
				Standard as					
	Parameters	Unit	Method of	per NAAQS					
	51 69 X 10 X 5 1 X 5	22000	Test	2009			BULTS		
1.	Particulate Matter (PM ₁₀)	(µg / m³)	IS 5182 (Part-23)	100.0	75.4 63.3 71.9	Avg. value:	70.2		
2.	Particulate Matter (PM _{2.5})	(µg / m³)	IS 5182 (Part-24)	60.0	41.8 31.6 39.2	Avg. value:	37.6		
3,	Sulphur Dioxide as SO ₂	(µg / m³)	IS 5182 (Parl-2)	80.0	16.1 13.4 7.0 10.1 12.1 17.1	Avg. value	12.6		
4.	Oxides of Nitrogen as NO ₂	(µg / m²)	IS 5182 (Parl-6)	80.0	38.3 34.2 28.7 29.4 34.2 36.9	Avg. value	33.6		

Digitally signed by SHIBESHW SHIBESHWAR PRASAD AR PRASAD Date: 2023.09.05

Verified by: Dr. Shibeshwar Prasad Technical Manager

attauta Cwe 80001¥

- END OF TEST REPORT -

Prasad

Shreyasee Digitally signed by Shreyasee Pracad Date 2023.09.05 11:42:32 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Ref. No. STH/TR/23-24/3839	Di: 0	05.09.2023	Your PO No	. 400028358		Dt: 20.07.2022		
a] Name and address of th	e Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
b] Details of Sample				Monitoring of Ambient Air Quality				
c) Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shiva Test House on 21.08.23				
d) Sampling Location				Collected fr	om Near Ash	Dyke		
e] Method of Sampling				IS 5182 (P	art - 14)			
f) Details of Sample Con	tainer (No. & T	ype of Containe	r)	Filter Pape	r; Glass Imp	inger		
g] Instrument ID				STH/EQIP/S	4 STH/EQIP/5	5		
h) Sample Quantity				30 ml x 6 (for each NO) ₁ , SO ₂)		
Sample Code				A-3839				
Sample Condition on F	Receipt			Fit for And	lysis			
k) Items required to be to				As per con	- Andrews			
Whether any specific Metho		suggested by the c	ustamer	No				
m] Date of receiving the s			7,000,007	23.08.23				
n) Analysis Start Date / A				23.08.23 / 30.08.23				
	THE RESERVE OF THE PARTY OF THE			Max* Temp	erature	34.0 °C		
				Min* Temperature		30.0 °C		
 Meteorological Data 			Relative Humidity Wind Direction			66% ESE		
				Wind Speed		12 Km.hr.		
Service Control of the Control of th	Toronton I	Method of	Standard as	- 10	Samplin	ng Station		
Parameters	Unit	Test	per NAAQS 2009					
100-00-00-00-00-00-00-00-00-00-00-00-00-		Test	2009	Results				
Particulate Matter		IS 5182	90005561	73.4	38			
(PM ₁₀)	(μg / m ³)	(Part-23)	100.0	69.6	Avg	68.9		
(A) (2)(5)	769	1.00		63.7	value:			
2. Destinator Matter		10.5100		41.5	Ave			
2. Particulate Matter	/Saw/res25	IS 5182 (Part-24)	60.0	31.5	Avg.	37.4		
(PM _{2,5})	(µg / m ³)	(E-911-7-6)		39.1	value			
				17.8				
		10 5400		13.1				
3. Sulphur Dioxide as	(µg / m ³)	IS 5182		8.9	Avg	42.4		
SOz	222	(Part-2)	F-99808	9.9	value:	13.4		
20.02940	1		80.0	11.9	10.8330303.			
				18.8				
	- 1			36.9				
		IS 5182		33.6				
 Oxides of Nitrogen as 	(µg / m³)	(Part-6)	1,6500	28.2	Avg	33.0		
NO ₂	150000000000000000000000000000000000000	(contra)	80.0	28.9	value	7,50.5		
				34.2				
				36.3				

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date 2023/09/05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Patna 800013

Shreyasee Cigitally signed by Shreyasee Prasad Date: 2023.09.05

Prasad 11:42:43 +05'30' Authorized Signatory

Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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TEST REPORT

