TNPL

Tamil Nadu Newsprint and Papers Limited

(A Government of Tamil Nadu Enterprise)
Kagithapuram - 639 136, Pugalur Taluk, Karur Dist. Tamil Nadu, India.
Phone: (0091) 04324-277001 to 10 - (10 Lines) Cell : 94860 41341 to 41343

ENV/112/24

May 21, 2024

Addl. Principal Chief Conservator of Forests (C)
Ministry of Env., Forest and Climate Change
Regional Office (SEZ), Ist and IInd Floor, Handloom Export Promotion Council,
34, Cathedral Garden Road, Nungambakkam,
Chennai - 34

Dear Sir,

Sub: Submission of six monthly compliance reports for the conditions stipulated in the Environmental clearances (EC)-Reg.

Ref: (i) MoEF EC file No. J-11011/710/2007-IA,II (I) dt. 11.02.2013
(ii) MoEF EC file No.J-11011/710/2007-IA II (I) dt. 11.12.2008
(iii) MoEF EC file No.J-11011/375/2005-IA-II (I) dt. 10.04.2006

This refers to the ECs issued for TNPL for the for the implementation of Deinking Pulp plant (DIP) & Upgradation of the Captive co-generation (UCCG), Mill Expansion Plant (MEP) and Mill Development Plan (MDP) vide reference ref (i), ref (ii) and ref (iii) respectively.

In compliance to the general condition stipulated in the respective ECs, the status of six monthly compliance report against the special and general conditions stipulated in the ECs for the period between 01/10/2023 and 31/03/2024 is submitted as detailed below:

Sl No	Project file No./ Date	Name of the project	Status of compliance on EC conditions submission Parivesh portal.	Remarks
01	J-11011/710/2007-IA,II(I) dt. 11.02.2013	Installation of deinking plant and upgradation of captive co-generation plant	Compliance to the conditions along with supporting documents as above were uploaded in Parivesh portal on 21/05/2024	A copy of the EC compliance report along with relevant annexure downloaded from the Parivesh portal is submitted along with letter.

TNPL

TAMIL NADU NEWSPRINT AND PAPERS LIMITED

Sl No	Project file No./ Date	Name of the project	Status of compliance on EC conditions submission Parivesh portal.	Remarks
02	J-11011/710/2007-IA II (I) dt. 11.12.2008	The expansion of Pulp and Paper Mill 2,45,000 to 4,00,000 TPA by installation of new Paper Machine 1,55,000 TPA and balancing of Hard wood and bagasse Pulp Mill Pulp Mill 300 to 330 and 500 to 550 TPD.	Compliance to the conditions along with supporting documents as above were uploaded in Parivesh portal on 21/05/2024.	A copy of the EC compliance report along with relevant annexure downloaded from the Parivesh portal is submitted along with letter
03	J-11011/375/2005-IA-II (I) dt. 10.04.2006	Expansion of Paper Production from 2,05,000 MTPA to 2,45,000 MTPA and production of 45,000 MTPA market pulp at TNPL, Kagithapuram, Karur District	Compliance to the conditions along with supporting documents as above were uploaded in Parivesh portal on 21/05/2024.	A copy of the EC compliance report along with relevant annexure downloaded from the Parivesh portal is submitted along with letter.

This is for your kind information and records.

Thanking You.

Yours faithfully,
For Tamilnadu Newsprint and Papers Limited,

Shanmugam 21/5/24
Deputy General Manager (R&D)

CC:
(1) The Member Secretary, SEIAA, Saidapet, Chennai – 600 005.
(2) The Member Secretary, TNPCB, Guindy, Chennai.
(3) The Regional Directorate, CPCB, Chennai.
(4) The Joint Chief Environmental Engineer, TNPCB, Salem.
(5) The District Environmental Engineer, TNPCB, Karur

Your (Environment Clearance) application has been Submitted with following details	
Proposal No	IA/TN/IND/6221/2007
Compliance ID	27850560
Compliance Number(For Tracking)	EC/M/COMPLIANCE/27850560/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	21-05-2024
IRO Name	V Geroge Jenner
IRO Email	tr025@ifs.nic.in
State	TAMIL NADU
IRO Office Address	Integrated Regional Offices, Chennai
Note:- SMS and E-Mail has been sent to V Geroge Jenner, TAMIL NADU with Notification to Project Proponent.	

Half Yearly Compliance Report
2024
01 Jun(01 Oct - 31 Mar)

Acknowledgment

Proposal Name	Installation of 300 TPD Deinked Pulp Line (DPL) and up-gradation of Captive Co-generation Plant (CCP) at Kagithapuram
Name of Entity / Corporate Office	Tamil Nadu Newsprint and Papers Limited
Village(s)	N/A
District	KARUR

Proposal No.	IA/TN/IND/6221/2007
Plot / Survey / Khasra No.	N/A
State	TAMIL NADU
MoEF File No.	J-11011/710/2007-IA.II(I)11/02/2013

Category	Industrial Projects - 1
Sub-District	N/A
Entity's PAN	NA
Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year	2024
Remarks (if any)	EC COMPLIANCE STATUS REPORT PERTAINING TO DIP AND UPGRADATION OF CAPTIVE CO-GENERATION PLANT AND FOR THE PERIOD ENDING 30/09/2023
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office Tamil Nadu Newsprint and Papers Limited

	Project Area as per EC Granted	Annual Project Area in Possession
Private	151.76	2.43
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	151.76	2.43

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Writing and Pring Paper	Tons per Annum (TPA)	31/03/2027	480000	422742	480000

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Corporate Environmental Responsibility	xviii. At least 5% of the total cost of the project shall be earmarked towards the Enterprise Social Commitment based on Public Hearing issues and item-wise details along with time bound action plan shall be prepared and submitted to the Ministry's Regional Office at Bangalore. Implementation of such program shall be ensured accordingly in a time bound manner.
PPs Submission: Complied TNPL so far spent Rs. 37.06 Crores against 5% of the project cost of Rs.15.5 Cr. The total cost spent under CSR during the review period is Rs. 2.43 Crores. Details are submitted as Annexure XIV.		Date: 20/05/2024
2	Statutory compliance	i. Compliance to all the specific and general Conditions stipulated for the existing plant by the Central/State Government shall be ensured and regular reports submitted to the Ministry and its Regional Office at Bangalore.
PPs Submission: Complied The requisite compliance reports are being submitted to relevant authorities as part of six monthly EC compliance reports through email as well as hard copies.		Date: 20/05/2024
3	AIR QUALITY MONITORING AND PRESERVATION	iii. Data on ambient air, stack and fugitive emissions shall be regularly submitted online to Ministry's Regional office at Bangalore, SPCB and CPCB as well as hard copy once in six months and display data on RSPM, SO2 and NOx outside the premises at the appropriate place for the general public.
PPs Submission: Complied The reports are being submitted to relevant authorities along with six monthly EC compliance reports through email and hard copies. Real-time value display available near the main gate. Summary of Ambient and Stack CEMS Data submitted as Annexure II.		Date: 20/05/2024
4	Statutory compliance	iv. In case of treatment process disturbances/failure of pollution control equipment adopted by the unit, the respective unit shall be shut down and shall not be restarted until the control measures are rectified to achieve the desired efficiency.
PPs Submission: Complied TNPL has a dedicated captive power plant. A separate feeder from the TG sets is connected directly to pollution control equipment systems to ensure continuous power supply during emergencies.		Date: 20/05/2024
5	WATER QUALITY MONITORING AND PRESERVATION	v. The total water requirement (including existing) shall not exceed 52,800 m3/day. The industry shall ensure the compliance of the standards for discharge of the treated effluent from the unit as stipulated under the EPA rules or SPCB whichever is more stringent. The company shall make efforts to limit the water consumption upto 75 m3/tonne of product. Adequate steps including use of modern RO/UF based technologies should be used to increase recycling and reduce water consumption.