Re	f. No. STH/TR/23-24/3840	D(c)	05.09.2023	Your PO N	-	3588-057-1019	Dt: 20.07.2022		
a]	Name and address of the C	Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
bl	Details of Sample				Monitoring of Ambient Air Quality				
[0]	Sample Collected by				By Chitranjan Kumar (Lab Representative) of Shi Test House on 21.08.23				
d	Sampling Location				Collecte	d from Near CW.	Pump House-(Stage-2)		
8	Method of Sampling				IS 5182	(Part - 14)			
ŋ	Details of Sample Contai	ner (No. & Ty	pe of Container		Filter Pa	aper; Glass Imp	inger		
gl	Instrument ID				STH/EQI	P/113STH/EQIP/	114		
h	Sample Quantity				30 ml x	6 (for each NO	2, SO ₂)		
[]	Sample Code				A-3840		(None of the last		
H	Sample Condition on Re-	ceipt			Fit for	Analysis			
[k]	Items required to be teste					contract			
OI .	Whether any specific Method o		aggested by the cu	stomer	No				
m]	Date of receiving the san			100000	23.08.23				
n	Analysis Start Date / Ana	lysis Complet	ion Date			3/30.08.23	ti acceptation —		
10-		West of the second			Max" To	34.0 °C			
0]	Meteorological Data					Min* Temperature 30.0 °C Relative Humidity 66%			
[0]						Wind Direction ESE			
					Wind Sp		12 Km./hr.		
	WILLIAM STATE OF THE STATE OF T	sassarws:	Method of	Standard	Sampling Station				
	Parameters	Unit	Test	NAAQS	Near CW, Pump House-(Stage-2) Resurs				
				2009	200	RE.	SULTS		
1.	Particulate Matter (PM ₁₀)	(μg / m³)	IS 5182 (Part-23)	100.0	74.1 59.3 68.3	Avg. value	67.2		
2.	Particulate Matter (PM _{2.5})	(μg / m³)	IS 5182 (Part-24)	60.0	41.4 31.4 37.7	Avg. value:	36.8		
3.	Sulphur Dioxide as SO ₂	(μg / m ³)	IS 5182 (Part-2)	80.0	15.8 14.1 9.9 10.9 14.8 17.8	Avg. value:	13.9		
4.	Oxides of Nitrogen as NO ₂	(μg / m ³)	IS 5182 (Part-6)	80.0	40.3 39.1 26.2 31.6 39.6 43.0	Avg. value:	36.6		

SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Dole: 2023.09.05

Verified by : Dr. Shibeshwar Prasad Technical Manager

Digitally signed by Shreyasee Shreyasee Prasad Date: 2023.09.05 Prasad 11:42:56 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us:

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Patna

800013

What Ros

Website: www.shivatest.com; www.shivatesthouse.com







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TEST REPORT

Ref. No. STH/TR/23-24/3841	Di	: 05.09.2023	Your PO N		3588-057-1019	Dt; 20.07.2022		
[a] Name and address of the	e Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
b) Details of Sample				Monitoring of Ambient Air Quality				
				By Chitranjan Kumar (Lab Representative) of Shir				
					ise on 21.08.23	- A		
[d] Sampling Location				CONTRACTOR CONTRACTOR	from Near Cant	een Stage II		
[e] Method of Sampling					(Part - 14)	NAME OF TAXABLE PARTY.		
 [f] Details of Sample Con 	tainer (No. &	Type of Contain	ner)		per; Glass Imp			
g] Instrument ID					IP/115 STH/EQII			
[h] Sample Quantity				30 ml x	6 (for each NO	2, SO ₂)		
ij Sample Code				A-3841				
 Sample Condition on F 	Receipt			Fit for A	Analysis			
[k] Items required to be to	sted			As per c	ontract			
I) Whether any specific Metho	d of Test has bee	en suggested by the	e customer	No	0			
m) Date of receiving the s	ample in Lab	oratory	- Constitution	23.08.23				
n) Analysis Start Date / A	nalysis Comp	letion Date		23.08.23	3/30.08.23	ACCIDING TO A		
		3.119 (A. 12-13-31.1)		Max* Temperature		34.0 °C		
				Min* Temperature Relative Humidity Wind Direction		30.0 °C		
[o] Meteorological Data						66% ESE		
				Wind Spe		12 Km Arr		
		Method of	Standard as			g Station		
Parameters	Unit	Method of Test	per NAAQS	Near Canteen Stage-II				
C-10-0-00-00-00-00-00-00-00-00-00-00-00-0	22.000	1000	2009		Re	SULTS		
		15 5182	50000	70.8	225 COLUMN 1			
 Particulate Matter (PM₁₀) 	(µg / m³)	(Part-23)	100.0	59.9	Avg. value	66.1		
	spar my			67.6				
		IS 5182		41.3				
 Particulate Matter (PM_{3.5}) 	(µg / m³)	(Part-24)	60.0	31.3	Avg. value:	37.6		
	1991	(F8IL-24)		40.1				
			1	17.8				
		IS 5182	80.0	15.1				
3. Sulphur Dioxide as SO ₂	(µg / m ³)	(Part-2)		9.9	Avg. value:	13.4		
outpiter bounde as 502	in (Castering)	traine)		8.9	Frig. Volume	1969		
	1 1			12.8				
				15.8				
				41,6				
		15 5182	80.0	38.4				
Oxides of Nitrogen as	(µg / m³)	(Part-6)		23.5	Avg. value:	34.7		
NO ₂	23236525000	705 45540		28.9	- II BO INTA	No. Co.		
				36.9				
				38.9				

SHIBESHW SHBESHWAR PRASAD Date: 2023:09:06
AR PRASAD Thick: 2023:09:06
Thick: 2023:09:06

Verified by : Dr. Shibeshwar Prasad Technical Managor



- END OF TEST REPORT -

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.09.05 11:43:06 +05'30'

Authorized Signatory for. (Mrs.) Shreyasee Prusad Quality Manager

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Contact us :

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Mob :+918676886249 :+919431047908 Email uthputnal@valoo.on.in.info@shivatest.com

Website: www.shirsgost.com; yoww.shirsgorthouse.com







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TEST REPORT

	Ref. No. STH/TR/23-24/44	22 Dc	05.10.2023	Your PO No.	the company of the company of	88-057-1019	Dt: 20.07.2022		
8]	Name and address of the	Customer		BARA NH 3	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
[b]	Details of Sample			The first product of the	Monitoring of Ambient Air Quality				
[c]	Sample Collected by			By Ch	By Chitranjan Kumar (Lab Representative) of Shiva Test				
Cot	다마. : [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]				on 15.09.				
(d)	Sampling Location				ump hous				
[e]	Method of Sampling				82 (Part -				
0	Details of Sample Contain	ter (No. & Ty	pe of Container)			lass Impinger	8		
[g]	Instrument ID	33		STH/E	quip/26, 5	TH/Equip/113			
[h]	Sample Quantity			30 m	x 6 (for e	each NO2, SO	2)		
1	Sample Code			A-44	22				
	Sample Condition on Rec	eipt			r Analysi	Ś			
(k)	Items required to be teste				er contract				
(I)	Whether any specific Met the customer		nas been suggested						
[m]	Date of receiving the sam	ple in Labora	atory	16.09	2.23				
[n]	promonent manufacture and a series of a series of the seri				23/23.0	9.23			
-			89. Ga 22.1		Max ^{rs} Temperature 33.0 ^A C				
					Min ^{rs} Temperature 29.0 °C				
[0]	Meteorological Data			Relative Humidity 75% Wind Direction S					
				and the state of t	Wind Direction S Wind Speed 9.0 Km./hr:				
					opeed	Samn	ling Station		
	Parameters	Unit	Method of Test	Standard as per NAAQS			house stage-2		
		23000		2009			RESULTS		
			10.000		75.4				
1.	Particulate Matter	(µg / m³)	IS 5182	100.0	63.3	Avg.	70.2		
	(PM ₁₀)	Manager State (St.)	(Part-23)	(0.04890)	71.9	value:	10.5374		
	Campana Variation was also		Voc. WYNG		41.8				
2.	Particulate Matter	(µg / m³)	IS 5182	60.0	31.6	Avg.	37.6		
	(PM _{2.5})	(hg) m)	(Part-25)	,000	39.2	value:	WALLAND.		
			111111111111111111111111111111111111111		16.1				
			100000	80.0	13.4				
	200 2000 220	(µg / m ³)	IS 5182	00.0	7.0	Avg.	42.2		
3	Sulphur Dioxide as SO ₂	1001111	(Part-2)		10.1	value:	12.6		
					12.1	0.2000			
					17.1				
					38.3				
			IS 5182		34.2				
4.	Oxides of Nitrogen as	(µg / m³)		80.0	28.7	Avg	33.6		
	NO ₂	300 0	(Part-6)	80.0	29.4	value:	33.0		
	11.70-52-52				34.2	E611/600			
					200	1			