		PPs Submission: Complied Average total & Sp. water consumption during review period are 32,134 M3/day and 28 M3/T of Product respectively. TNPCB and NABL accredited & MoEFCC recognized Third Party Lab is conducting Effluent water quality analysis once in month and relevant reports are submitted to concerned authorities along with respective EC compliance reports. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab effluent water analysis report ROA is submitted as Annexure III. The value of treated effluent is well within the TNPCB norms.	Date: 20/05/2024
6	WATER QUALITY MONITORING AND PRESERVATION	vi. Adequate number of influent and effluent quality monitoring stations shall be set up in consultation with the State Pollution Control Board and regular monitoring shall be carried out for all relevant parameters to maintain the effluent treatment efficiency. Online flow meter, pH meter, conductivity meter etc. shall be installed. The report shall be submitted to Ministry's Regional Office at Bangalore SPCB and CPCB.	
		PPs Submission: Complied Adequate no. of sampling stations available to monitor Treated effluent & Sewage quality through TNPCB, NABL accredited & MoEFCC recognized Third Party Lab & online water quality station installed and in operation. A summary of online Water Quality Watch (WQW) data is attached as Annexure IV.	Date: 20/05/2024
7	WATER QUALITY MONITORING AND PRESERVATION	vii. Ground water quality study in and around the project area shall be conducted and report submitted to Ministry's Regional Office at Bangalore, SPCB and CPCB.	
		PPs Submission: Complied TNPCB and NABL accredited & MoEFCC recognized Third Party Lab is conducting groundwater quality analysis once in three months and relevant reports are submitted to concerned authorities along with respective EC compliance reports. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Ground water analysis report submitted as Annexure V.	Date: 20/05/2024
8	WATER QUALITY MONITORING AND PRESERVATION	viii.The company shall install Oxygen Delignification (ODL) Plant and shall maintain AOX below 1kg/tonne of paper production.	
		PPs Submission: Complied ODL were installed in Hard wood fiber line and chemical bagasse plant in 2008 and 2010 respectively. AOX and TOC are measured once a month through NABL accredited & MoEFCC recognized Third Party Lab. An AoX value varies from 0.04 to 0.11 Kg/T against 1 kg/ton of paper production. Copy of AOX report submitted as Annexure VI.	Date: 20/05/2024
9	WASTE MANAGEMENT	ix. ECF technology shall be used and lime kiln shall be installed to mange lime sludge.	
		PPs Submission: Complied ECF was installed in 2008 and is in operation. Lime Kilns I & II were installed in 1996 and 2008 respectively and are under continuous operation.	Date: 20/05/2024
10	WATER QUALITY MONITORING AND PRESERVATION	x. The Company shall submit the comprehensive water management plan along with monitoring plan for the ground water quality and the level, within three months from date of issue of this letter.	
		PPs Submission: Complied TNPL is periodically submitting its updated comprehensive water management plan along with respective six monthly EC compliance reports. A copy of the latest comprehensive water management plan report is submitted as Annexure VII.	Date: 20/05/2024
11	WASTE MANAGEMENT	xi. The ash generated from the plant shall be disposed of in	

		accordance with the provisions of the Fly Ash Notification, 2009.
PPs Submission: Complied Fly ash utilized in the TNPL cement plant and balance, if any is being sent to fly ash bricks manufacturing units. Fly ash Quarterly reports are submitted to TNPCB authorities. The latest fly ash submission details is enclosed as Annexure VIII		Date: 20/05/2024
12	WASTE MANAGEMENT	xii. The project authority shall dispose to hazardous waste as per the provision of Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008.
PPs Submission: Complied TNPCB issued Hazardous Wastes Authorization No 22HFC42010886 dated 29/08/2022 with validity 31/03/2027 for Main Plant and No 22HFC42552706 dated 04/11/2022 with validity 31/03/2027 for Captive Power Plant. Hazardous Waste disposal is done as per authorization.		Date: 20/05/2024
13	GREENBELT	xiii.The company shall develop green belt in 33% of the total land as per the CPCB guidelines to mitigate the effect of fugitive emissions.
PPs Submission: Complied The unit has developed and maintained a green belt with 38.42% for the paper plant and 42.37% for the Captive Power Plant. A Copy of the Green Belt report for the current review period is submitted as Annexure IX.		Date: 20/05/2024
14	Human Health Environment	xiv.Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.
PPs Submission: Complied OHC is provided with the required infrastructure and functioning four resident doctors with requisite paramedical staff and maintaining health records as per Factory Act. A Copy of the OHC report for the current review period is submitted as Annexure X.		Date: 20/05/2024
15	Risk Mitigation and Disaster Management	xv. The Company shall make the arrangement for protection of possible fire hazardous during manufacturing process in material handling.
PPs Submission: Complied Necessary arrangements are being made towards the protection of possible fire hazardous during the manufacturing process in material handling. The updated fire protection facilities available in TNPL are submitted as Annexure XI.		Date: 20/05/2024
16	Corporate Environmental Responsibility	xvi.All the recommendations made in the Charter on corporate Responsibility for Environment Protection (CREP) for the pulp and paper sector shall be strictly implemented.
PPs Submission: Complied CREP recommendations are being implemented and a copy of the report for the current review period is submitted as Annexure XII		Date: 20/05/2024
17	PUBLIC HEARING	xvii. All the commitments made to the public during Hearing / Public Consultation meeting held on 18th May, 2012 shall be satisfactorily implemented and a separate budget for implementing the same should be allocated and information submitted to the Ministry's Regional Office at Bangalore.
PPs Submission: Complied All commitments made were implemented during the review period under 19 schemes at a cost of Rs.144.82 Lakhs. A detail of public Hearing implementation is submitted as Annexure XIII		Date: 20/05/2024

18	Human Health Environment	xix.Provision shall be made for the housing of construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, Safe drinking water, medical health care, crèche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.

PPs Submission: Complied Complied during the project execution period.Not applicable -during the review period	Date: 21/05/2024

19	AIR QUALITY MONITORING AND PRESERVATION	ii.The project authority shall install multi cyclones, wet scrubbers with the boilers to achieve the particulate emission below 50 mg/Nm3. The emissions from chemical recovery section shall be controlled through primary and secondary venturi scrubbers

PPs Submission: Complied TNPL has installed Electro Static Precipitator (ESP) in the Chemical Recovery Section to mitigate the boiler particulate emission. The stipulate the norms for the boilers in the chemical recovery section are achieved by operating ESPs efficiently with appropriate periodical maintenance. The same is evidenced from the Continues Emission Monitoring Data – Connected with care air center of TNPCB & Periodical TNPCB Stack Survey ROA & NABL accredited & MoEFCC recognized Third Party Lab data. The latest TNPCB and NABL accredited & MoEFCC recognized Third Party Lab Stack survey ROA is submitted as Annexure I.	Date: 21/05/2024

General Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	i.The project authorities must strictly adhere to the stipulation made by the Tamil Nadu Pollution Control Board and the State Government.

PPs Submission: Complied Strictly complying with TNPCB conditions. The consent to operate for facility is being renewed from time to time.	Date: 21/05/2024

2	Statutory compliance	ii. No further expansion or modifications in the plant shall be carried our without prior approval of the Ministry of Environment and Forest.

PPs Submission: Complied TNPCB granted fresh CTO Expansion for enhancement of production from 4.0 to 4.8 Lakh MT/A under No Increase in Pollution Load Scenario. The CTO obtained from TNPCB on 01/02/2024 with a validity of 31/03/2027.	Date: 21/05/2024

3	AIR QUALITY MONITORING AND PRESERVATION	iii. At least four ambient air quality monitoring stations should be established in the downward direction as well as where maximum ground level concentration of PM10, SO2 and NOx are anticipated in consultation with the SPCB. Data on ambient air quality and stack emission shall be regularly submitted to this Ministry including its Regional Office at Bangalore and the SPCB/CPCB once in six months.