SHIBESHW SHIBSHWAR PRASAD DIGGS 2023-10.05
AR PRASAD DIGGS 2023-10.05
06/15/33-405/3F

Verified by :

Dr. Shibeshwar Prasad Technical Manager



Shreyasee Prasad

Digitally signed by Shrayasee Prasad Date: 2023,10.05 04.17.36 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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2. Total Liability of our Laboratory is limited to invoiced amount.

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Contact us :

122-C, Aastha, Road No. 5A, Pathputra Colony, Patris - 800 013 (Birbar)

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TEST REPORT

Ref. No. STH/TR/23-24/4422(Dt: 05. 	10.2023	You	r PO No. 40	00283588	057-10)19	Dt: 20,07,202		
[a] Name and address of the Cu	stomer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample			Mon	itoring of A	mbient Ai	Qualit	ty			
[c] Sample Collected by	By CA	idranjan Kumar i	Lab Represe	entative) d	of Shive Test Ho	use on 15.00.23				
[d] Sampling Location			CW	pump house	e stage-2	ž.				
[e] Method of Sampling			and the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a section in the second section in the second section is a section in the section in the section in the section is a section in the section in t	182 (Part -14)		10			
[f] Sampling Environmental Co			Tem	p.(°C)	33	Hur	midity(%)	75		
[g] Details of Sample Container	(No. & Type of Co	intainer)	Filte	Paper, Glas	s Impinge	ř.	0.555			
[h] Instrument ID			5TH/	Equip/26, 51	TH/Equip/	113				
[i] Sample Code			A-4	122	DAY SOUTH	en C				
Sample Condition on Receipt			Fit for Analysis							
[k] Items required to be tested			As per contract							
 Whether any specific Metho by the customer 	d of Test has bee	n suggested	No							
[m] Date of receiving the sample	in Laboratory		16.09	3.23						
[n] Analysis StartDate/Analysis (Completion Date	X	16.09	23/23.09	23	- 2				
	Linit	Method	4	Standard a	as per NA	AQS	San	npling Station		
Parameters		Test		2	2009	C1/2/2/2	CW pump	house stage-		
Carbon Monoxide(CD)	mg /m³	IS 5182 (Pa	rt-10)	- 4	mg/m ³			0.34		
2. Lead (Pb)	µg/m³	IS 5182 (Pa	rt-22)	1	µg/m³			0.08		
 Ammonia as NH₀ 	μg /m³	IS 5182 (P	art-5)	400) µg/m³			7.3		
4. Ozone (O ₂)	μg /m ³	IS 5182 (P.	art-9)	180	μg/m³			21.67		
5. Benzene(CcHc)	IS 5182 (Pa	nt-11) 5 μg/m³ 0.			0.15					
6. Benzo (a) Pyrene	rt-12)	1	ng/m³			0.16				
7. Arsenic (As)	Arsenic (As) ng im ³ AAS Mi					ethod 8 ng/m² 0,21				
8. Nickel as Ni	ng/m³	AAS Me	thod	20	ng/m²			4.35		



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023, 10.05

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:17:49 +05'30"

Authorized Signatory Dr. (Afrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

	-2000 - N. M. ARGON 200 25-01 (128. E.)	MAJO LA CONTRA			NTPC LI		WER PLANT PROJECT		
al	Name and address of the	Customer			NH 31, BARAUNI BEGUSARAI – 851 116				
bĭ	Details of Sample				Monitori	ing of Ambie	ent Air Quality		
cì	Sample Collected by				By Chitrarijan Kumar (Lab Representative) of Shiv				
					Test House on 15.09.23				
d	Sampling Location				4 10 10 10 10 10 10 10	awan, NTPC	Barauni		
e]	Method of Sampling Details of Sample Contail	nos (Nio 9 Tu	me of Contains	.1		(Part - 14) per, Glass Im	mineae		
1		ner (No. & ry	pe di Containe	0.		ip/27, STH/E			
gl_	Instrument ID								
Ы	Sample Quantity					6 (for each N	O ₂ , SO ₂)		
1]	Sample Code				A-4423				
1	Sample Condition on Rec				Fit for A	and the State of the last of t			
KL.	Items required to be teste			ate d by the	As per co	ontract			
]	Whether any specific Me customer			sted by the	No				
m	Date of receiving the san				16,09.23				
n	Analysis Start Date / Ana	lysis Comple	tion Date		16.09.23 / 23.09.23				
			Max" Ter		33.0 °C 29.0 °C				
ol	Meteorological Data		Min" Ten Relative h		75%				
9	(Wilder Group Control of Control		Wind Dire	ction	S				
			Wind Spe		9.0 Km./hr				
	Parameters	Unit	Method of	Standard as per NAAQS	-		ing Station		
	Parameters	Unit	Test	2009	Vinod Bhawan, NTPC Barauni Results				
			IS 5182		73.4		130013		
1:	Particulate Matter (PM ₁₀)	10/2/22/20	(Part-23)	100.0	69.6	Avg	68.9		
		(µg / m ³)			63.7	yalve:	1140-01-01		
-	S With College Books		IS 5182	9350	41.6	(3)	\$3550 h		
2.	Particulate Matter (PM _{2.5})	(µg / m ³)	(Part-25)	60.0	31.5	Avg.	38.2		
		2680000	W. 255.250	-	43.6 17.8	yave.			
			10.5400	80.0	13.1				
6	Sulphur Dioxide as SO ₂	(µg / m ³)	(Part-2)	00.0	8.9	Avg	49.4		
3.	Sulpriur blookde as SOI	3.3899-3371-6-	(Part-2)		9.9	value:	13.4		
					11.9				
					36.9				
		20 20 00	10.5400	80.0	33.6	500			
4.	Oxides of Nitrogen as	(µg / m³)	(Part-6)	2000	28.2	Avg	33.0		
	NO ₂		(Faire)		28.9	value	33.0		
				34.2	1				

SHIBESHW

Digitally signed by SHIBESHWAR PRASAD AR PRASAD Quite: 2023.10.05

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023-10.05 04:17:58 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/4423(A)	Dt: 05,10.	2023	Your	PO No. 4000	283588-057	1019	Dt: 20.07.2022			
[a] Name and address of the Cur	stomer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample			Mon	itoring of A	mbient Air G	uality				
[c] Sample Collected by			By C 15.05		nar (Łab Repn	isentative) of Sh	ive Test House or			
[d] Sampling Location			Vinc	d Bhawan,	NTPC Barau	ni				
[e] Method of Sampling				182(Part -14)	anne de la la lecole				
[f] Sampling Environmental Cor	A CONTRACTOR OF THE PARTY OF TH		Tem	p.(°C)	33	Humidity(%)	75			
[g] Details of Sample Container (No. & Type of Co	ntainer)	Filte	r Paper, Glas	ss Impinger					
[h] Instrument ID			STH	/Equip/27,	STH/Equip/	114				
[i] Sample Code			A-4	CONTRACTOR OF THE PARTY OF THE	E 035 - 1022					
[] Sample Condition on Receipt			_	or Analysis						
 [k] Items required to be tested [ii] Whether any specific Method by the customer 	d of Test has bee	n suggested	As per contract No							
[m] Date of receiving the sample	in Laboratory		16.09	0.23						
[n] Analysis StartDate/Analysis C	Completion Date		16.09.23 / 23.09.23							
	Unit	1000000	sari Sari		as per NAA	OS Sam	pling Station			
Parameters		Method Test			2009		d Bhawan NTPC Iarauni			
Carbon Monoxide (CO)	mg/m ³	IS 5182(Pa	et-10)	4	mg/m ¹		0.46			
2. Lead (Pb)	µg/m³	IS 5182(Pa	nt-22)	- 1	µg/m³		0.09			
3. Ammonia as NH ₁	μg/m²	IS 5182(P	art-5)	40	O μg/m²		8.4			
4. Ozone (O ₃)	µg /m²	IS 5182(P	art-9)	18	0 μg/m²		23.4			
5. Benzene(C ₆ H ₆)	IS 5182(Pa	nt-11)	δ μg/m³			0.15				
6. Benzo (a) Pyrene	ng/ m ³	IS 5182(Pa	nt-12)	1 ng/m³			0.14			
7. Arsenic (As)	ng/m³	AAS Me	thod	6	6 ng/m³ 0.21					
8. Nickel as Ni	ng /m ³	AAS Mo	thod	20	ng/m ¹		4.35			