PPs Submission: Complied AAQ monitoring is being carried out in eight stations once in six months by TNPCB and once a month by NABL accredited & MoEFCC recognized Third third-party lab in addition to that Online ambient air quality monitoring station has been installed and a real-time data is being transmitted to Care air Centre of Tamil Nadu Pollution Control Board. The reports are submitted regularly along	Date: 21/05/2024

with six monthly EC compliance reports to the respective offices. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Ambient Air survey report submitted as Annexure XV.			
4	AIR QUALITY MONITORING AND PRESERVATION	iv. Industrial wastewater shall be properly collected, treated so as to conform to the standards prescribed under GSR 422 (E) dated 19th May, 1993 and 31st December, 1993 or as amended from time to time. The treated wastewater shall be utilized for plantation purpose.	
PPs Submission: Complied The unit installed Primary, Secondary, and Tertiary Effluent Treatment facilities to ensure its quality within norms prescribed by the board & entire treated effluent is utilized for "On land irrigation			Date: 21/05/2024
5	Noise Monitoring & Prevention	v. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (nighttime).	
PPs Submission: Complied TNPL installed necessary noise control measures. The Noise survey report by TNPCB and NABL accredited & MoEFCC recognized Third Party Lab reveals that values are with prescribed norms. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Noise survey report submitted as Annexure XVI.			Date: 21/05/2024
6	Human Health Environment	vi. Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the Factories Act.	
PPs Submission: Complied OHC is provided with the required infrastructure and functioning four resident doctors with requisite paramedical staff and maintaining health records as per Factory Act. A Copy of the OHC report for the current review period is submitted as Annexure X.			Date: 21/05/2024
7	Statutory compliance	vii. The Company shall also develop rain water harvesting structures to harvest the rain water for utilization in the lean season besides recharging the ground water table.	
PPs Submission: Complied TNPL so far, has implemented rainwater harvesting facilities to recharge ground after covering about 4.52 Lakh Sq.meter area through 627 rainwater pits, 5 ponds, and five reservoirs. Rainwater harvesting details are submitted as Annexure XVII.			Date: 21/05/2024
8	Corporate Environmental Responsibility	viii.The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report. Further, the company must undertake socio-economic development activities in the surrounding villages like community development programmes, educational programmes, drinking water supply and health care etc.	
PPs Submission: Complied TNPL so far spent Rs. 37.06 Crores against 5% of the project cost of Rs.15.5 Cr. The total cost spent under CSR during the review period is Rs. 2.43 Crores. Details are submitted as Annexure XIV			Date: 21/05/2024
9	Corporate Environmental Responsibility	ix. Requisite funds shall be earmarked towards capital cost and recurring cost/annum for environment pollution control measures to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government. An implementation schedule for implementing all the conditions stipulated herein shall be submitted to the Regional Office of the Ministry at Bangalore. The	

		funds so provided shall not be diverted for any other purpose.
PPs Submission: Complied TNPL had spent the funds allocated for the implementation of environment pollution control measures as stipulated by the MoEF and TNPCB. Details are submitted as Annexure XIV.		Date: 21/05/2024
10	Statutory compliance	x. A copy of clearance letter shall be sent by the proponent to concerned Panchayat, Zlia Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/representations, if any, were received while processing the proposal. The clearance letter shall also be put on the web site of the company by the proponent
PPs Submission: Complied A copy of the clearance letter was submitted to Kagithapuram town panchayat on 21/03/2013. A copy of the submission is enclosed as Annexure XVIII.		Date: 21/05/2024
11	Statutory compliance	xi. The project proponent shall upload the status of compliance of the stipulated environment 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 the MOEF at Bangalore. The respective Zonal Office of CPCB and the SPCB. The criteria pollutant levels namely; PM10, SO2, NOx (ambient levels as well as stack emissions) for critical sectoral parameters, indicated for the projects shall be mentored and displayed at a convenient location near the main gate of the company in the public domain.
PPs Submission: Complied EC compliance reports are updated once in 6 months on the www.tnpl.com website. Hard and soft copies are submitted to respective authorities once in 6 months. Real-time value is available near the main gate.		Date: 21/05/2024
12	Statutory compliance	xii. The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental conditions including results of monitored data (both in hard copies as well as by e-mail)to the Regional Office of MOEF, the respective Zonal Office of CPCB and the SPCB. The Regional Office of this Ministry at Bangalore / CPCB/SPCB shall monitor the stipulated conditions.
PPs Submission: Complied Hard and soft copies (email) of periodical EC compliance reports including monitoring data are being submitted to respective authorities once in six months. EC Periodical submission details are enclosed as Annexure XIX.		Date: 21/05/2024
13	Statutory compliance	xiii.The environmental statement for each financial year ending 31st March in Form-V as in 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 condition and shall also be sent to the respective Regional Office of the MOEF at Bangalore by e-mail.
PPs Submission: Complied Regularly submitting Form V to the relevant authorities and the latest form V copy along with respective EC Compliance is available on the TNPL website. The latest Form V is attached as Annexure XX.		Date: 21/05/2024

14	Statutory compliance	xiv.The Project proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB and may also be seen at Website of the Ministry of Environment and Forests at http:/envfor.nic.in. this shall be advertised within seven days from the date of issue of the in the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same should be forwarded to the Regional office at Bangalore.

PPs Submission: Complied The advertisement was made in Newspapers on 27/02/2013 and a copy of the advertisement was forwarded to MoEF & CC on 4th March 2013. Details are submitted as attached as Annexure XXI.	Date: 21/05/2024

15	Statutory compliance	xv. Project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.

PPs Submission: Complied Both DIP and up gradation of Captive Power Plant work were started and completed during 2013 itself	Date: 21/05/2024

Visit Remarks

Last Site Visit Report Date:	21/04/2022
Additional Remarks:	

Your (Environment Clearance) application has been Submitted with following details	
Proposal No	IA/TN/IND/4608/2005
Compliance ID	69703861
Compliance Number(For Tracking)	EC/M/COMPLIANCE/69703861/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	21-05-2024
IRO Name	V Geroge Jenner
IRO Email	tr025@ifs.nic.in
State	TAMIL NADU
IRO Office Address	Integrated Regional Offices, Chennai
Note:- SMS and E-Mail has been sent to V Geroge Jenner, TAMIL NADU with Notification to Project Proponent.	

Half Yearly Compliance Report
2024
01 Jun(01 Oct - 31 Mar)

Acknowledgment

Proposal Name	Expansion of Pulp and Paper Mill (2,45,000 to 4,00,000 TPA) by installation of new Paper Machine (1,55,000 TPA) and balancing of Hard Wood Pulp Mill (300 to 330 TPD) and Bagasse based Pulp Mill (500 to 550 TPD) at TNPL, Kagithapuram, Karur District.
Name of Entity / Corporate Office	Tamil Nadu Newsprint and Papers Limited
Village(s)	N/A
District	KARUR

Proposal No.	IA/TN/IND/4608/2005
Plot / Survey / Khasra No.	N/A
State	TAMIL NADU
MoEF File No.	J-11011/710/2007-IA-II(I)

Category	Industrial Projects - 1
Sub-District	N/A
Entity's PAN	NA
Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year	2024
Remarks (if any)	EC compliance status report pertaining to installation of New Paper machine(1,55,000 TPA) , Hard wood Pulp Mill (300 to 330 TPA) and Bagasse based Pulp Mill (500 to 550 TPD) and for the period ending 30/09/2023.
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office Tamil Nadu Newsprint and Papers Limited

	Project Area as per EC Granted	Annual Project Area in Possession
Private	151.76	1.62
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	151.76	1.62

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Writing and Pring Paper	Tons per Annum (TPA)	31/03/2027	480000	422742	480000

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	i. As proposed, Elemental Chlorine Free (ECF) bleaching technology shall be adopted in hardwood pulp mill, bagasse pulp mill and paper machine.

PPs Submission: Complied Implementation status: ECF bleaching technology was adopted in the year 2008 for both hardwood pulp and bagasse pulp mills, and the same are currently under operation. ECF bleaching technology does not apply to the Paper machines section.	Date: 21/05/2024

2	AIR QUALITY MONITORING AND PRESERVATION	ii. Continuous stack monitoring facilities for all the stacks. Sufficient air pollution control devices viz. Electrostatic precipitator (ESP) and bag filters etc. shall be provided to control gaseous emissions below 100 mg/Nm³. Monitoring of H2S and Mercaptan along with other parameters shall be ensured and report submitted to Ministry's Regional Office at Bangalore, TNPCB and CPCB regularly. The gaseous emissions (SPM, SO2, NOX, H2S and Mercaptan) from various process units shall conform to the standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry, its size and location. At no time, the emission level shall go beyond the prescribed standards. In the event of failure of any pollution control systems(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency.