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD Date: 2023, 10,05

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:18:07 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24	4424 D	: 05, 10, 2023	Your PO N	0.4000283	588-057-1019	Dt; 20.07.2022		
[a] Name and address of	f the Customer			NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116				
b) Details of Sample				Monitoring of Ambient Air Quality				
	6			By Chitranjan Kumar (Lab Representative) of Shiv				
				Test Hou	se on 15.09.33			
d] Sampling Location				Bariyahi Village				
e) Method of Sampling					(Part - 14)			
f Details of Sample Co	ntainer (No. & T	ype of Containe	er)		per; Glass In	npinger		
g] Instrument ID		2011	-101	RDS-1, F	THE REST PROPERTY AND ADDRESS OF THE PARTY AND	PARTIE P		
h] Sample Quantity				30 ml x	6 (for each N	O ₂ , SO ₂)		
] Sample Code				A-4424				
) Sample Condition or	Receipt			Fit for A	nalysis			
k] Items required to be	tested			As per o	ontract			
 Whether any specific customer 	Method of Test	has been sugg	ested by the	No				
m) Date of receiving the	sample in Labo	ratory		16.09.23				
n] Analysis Start Date /				16.09.23 / 23.09.23				
				Max* Temperature 33.0 °C				
-t. Metascalagical Data					perature	29.0 °C		
ol Meteorological Data				Relative H Wind Dire		75% S		
				Wind Speed 9.0 Km.mr.				
	755-565	Method of	Standard as	Sampling Station				
Parameters	Unit	Test	per NAAQS	Bariyahi Village				
		Tube	2009		R	ESULTS		
		IS 5182	0.000	73.4	Ava.			
 Particulate Matter (PM- 	(μg / m ²)	(Part-23)	100.0	69.6	value	67.2		
	(10% - 11-1			63.7	1,000			
		IS 5182		41.6	302			
 Particulate Matter (PM) 	a) (ug/m³)	(Part-25)	60.0	31.5	Avg.	36,8		
	The first in the first	(Farther)		41.6	15000			
				15.8				
	Local Consults	IS 5182	80.0	14.1	97			
3. Sulphur Dioxide as SO	(μg / m ⁵)	(Part-2)	0.55	9.9	Avg.	13.9		
e aprili same la ou		fr mirel		10.9	value	1944		
				14.8				
			2	17.8				
			Distance of the Control of the Contr	40.3				
	000000000	IS 5182	80.0	39.1	70			
4. Oxides of Nitrogen as	(μg / m ³)	(Part-6)		26.2	Avg	36.6		
NO ₃		0.755570		31.6 39.6	value	5555		
	0.000							
			The state of the s	43.0				

SHIBESHW Digitally signed by SHIBESHWARPRASAD AR PRASAD (0416-2023-10.05)

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023-10:05 04:18:15+05'30'