PPs Submission: Complied TNPL has installed Electro Static Precipitator (ESP) in the Chemical Recovery Section to mitigate the boiler particulate emission. The stipulated norms for the boilers in the chemical recovery section are being achieved by operating the ESPs effectively and efficiently. The same is evidenced by the Continues Emission Monitoring Analyzer Data – Connected with Care Air Centre of TNPCB. Moreover the same is evident from the periodical-biannual TNPCB Stack Survey ROA, monthly NABL accredited & MoEFCC recognized Third Party Lab analysis data. The latest TNPCB and NABL accredited & MoEFCC recognized Third Party Lab Stack survey ROA is submitted as Annexure I. H2S and Mercaptans are monitored once a month through NABL accredited & MoEFCC recognized Third Party Lab. TNPL has a dedicated captive power plant. A separate feeder from the TG sets is connected directly to pollution control equipment systems to ensure continuous power supply during emergencies.	Date: 21/05/2024

3	AIR QUALITY MONITORING AND PRESERVATION	iii. Secondary fugitive emissions from all the sources shall be controlled within the latest permissible limits issued by the Ministry and regularly monitored. Guidelines / Code of Practice issued by the CPCB shall be followed. Fugitive emissions shall be controlled by providing dust collectors and water spraying system at material transfer points. Monitoring of H2S and mercaptans shall be carried out once in a month in the work environment.

PPs Submission: Complied	Date:

		Secondary fugitive emissions control measures installed viz., Closed conveyors, water sprinklers, dust collectors, wind barriers, greenery development, telescopic chute, etc., are installed to control the Secondary fugitive emissions. H2S and Mercaptans are monitored once a month through NABL accredited & MoEFCC recognized Third Party Lab. Copy of latest H2S and Mercaptans report enclosed as Annexure XXII	21/05/2024
4	WATER QUALITY MONITORING AND PRESERVATION	iv. AOx levels shall be controlled less than 1 kg/ton of paper manufactured as per E(P) Act. The odours and gases from cooking / stripping column, evaporator hot well and hot condensate tank should be burnt in the incinerator.	
		PPs Submission: Complied AOX and TOC are mentioned once a month through NABL accredited & MoEFCC recognized Third Party Lab. AoX varies from 0.04 to 0.11 Kg/T against 1 kg/tone of paper production. The latest Copy of the AoX report was submitted as Annexure VI.	Date: 21/05/2024
5	WATER QUALITY MONITORING AND PRESERVATION	v. Total water consumption shall not exceed as mentioned in the Corporate Responsibility for Environment Protection (CREP) guidelines.	
		PPs Submission: Complied The average total water consumption is only 32,134 M3/day. Average fresh water consumption and treated effluent discharge are 28 M3/T and 21 M3/T of Product respectively. A copy of the CREP report for the current review period is submitted as Annexure XII.	Date: 21/05/2024
6	WATER QUALITY MONITORING AND PRESERVATION	vi. Total water requirement from River Cauvery shall not exceed 72,000 M3/day as per the permission accorded by the Public Works Department. Efforts shall be made to reduce the quantity of water intake and maximize use of recycled water.	
		PPs Submission: Complied As per MoEF –Environment Clearance No. F.No.J-11011/710/2007-IA-II (i) dated 11th February 2013, the freshwater requirement is 52,800 m3/day. However, the average freshwater consumption during the review period is about 32,134 M3/day excluding domestic consumption is well within the approved quantity.	Date: 21/05/2024
7	WATER QUALITY MONITORING AND PRESERVATION	vii. The process effluent shall be treated in Effluent Treatment Plant (ETP) through primary, secondary and tertiary treatment methods. Spill liquor from paper mill and chemical recovery areas shall also be collected and properly treated. Effort shall be made to reduce the colour in the effluent discharged. Treated effluent (filtrate) shall be used for the green belt development and discharge to the nearby drain only after conforming to the standards prescribed by the TNPCB and under E(P) Act, whichever are more stringent. The quality of the treated effluent shall conform to the prescribed standards and used for irrigation. AOx and TOC levels are to be monitored.	
		PPs Submission: Complied The unit installed Primary, Secondary, and Tertiary Effluent Treatment facilities to ensure its quality within norms prescribed by the board & entire treated effluent is utilized for " On land irrigation"	Date: 21/05/2024
8	WATER QUALITY MONITORING AND PRESERVATION	viii. Adequate number of influent and effluent quality monitoring stations shall be installed in consultation with the TNPCB and controlled within the permissible limits for all the parameters. One of the water quality monitoring station shall be at 100 m downstream of confluence of the treated effluent discharge point in the nearest water body	

PPs Submission: Complied Influent quality at each source of generation and treated effluent quality are monitored once a month by TNPCB and by NABL accredited & MoEFCC recognized laboratory. Summary of online Water Quality Watch (WQW) data attached as Annexure IV		Date: 21/05/2024
9	WATER QUALITY MONITORING AND PRESERVATION	ix. Efforts shall be made to reduce total dissolved solids (TDS) in the effluent and effluent discharged shall not exceed 80 m3/T of paper produced as per the norms prescribed in the E(P) Act.
PPs Submission: Complied The average wastewater discharge was 21 M3/per MT of paper production for the review period. Efforts taken to reduce TDS in treated effluent are enclosed as Annexure XXIII.		Date: 21/05/2024
10	WATER QUALITY MONITORING AND PRESERVATION	x. Chemical recovery plant shall be installed for the treatment of black liquor. In order to achieve colour reduction, tertiary treatment system like activated filter, multi-media filter etc. shall be explored. The inorganic compounds shall be recovered in the chemical recovery plant and organic compounds burnt in the recovery boiler. The effluent from bagasse handling and fibre preparation section containing high BOD and SS shall be segregated and treated in a clarifier to reduce the SS. Effluent with low BOD and SS generated from paper machine, pulp mill and soda recovery plant shall be passed through bar screen, mechanical screen, detritor and primary clarifier to remove SS. Anaerobic treatment shall be done to reduce BOD levels. The bio-gas from the bio-methanation plant shall be utilized in lime kiln. The effluent shall be further treated in the aeration system based on activated sludge process to reduce BOD/ COD to the permissible levels. No trade effluent shall be discharged into Pugalur Canal and seepage from TEWLIS area shall be prevented entering the same canal during the monsoon.
PPs Submission: Complied All the above facilities, viz., chemical recovery plant, ETP tertiary Treatment, Biogas plant with pre-treatment for bagasse wash water, use of biogas in lime kiln, ASL implemented and in continuous operation		Date: 21/05/2024
11	WATER QUALITY MONITORING AND PRESERVATION	xi. Permission for the drawal of 75,750 M3/day from River Cauvery water shall be obtained from the concerned department.
PPs Submission: Complied Permission for drawl of 16 MGD water from River Cauvery from Govt. of TamilNadu is available and enclosed as Annexure XXIV		Date: 21/05/2024
12	WATER QUALITY MONITORING AND PRESERVATION	xii. Action plan shall be prepared for further colour removal from the effluent and submitted to the Ministry, its Regional Office at Bangalore, TNPCB and CPCB and implemented.
PPs Submission: Complied TNPL has implemented tertiary treatment to reduce color in the treated effluent by Ozonation since from the year 2010.		Date: 21/05/2024
13	WATER QUALITY MONITORING AND PRESERVATION	xiii. Regular ground water monitoring shall be carried out for all the relevant parameters where effluent is discharged.
PPs Submission: Complied Groundwater quality analysis is being conducted once in three months through TNPCB and NABL accredited & MoEFCC recognized Third Party Lab. Copies of those reports are submitted to		Date: 21/05/2024

concerned authorities along with respective EC compliance reports. The copy of the latest report is submitted as Annexure V		
14	WATER QUALITY MONITORING AND PRESERVATION	xiv. Apart from other parameters, TOC and AOx levels in the treated effluent shall be measured once in a month. The AOx levels shall not 1.5kg/tone of paper as per the norms prescribed in E(P) Act.
PPs Submission: Complied AOX and TOC are measured once a month through NABL accredited & MoEFCC recognized Third Party Lab. An AoX value varies from 0.04 to 0.11 Kg/T against 1 kg/ton of paper production. Copy of AOX report submitted as Annexure VI		Date: 21/05/2024
15	WASTE MANAGEMENT	xv. Sludge dewatering system shall be installed. ETP sludge shall be used as manure Chip dust and pith shall be used as fuel in the existing boilers of TNPL. Lime mud reburning kilns shall be installed to recycle lime sludge and to regenerate burnt lime required for the caustcizing process. Efforts shall be made for the utilisation of lime sludge and mud in the cement plants.
PPs Submission: Complied The dewatering system of the Vaccum filter and decanters is installed ETP. ETP Sec. Sludge is used as manure. Chip dust and pith are used as fuel. Two lime kilns are in continuous operation to recycle the lime sludge. The rest of the Lime sludge & mud (Lime Grit) is being used in the TNPL Cement Plant as Raw material.		Date: 21/05/2024
16	WATER QUALITY MONITORING AND PRESERVATION	xvi. Action plan for the disposal of Reverse Osmosis (RO) rejects shall be prepared and submitted to the Ministry's Regional Office at Bangalore, TNPCB and CPCB within three months of issue of this letter.
PPs Submission: Complied TNPL carried out a pilot plant study through the Tamil Nadu Water investment company and concluded that the implementation of RO in Effluent recycling is economically not feasible. However, TNPL continuously seeking, economically feasible technology availability in the market, to implement.		Date: 21/05/2024
17	WASTE MANAGEMENT	xvii. Proper utilization of fly ash shall be ensured as per Fly ash Notification, 1999 and subsequent amendment in 2003.
PPs Submission: Complied Fly ash is being utilized in the TNPL cement plant and the balance, if any is being sent to fly ash bricks manufacturing units. Fly ash Quarterly reports are being submitted to the TNPCB authorities. The latest fly ash submission details are enclosed as Annexure VIII.		Date: 21/05/2024
18	Corporate Environmental Responsibility	xviii. As per the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP), the company shall undertake measures for discharge of within two years and 1.0 kg/ton of paper in 5 years.
PPs Submission: Complied TNPL is periodically submitting the compliance against the CREP conditions as part of six monthly Compliance reports on conditions, as stipulated in the ECs. A copy of the report for the current review period is submitted as Annexure XII.		Date: 21/05/2024
19	GREENBELT	xix. Green belt shall be developed in 33 % area to mitigate the effects of fugitive emissions all around the plant in as per the CPCB guidelines and in consultation with local DFO. Green belt already developed shall be properly maintained.

PPs Submission: Complied The unit has developed and maintained a green belt with 38.42% for the paper plant and 42.37% for the Captive Power Plant. A Copy of the Green Belt report for the current review period is submitted as Annexure IX.		Date: 21/05/2024
20	PUBLIC HEARING	xx.All the commitments made to the public during public hearing shall be satisfactorily implemented.
PPs Submission: Complied All the commitments made in the public hearing were satisfactorily implemented. Details are enclosed as Annexure XXV		Date: 21/05/2024
21	Corporate Environmental Responsibility	xxi. All the recommendations made in the Charter on Corporate Responsibility for Environment Protection (CREP) for Pulp and Paper Sector shall be strictly implemented.
PPs Submission: Complied TNPL is periodically submitting the compliance against the CREP conditions as part of six monthly Compliance reports on conditions, as stipulated in the ECs. A copy of the report for the current review period is submitted as Annexure XII.		Date: 21/05/2024
22	Human Health Environment	xxii. The company shall provide housing for construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, mobile STP, safe drinking water, medical health care, creche etc. The housing may be in the form of temporary structures to be removed after the completion of the project.
PPs Submission: Complied Complied during the project execution period. Not applicable -during the review period		Date: 21/05/2024

General Conditions

Sr.No.	Condition Type	Condition Details
1	Statutory compliance	i.The project authorities must strictly adhere to the stipulations made by the Tamil Nadu state Pollution Control Board (TNPCB) and the State Government.
PPs Submission: Complied Strictly complying with TNPCB conditions. The consent to operate for the facility is being renewed from time to time.		Date: 21/05/2024
2	Statutory compliance	ii.No further expansion or modernization in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
PPs Submission: Complied TNPCB granted fresh CTO Expansion for enhancement of production from 4.0 to 4.8 Lakh MT/Annum under No Increase in Pollution Load Scenario. The CTO was obtained from TNPCB on 01/02/2024 with a validity of 31/03/2027.		Date: 21/05/2024
3	Statutory compliance	viii. The implementation of the project vis-à-vis environment action plans shall be monitored by Ministry's Regional Office at Bangalore /

		TNPCB / CPCB. A six-monthly compliance status report shall be submitted to monitoring agencies.
PPs Submission: Complied Hard and soft copies (email) of periodical EC compliance reports including monitoring data are being submitted to respective authorities once in six months. Periodical EC submission details are enclosed as Annexure XIX.		Date: 21/05/2024
4	Human Health Environment	ix. Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. shall be ensured for construction workers during the construction phase so as to avoid felling of trees and pollution of water and the surroundings.
PPs Submission: Complied Complied during the project execution period. Not applicable -during the review period		Date: 21/05/2024
5	Corporate Environmental Responsibility	x.The project proponent shall have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction, education, establishment of health centres, sanitation facilities, drinking water supply, community awareness and employment to local people wherever possible both for technical and non-technical jobs.
PPs Submission: Complied TNPL so far spent Rs. 37.06 Crores against 5% of the project cost of Rs.15.5 Cr. The total cost spent under CSR during the review period is Rs. 2.43 Crores. Details are submitted as Annexure XIV.		Date: 21/05/2024
6	Statutory compliance	xi. A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the control of Senior Executive.
PPs Submission: Complied A separate Environmental Management Cell is available and the same is enclosed as Annexure XXVI.		Date: 21/05/2024
7	Statutory compliance	xii. The project authorities will provide Rs.128.00 Crores both recurring and non-recurring to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes. Rs.159.00 Crores is allotted for environment protection measures.
PPs Submission: Complied A sum of Rs. 128 Crore and Rs. 159 Crore allocated for MEP and MDP respectively were fully utilized for implementation of EC conditions. Details are submitted as Annexure XIV		Date: 21/05/2024
8	Statutory compliance	xiii. Six monthly status report on the project vis-à-vis implementation of environmental measures shall be submitted to this Ministry's Regional Office at Bangalore/CPCB/TNPCB.
PPs Submission: Complied Hard and soft copies of periodical EC compliance reports including monitoring data are being submitted to respective authorities. Periodical submission details are enclosed. EC periodical submission details are enclosed as Annexure XIX.		Date: 21/05/2024
9	Statutory compliance	xiv. The Project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and