Authorized Signatory Dr. (Alrs.) Shreyasee Prasad Quality Manager

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TEST REPORT

Ref. No. STH/TR/23-24/4424(A)	Dr: 05.	10.2023	Your I	O No. 4000	283588-0	57-1019	D	: 20.07.2022		
[a] Name and address of the Custor	NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116									
[b] Details of Sample	Monitoring of Ambient Air Quality									
[c] Sample Collected by	By Chitranjan Kumar (Lab Representative) of Shive Test House on 15.59.23									
[d] Sampling Location				Bariyahi Village						
[e] Method of Sampling				IS 5182(Part -14) Temp.(² C) 33 Humidity(%) 75						
Application of the application of the first study of the forest containing the first containing the first study of the first st	Sampling Environmental Condition				33		Humidity(%) 7			
[g] Details of Sample Container (No	Filter Paper; Glass Impinger									
[h] Instrument ID	RDS-1, FPM-1									
[i] Sample Code	A-4424									
Sample Condition on Receipt			Fit for Analysis							
[k] Items required to be tested	As per contract									
 Whether any specific Method or by the customer 	No									
[m] Date of receiving the sample in	16,09.23									
n] Analysis Start Date/Analysis Completion Date				16.09.23 / 23.09.23						
504 7.0° 85	Unit			Standard asper NAAQS 2009		2009	Sampling Station			
Parameters		Mathod Test					Bariyahi Village			
Carbon Monoxide (CO)	mg/m²	IS 5182 (Pa	ert-10)	4 mg/m ³			0.19			
2. Lead (Pb)	µg / m ⁹	IS 5182 (Part-2)		1 µg/m³		80	0.09			
3. Ammonia as NH ₃	µg/m³	IS 5182 (P	art-5)	400 μg/m³			14.1			
4. Ozone (O ₅)	µg/m²	IS 5182 (P	art-9)	180 µg/m ¹			35.6			
5. Benzene(C ₀ H ₀)	µg/m³	IS 5182 (Pa	art-11)	5 μg/m³			0.15			
6. Benzo (a) Pyrene	ng/ m ³	IS 5182 (Pa	ert-12)	1	1 ng/m ³		0.15			
7. Arsenic (As)	ng/m³	AAS Me	thed	hod 6 ng/m ³			0.15			
8. Nickel as Ni	ickel as Ni ng /m ³ AAS Me			ethod 20 ng/m ² 2,90						



SHIBESHW Digitally signed by SHIBESHWAR PRASAG AR PRASAD 041623+05'30'

Verified by: Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023.10.05 04:18:26 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prosad Quality Manager

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TEST REPORT

	Ref. No. STH/TR/23-24/4425 Dt: 93.16.2023 Your PO N Name and address of the Customer					NO. 4000283588-057-1019 Dt: 20.07.2022 NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116			
[b]	Details of Sample				Monitori	ing of Ambie	ent Air Quality		
[c]	Sample Collected by		By Chitrargan Kumar (Lab Representative) of Shiv Test House on 15.09.23						
[d]	Sampling Location	pling Location Ash dyke area of							
[e]	Method of Sampling		IS 5182 (Part - 14)						
If	Details of Sample Contai	iner (No. & 7	Filter Paper, Glass Impinger						
9	Instrument ID		STH/Equip/55, STH/Equip/116						
[h]	Sample Quantity			6 (for each N	CALL AND				
[]	Sample Code		A-4425	A. A. C.	T.M. (1984)				
01	Sample Condition on Re-	ceint	Fit for Analysis						
k)	Items required to be test				As per contract				
n)	Whether any specific Me customer		No						
tm1	Date of receiving the san	nnle in Labo	ratory		16.09.23				
n	Analysis Start Date / Ana				16,09.23 / 23.09.23				
	Meteorological Data					Max** Temperature 33.0 °C Min** Temperature 29.0 °C Relative Humidity 75% Wind Direction S Wind Speed 9.0 Km.hr			
	21h2.		TOWN THE STORM	Standard as	Sampling Station				
	Parameters	Unit	Method of Test	per NAAQS 2009	Ash dyke area of NTPC Barauni				
					RESULTS				
1.	Particulate Matter (PM ₁₀)	(μg / m³)	IS 5182 (Part-23)	100,0	74.1 59.3 68.3	Avg value	67.2		
2,	Particulate Matter (PM _{2.5})	(µg / m³)	CPCB (GMAAP Vol. I)	60.0	41.4 31.4 37.7	Avg value,	36,8		
3.	Sulphur Dioxide as SO ₂	(μg / m ³)	IS 5182 (Part-2)	80,0	15.8 14.1 9.9 10.9 14.8 17.8	Avg. value	13.9		
t.	Oxides of Nitrogen as NO ₂	(µg / m³)	IS 5182 (Part-6)	80.0	40.3 39.1 26.2 31.6 39.6	Avg. value	36.6		