		copies of the clearance letter are available with the Tamil Nadu State Pollution Control Board and may also be seen at Website of the Ministry of Environment and Forests at http://www.envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional Office.
PPs Submission: Complied Public notice is given in two local newspapers dated 31st DEC 2008. A copy of the same is attached as Annexure XXVII.		Date: 21/05/2024
10	Statutory compliance	xv.The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.
PPs Submission: Complied The Board of Directors approved the project proposal in 2007 and financial closure was achieved during 2008. The final approval of the project by TNPCB (CTO for the project) was on 14/01/2011.		Date: 21/05/2024
11	MISCELLANEOUS	iii. Proper house keeping and cleanliness must be maintained within and outside the plant.
PPs Submission: Complied TNPL is maintaining good housekeeping within and outside of the plant premises.		Date: 21/05/2024
12	Noise Monitoring & Prevention	iv. The overall noise levels in and around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time)
PPs Submission: Complied TNPL installed necessary noise control measures. The Noise survey report by TNPCB and NABL accredited & MoEFCC recognized Third Party Lab reveals that values are well within the prescribed norms. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Noise survey report submitted as Annexure XVI.		Date: 21/05/2024
13	Human Health Environment	v.Occupational health surveillance programme shall be undertaken as regular exercise for all the employees, specially for those engaged in handling hazardous substances. The first aid facilities in the occupational health centre shall be strengthened and the medical records of each employee should be maintained separately.
PPs Submission: Complied OHC is provided with the required infrastructure and functioning four resident doctors with requisite paramedical staff and maintaining health records as per Factory Act. A Copy of the OHC report for the current review period is submitted as Annexure X.		Date: 21/05/2024
14	Statutory compliance	vi.The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
PPs Submission: Complied The entire allocated fund of Rs. 159 & Rs.128 crores allocated for the environmental protection measures under MEP and MDP have been completely utilized as per an enclosed report. Details are		Date: 21/05/2024

submitted as Annexure XIV.			
15	Statutory compliance	vii.The company shall undertake rainwater harvesting measures to recharge the ground water.	
PPs Submission: Complied TNPL so far has implemented rainwater harvesting facilities to recharge groundwater covering about 4.52 Lakh Sq.meter area through 627 rainwater pits, 5 ponds, and five reservoirs. Rainwater harvesting details are submitted as Annexure XVII.			Date: 21/05/2024

Visit Remarks

Last Site Visit Report Date:	21/04/2022
Additional Remarks:	

Your (Environment Clearance) application has been Submitted with following details	
Proposal No	IA/TN/IND/22309/1910
Compliance ID	69710729
Compliance Number(For Tracking)	EC/M/COMPLIANCE/69710729/2024
Reporting Year	2024
Reporting Period	01 Jun(01 Oct - 31 Mar)
Submission Date	21-05-2024
IRO Name	V Geroge Jenner
IRO Email	tr025@ifs.nic.in
State	TAMIL NADU
IRO Office Address	Integrated Regional Offices, Chennai
Note:- SMS and E-Mail has been sent to V Geroge Jenner, TAMIL NADU with Notification to Project Proponent.	

Half Yearly Compliance Report
2024
01 Jun(01 Oct - 31 Mar)

Acknowledgment

Proposal Name	Expansion of Paper Production from 2,05,000 to 2,45,000 MTPA and Production of 45,000 MTPA market pulp at TNPL, Kagithapuram, Karur District.
Name of Entity / Corporate Office	Tamil Nadu Newsprint and Papers Limited
Village(s)	N/A
District	KARUR

Proposal No.	IA/TN/IND/22309/1910
Plot / Survey / Khasra No.	N/A
State	TAMIL NADU
MoEF File No.	J-11011/375/2005-IA-II(I)

Category	Industrial Projects - 1
Sub-District	N/A
Entity's PAN	NA
Entity name as per PAN	NA

Compliance Reporting Details

Reporting Year	2024
Remarks (if any)	EC compliance status report pertaining to expansion of Paper Production from 2,05,000 to 2,45,000 MTPA and Production of 45,000 MTPA market pulp at TNPL and for the period ending 30/09/2023.
Reporting Period	01 Jun(01 Oct - 31 Mar)

Details of Production and Project Area

Name of Entity / Corporate Office Tamil Nadu Newsprint and Papers Limited

	Project Area as per EC Granted	Annual Project Area in Possession
Private	151.76	3.44
Revenue Land	0	0
Forest	0	0
Others	0	0
Total	151.76	3.44

Production Capacity

Sr. no	Product Name	units	Valid Upto	Capacity	Production last year	Capacity as per CTO
1	Writing and Pring Paper	Tons per Annum (TPA)	31/03/2027	480000	422742	480000

Conditions

Specific Conditions

Sr.No.	Condition Type	Condition Details
1	AIR QUALITY MONITORING AND PRESERVATION	i. The gaseous emissions (SPM, SO2, NOX and H2S) from various process units shall conform to the standards prescribed from time to time. The State Board may specify more stringent standards for the relevant parameters keeping in view the nature of the industry, its size and location. At no time, the emission level shall go beyond the prescribed standards. In the event of failure of any pollution control system(s) adopted by the unit, the respective unit should not be restarted until the control measures are rectified to achieve the desired efficiency. ESPs shall be provided to the recovery boiler with 99.9% and lime kiln to collect the solids (Sodium salts) escaping the flue gas.

PPs Submission: Complied TNPL has installed Electro Static Precipitator (ESP) in the Recovery Boiler, Lime Kilns Section to mitigate the boiler particulate emission. The stipulated norms for the boilers in the chemical recovery section are achieved by operating ESPs efficiently with appropriate periodical maintenance. The same is evidenced from the Continues Emission Monitoring Data – Connected with care air center of TNPCB & Periodical TNPCB Stack Survey ROA & NABL accredited & MoEFCC recognized Third Party Lab data. The latest TNPCB and NABL accredited & MoEFCC recognized Third Party Lab Stack survey ROA is submitted as Annexure I.	Date: 21/05/2024

2	AIR QUALITY MONITORING AND PRESERVATION	ii. Three on-line monitoring stations for ambient air near the boundary of the plant shall be set up along with another on-line stack monitoring system for recovery boiler for particulate matter, SO2, NOX and H2S and the on-line data shall be submitted to the CPCB and TNPCB.

PPs Submission: Complied THREE CAAQMS MONITORING STATION LOCATIONS 1. Canteen Building 2. Vicinity of Coal Yard 3. Entrance of TNPL Cement Plant. Online Stack Monitoring was Provided for the recovery Boiler for PM, SO2, NOX, and H2S. Summary of Ambient and Stack CEMS Data submitted as Annexure II.	Date: 21/05/2024

3	Statutory compliance	iii.The company shall phase out Element Chlorine from pulp bleaching process. The Chlorine dioxide plant shall be installed and commissioned on or before May, 2007.

PPs Submission: Complied ECF (Elemental chlorine-free) bleaching technology was commissioned in May 2008 by installing a Chlorine Di Oxide unit and the same in continuous operation.	Date: 21/05/2024

4	Statutory compliance	iv. The company shall install new Chemical Recovery Boiler (CRB). The new power boilers for the co-generation power plant, recovery boiler and lime kiln shall be equipped with ESP and shall meet the notified standards.

PPs Submission: Complied ESPs installed for Power & Recovery boilers and Lime kilns. ROA of the TNPCB survey during the	Date:

		review period reveals that emissions are within prescribed norms. The latest TNPCB and NABL accredited & MoEFCC recognized Third Party Lab Stack survey ROA is submitted as Annexure I.	21/05/2024
5	AIR QUALITY MONITORING AND PRESERVATION	v. Fugitive emissions shall be controlled by providing dust collectors and water spraying system at material transfer points. A super batch digester shall be installed to control odour. All the recommendations of the Corporate Responsibility for Environmental Protection (CREP) issued by the CPCB shall be followed. Arrangements for burning the non-condensable gases in a lime kiln shall be in place before the new digesters are commissioned. The existing direct contact evaporator shall be changed to the surface contract evaporator. Monitoring of H2S and Mercaptans shall be carried out once in a month in the work environment.	
		PPs Submission: Complied Dust control measures: Closed conveyors, water sprinklers, dust collectors, wind barriers, etc. NCG commissioned and in operation. H2S and Mercaptans are monitored once a month through NABL accredited & MoEFCC recognized Third Party Lab. Copy of latest report enclosed as Annexure XXII	Date: 21/05/2024
6	WATER QUALITY MONITORING AND PRESERVATION	vi. Total fresh water requirement from River Cauvery shall not exceed 66,380 m3/d. presently, 38% treated waste water is recycled and reused in the process. Effort shall be made to further reduce water consumption by spill liquor collection from pulp mill and chemical recovery area, Cooling towers, dewatering of waste sludge in lieu of vacuum drum filters etc. the effluent generation shall not exceed 37,715 m3/day The quality of the treated effluent shall conform to the prescribed standards and used for irrigation.	
		PPs Submission: Complied As per the 2013 DIP EC, the fresh water requirement is 52,800 M3/d. However, based on conservation, the average total water consumption is only 32,134 M3/day. Fresh water and treated effluent discharge are 28 M3/T and 21 M3/T of paper respectively. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab effluent water analysis report ROA is submitted as Annexure III. The value of treated effluent is well within the TNPCB norms.	Date: 21/05/2024
7	WATER QUALITY MONITORING AND PRESERVATION	vii.The black liquor generated by the paper mill shall be concentrated in an evaporation pond. The inorganic compounds shall be recovered in the chemical recovery plant and organic confounds brunt in the recovery boiler. The effluent from bagasse handling and fibre preparation section containing high BOD and SS shall be segregated and treated in a clarifier to reduce the SS. Effluent with low BOD and SS generated from paper machine, pulp mill and soda recovery plant shall be passed through bar screen, mechanical screen, detritor and primary clarifier to remove SS. Anaerobic treatment shall be done to reduce BOD levels. A bio-methanation plant shall be installed to treat high BOD/COD steams and generate bio-gas upto 20,000 m3/d to be utilized in lime kiln. The effluent shall be further treated in the aeration system based on 'Activated Sludge Process' to reduce BOD/COD to the permissible levels. No trade effluent shall be discharged into Pugalur canal and seepage from TEWLIS area shall be prevented entering the same canal during the monsoon.	
		PPs Submission: Complied Evaporator & recovery boiler were installed and in operation to generate steam through incineration of organic compounds and recovery of inorganic chemicals. The unit installed Primary, Secondary, and Tertiary Effluent Treatment facilities to ensure its quality within norms prescribed by the board & the entire treated effluent is utilized for "On land irrigation". TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab effluent water analysis report ROA is submitted as Annexure III. The value of treated effluent is well within the TNPCB norms. During the monsoon	Date: 21/05/2024

seepage from the TEWLIS area is reutilized for land irrigation along with Treated Effluent.		
8	WATER QUALITY MONITORING AND PRESERVATION	viii. The use of Ferric/Ferrous chloride shall be optimized to further reduce the colour in the treated effluent.
PPs Submission: Complied Ferric/ Ferrous Chloride usage stopped due to TDS increase in effluent. To further reduce colour, Tertiary treatment using Ozone introduced during 2010.		Date: 21/05/2024
9	WATER QUALITY MONITORING AND PRESERVATION	ix. Apart from other parameters. TOC and AOX levels in the treated effluent shall be measured once in a month.
PPs Submission: Complied AOX and TOC are mentioned once a month through NABL accredited & MoEFCC recognized Third Party Lab. AoX varies from 0.04 to 0.11 Kg/T against 1 kg/tone of paper production. Copy of AOX report submitted as Annexure VI.		Date: 21/05/2024
10	WASTE MANAGEMENT	x. Solid waste generated in the form of ash and lime sludge shall be provided to cement manufacturing unit. Chip dust and pith shall be used as fuel in the existing boilers of TNPL. ETP sludge shall be given to cardboard/egg tray manufactures. The causticizing plant shall be augmented to 2,000 m3/day to overcome the problem of high silica bagasse liquor. Lime mud reburning kilns shall be installed to recycle lime sludge and to regenerate burnt lime required for the causticizing process.
PPs Submission: Complied Fly ash & Lime sludge used in TNPL Cement Plant. Chip dust and pith are used as fuel. ETP sludge is sold for cardboard manufacturing. Caustricizing plant augmented. 2 lime kilns are in operation.		Date: 21/05/2024
11	Corporate Environmental Responsibility	xi. As per the recommendations made in the Charter on Corporate Responsibility for Environmental Protection (CREP), the company shall undertake measures for discharge of AOX less than 1.5 kg/tone of paper within two years and 1.0 kg/tone of paper in 5 years. The waste water discharge per ton of paper shall be less than 80 m3/T of paper.
PPs Submission: Complied The average total water consumption is only 32,134 M3/day. Average freshwater consumption and treated effluent discharge are 28M3/T and 21 M3/T of paper respectively. A copy of the CREP report for the current review period is submitted as Annexure XII.		Date: 21/05/2024
12	GREENBELT	xii. Green belt shall be raised in at least 50 ha. (33%) to mitigate the effects of fugitive emissions all around the plant in as per the CPCB guidelines and in consultation with local DFO.
PPs Submission: Complied The unit has developed and maintained a green belt with 38.42% for the paper plant and 42.37% for the Captive Power Plant. A Copy of the Green Belt report for the current review period is submitted as Annexure IX.		Date: 21/05/2024
13	Statutory compliance	xiii. The company shall undertake rainwater harvesting measures to recharge the ground water.
PPs Submission: Complied TNPL so far, has implemented rainwater harvesting facilities to recharge groundwater covering about 4.52 Lakh Sq.meter area through 627 rainwater pits, 5 ponds, and five reservoirs. Rainwater		Date: 21/05/2024

harvesting details are submitted as Annexure XVII.	

General Conditions

Sr.No.	Condition Type	Condition Details
1	Human Health Environment	v.Occupational health surveillance program shall be undertaken as regular exercise for all the employees, especially for those engaged in handling hazardous substances. The first aid facilities in the Occupational health centre shall be strengthened and the medical records of each employee should be maintained separately.
PPs Submission: Complied OHC is provided with the required infrastructure and functioning four resident doctors with requisite paramedical staff and maintaining health records as per Factory Act. A Copy of the OHC report for the current review period is submitted as Annexure X.		Date: 21/05/2024
2	Statutory compliance	vi.The project proponent shall also comply with all the environmental protection measures and safeguards recommended in the EIA/EMP report.
PPs Submission: Complied The entire allocated fund of Rs. 159 & Rs. 128 cores allocated for the environment protection measures under MEP and MDP have been completely utilized. Details are submitted as Annexure XIV.		Date: 21/05/2024
3	Statutory compliance	vii.The implementation of the project vis-à-vis environmental action plans shall be monitored by Ministry's Regional Office at Bangalore/TNPCB/CPCB. A six monthly compliance status report shall be submitted to monitoring agencies.
PPs Submission: Complied Hard and soft copies (email) of periodical EC compliance reports including monitoring data are being submitted to respective authorities once in six months. EC Periodical submission details are enclosed as Annexure XIX.		Date: 21/05/2024
4	Human Health Environment	viii.Adequate provisions for infrastructure facilities such as water supply, fuel, sanitation etc. shall be ensured for construction workers during the construction phase so as to avoid felling of trees and pollution of water and the surroundings.
PPs Submission: Complied Complied during the project execution period. Not applicable -during the review period		Date: 21/05/2024
5	Corporate Environmental Responsibility	ix. The project proponent shall have a scheme for social upliftment in the surrounding villages with reference to contribution in road construction, education, establishment of health centres, sanitation facilities, drinking water supply, community awareness and employment to local people whenever and wherever possible both for technical and non-technical jobs.
PPs Submission: Complied TNPL so far spent Rs. 37.06 Crores against 5% of the project cost of Rs.15.5 Cr. The total cost spent under CSR during the review period is Rs. 2.43 Crores. Details are submitted as Annexure XIV.		Date: 21/05/2024
6	Statutory compliance	x.A separate Environmental Management Cell equipped with full fledged laboratory facilities to carry out the various Environmental Management and Monitoring functions shall be set up under the