SHIBESHW AR PRASAD Date: 2023-10.05

Digitally signed by SHIBESHWAR PRASAD

Verified by :

Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Streyasee Frasad Date: 2023 10:05 04.18.35 +05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

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Contact us :

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RECOGINSED AS ENVIRONMENTAL LABORATORY BY MOEFCC, GOVT. OF INDIA, UNDER ENVIRONMENT (PROTECTION) ACT 1986, DEPTT. OF INDUSTRY, FORESTS & ENVIRONMENT, GOVT. OF BIHAR AND BIHAR STATE POLLUTION CONTROL BOARD

TEST REPORT

Ref. No. STH/TR/23-24/4425(A)	Dt: 05	10.2023	You	PO No. 4000283588-057-	1019	06: 20.07.2022				
[a] Name and address of the Cus	tomer		NTPC LIMITED BARAUNI THERMAL POWER PLANT PROJECT NH 31, BARAUNI BEGUSARAI – 851 116							
[b] Details of Sample			Monitoring of Ambient Air Quality							
[c] Sample Collected by			By Chitranjan Kumar (Lab Representative) of Shiva Test House on 15:00:22							
[d] Sampling Location			Ash dyke area of NTPC Barauni							
[e] Method of Sampling				IS 5182(Part -14) Temp.(⁶ C) 33 Humidity(%) 75						
B-1					lumidity(%)	75				
[g] Details of Sample Container (No. & Type of Container)				Filter Paper, Glass Impinger						
[h] Instrument ID			STH/Equip/55, STH/Equip/116							
[i] Sample Code			A-4425							
Sample Condition on Receipt			Fit for Analysis							
[k] Items required to be tested Whether any specific Method by the customer	of Test has bee	en suggested	As per contract No							
[m] Date of receiving the sample in Laboratory				16.09.23						
n] Analysis Start Date/Analysis Completion Date				16.09.23 / 23.09.23						
	Unit			Standard asper NAAQS2009	Sampling Station					
Parameters		Method of Te	ist			area of NTPC rauni				
Carbon Monoxide(CO)	mg/m³	IS 5182(Part-10)		4 mg/m²	- 0	.19				
2. Lead (Pb)	μg/m ⁹	IS 5182(Part-22)		1 μg/m ³	- 0	:11				
3. Ammonia as NH ₃	µg/m ³	IS 5182(P	art-5)	400 μg/m³	14.1					
4. Ozone (O ₃)	μg/m ³	15 5182(P	art-9)	180 μg/m³	35.6					
5. Benzene(C ₆ H ₆)	μg /m [®]	IS 6182(Pa	rt-11)	5 µg/m²	0.15					
6. Benzo (a) Pyrene	ng/ m²	IS 5182(Pa	rt-12)	1 ng/m ³	0.15					
7. Arsenic (As)	ng /m ³	AAS Me	thod	6 ng/m²	0,18					
8. Nickel as Ni	ng /m ³	AAS Me	thod	thod 20 ng/m ¹ 2.5						
				A CONTRACTOR OF THE CONTRACTOR						



SHIBESHW Digitally signed by SHIBESHWAR PRASAD AR PRASAD (04:16:43 +05:30)

Verified by : Dr. Shibeshwar Prasad Technical Manager

Shreyasee Prasad

Digitally signed by Shreyasee Prasad Date: 2023, 10,05 04,18:44+05'30'

Authorized Signatory Dr. (Mrs.) Shreyasee Prasad Quality Manager

- END OF TEST REPORT -

This report applies only to sample tested as above.

Total Liability of our Laboratory is limited to invoiced amount.

Test Report endorsed only the tests and not the product certificate.

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