		control of Senior Executive.
PPs Submission: Complied A separate Environmental Management Cell is available and the same is enclosed as Annexure XXVI.		Date: 21/05/2024
7	Statutory compliance	xi.The project authorities will provide adequate funds both recurring and non-recurring to implement the conditions stipulated by the Ministry Environmental and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so provided should not be diverted for any other purposes. Rs.159.00 Crores is allotted for environment protection measures.
PPs Submission: Complied TNPL so far spent Rs. 37.06 Crores against 5% of the project cost of Rs.15.5 Cr. The total cost spent under CSR during the review period is Rs. 2.43 Crores. Details are submitted as Annexure XIV.		Date: 21/05/2024
8	Statutory compliance	xii. Six monthly status report on the project vis-à-vis implementation of environmental measures shall be submitted to this Ministry's Regional Office at Bangalore/CPCB/TNPCB.
PPs Submission: Complied Hard and soft copies (email) of periodical EC compliance reports including monitoring data are being submitted to respective authorities once in six months. EC Periodical submission details are enclosed as Annexure XIX.		Date: 21/05/2024
9	Statutory compliance	xiii. The project Proponent shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the Tamil Nadu State Pollution Control Board/Committee and may also be seen at Website of the Ministry of Environmental and Forests at http://www.envfor.nic.in. This shall be advertised within seven days from the date of issue of the clearance letter at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the Regional office.
PPs Submission: Complied The issue of environmental clearance from MoEF was advertised on 6th June 2006		Date: 21/05/2024
10	Statutory compliance	xiv.The Project Authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of commencing the land development work.
PPs Submission: Complied The entire allocated funds of Rs. 159 & Rs. 128 crores allocated for the environment protection measures under MEP and MDP have been completely utilized. Details are submitted as Annexure XIV.		Date: 21/05/2024
11	Statutory compliance	i. The project authorities must strictly adhere to the stipulations made by the Tamil Nadu State Pollution Control Board (TNPCB) and the State Government.
PPs Submission: Complied Strictly complying with TNPCB conditions. The consent to operate for the facility is being renewed from time to time.		Date: 21/05/2024

12	Statutory compliance	ii. No further expansion of modernization in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.

PPs Submission: Complied TNPCB granted CTO Expansion for enhancement of production from 4.0 to 4.8 Lakh MT/A under No Increase in Pollution Load Scenario. The CTO was obtained from TNPCB on 01/02/2024 with a validity of 31/03/2027.	Date: 21/05/2024

13	MISCELLANEOUS	iii. Proper housekeeping and cleanliness must be maintained within and outside the plant.

PPs Submission: Complied Good housekeeping is practiced in and around the plant area.	Date: 21/05/2024

14	Noise Monitoring & Prevention	iv.The overall noise levels in around the plant area shall be kept well within the standards (85 dBA) by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels should conform to the standards prescribed under EPA Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).

PPs Submission: Complied TNPL installed necessary noise control measures. The Noise survey report by TNPCB and NABL accredited & MoEFCC recognized Third Party Lab reveals that values are with prescribed norms. TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Noise survey report submitted as Annexure XVI.	Date: 21/05/2024

Visit Remarks

Last Site Visit Report Date:	21/04/2022
Additional Remarks:	

DETAILS OF ANNEXURES

PROJECT:

(1) Installation of Deinking Plant and Upgradation of Captive Co generation Plant

(2) The expansion of Pulp and Paper Mill 2,45,000 to 4,00,000 TPA by installation of new paper machine 1,55,000 TPA and balancing of Hard Wood and Bagasse Pulp Mill 300 to 330 and 500 to 550 TPD

(3) The expansion of Paper Production from 2,05,000 to 2,45,000 TPA and Production of 45,000 TPA of Market Pulp

SL.NO	ANNEXURE NO	DESCRIPTION
1	ANNEXURE I	Latest TNPCB and NABL accredited & MoEFCC recognized Third Party Lab Stack survey Report
2	ANNEXURE II	Summary of Online Ambient and Stack CEMS Data
3	ANNEXURE III	TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab effluent water analysis report
4	ANNEXURE IV	Summary of online Water Quality Watch (WQW) data
5	ANNEXURE V	TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Ground water analysis report
6	ANNEXURE VI	Copy of NABL accredited & MoEFCC recognized Third Party Lab AoX report
7	ANNEXURE VII	Copy of latest comprehensive water management plan report
8	ANNEXURE VIII	Copy of Latest fly ash submission details to TNPCB
9	ANNEXURE IX	Copy of Green Belt report for current review period
10	ANNEXURE X	Copy of OHC report for current review period
11	ANNEXURE XI	Copy of updated fire protection facilities is available in TNPL
12	ANNEXURE XII	Copy of CREP recommendations for current review period
13	ANNEXURE XIII	Detail of DIP public Hearing implementation in TNPL
14	ANNEXURE XIV	Copy of CSR Activities report for current review period
15	ANNEXURE XV	TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Ambient Air survey report
16	ANNEXURE XVI	TNPCB and Latest NABL accredited & MoEFCC recognized Third Party Lab Noise survey report
17	ANNEXURE XVII	Copy of Rain water harvesting facilities in TNPL
18	ANNEXURE XVIII	Copy of DIP - environmental clearance letter was submitted to Kagithapuram town panchayat
19	ANNEXURE XIX	Submission of EC Periodical report
20	ANNEXURE XX	Submission of Latest Environmental Statement (Form V) report
21	ANNEXURE XXI	Copy of DIP - environmental clearance Newspaper Advertisement
22	ANNEXURE XXII	NABL accredited & MoEFCC recognized Third Party Lab H_2S and Mercaptans report
23	ANNEXURE XXIII	Efforts taken to reduce TDS in treated effluent
24	ANNEXURE XXIV	Permission for drawl of 16 MGD water from River Cauvery from Govt. of Tamil Nadu
25	ANNEXURE XXV	Detail of MEP public Hearing implementation in TNPL
26	ANNEXURE XXVI	Environmental Management Cell
27	ANNEXURE XXVII	Copy of MEP - environmental clearance Newspaper Advertisement

ANNEXURE I

TNPCB REPORT – STACK EMISSION

Report No.DEI/DGI/61

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Dindigul.

STACK MONITORING SURVEY - Report of Analysis

Report No.TNPCB/DEI/DGI/F.No.70/SM/2023-2024, Dated:20.03.2024

1. Name of the Industry : M/s. Tamilnadu Newsprint and Papers Ltd.,

2. Address of the Industry : Pulp Plant & Paper Division,
Kagithapuram - 639 136,
Karur District.

3. Date of survey : 14.02.2024 & 15.02.2024

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °C	Velocity in (m/sec)	Discharge rate in (Nm^3/Hr)	Pollutants (mg/Nm^3)					
					PM	SO_2	NO_x	Cl_2	H_2S	Acid Mist
1.	Recovery Boiler A,B & C	159	12.35	2,97,474	36	18	92	-	0.168	-
2.	Lime Kiln - I	168	11.16	21,326	25	24	74	-	0.154	-
3.	Lime Kiln - II	164	12.42	19,508	23	31	72	-	0.146	-
4.	Hard wood Boiler	68	10.97	6,827	51	29	-	0.702	-	<0.05
5.	Chemical Baggasse	76	9.93	8,712	53	34	-	0.540	-	<0.05

End of the report

20/03/2024
Jr. Environmental Scientist

20/03/2024
Deputy Chief Scientific Officer
DEI, TNPCB, Dindigul.

Report No.DEL/DGL/62

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Dindigul.

STACK MONITORING SURVEY - Report of Analysis

Report No.TNPCB/DEL/DGL/F.No.71/SM/2023-2024, Dated: 19.03.2024

1. Name of the Industry : M/s. Tamilnadu News Print and Papers Ltd.,

2. Address of the Industry : Power Plant Division,
Kagithapuram - 639 136,
Karur District.

3. Date of survey : 14.02.2024

Stack Monitoring Survey Results

Sl. No	Stack attached to	Stack Temp °C	Velocity in (m/sec)	Discharge rate in (Nm^3/Hr)	Pollutants (mg/Nm^3)		
					PM	SO_2	NO_x
1.	Power Plant – VI	132	13.09	3,33,125	26	56	94.68
2.	Power Plant – VII	128	10.64	2,75,277	20	60.8	101.35

End of the report

19/03/2024

Jr. Environmental Scientist

20/03/2024

Deputy Chief Scientific Officer,
DEL, TNPCB, Dindigul.

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB TEST REPORT – STACK EMISSION

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

www.ctllabs.in

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38325/2023-24 & 03.04.2024**
Sample Number	**N-38325/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Lime Kiln -1**
GPS Reading	**11°03'17.3''N & 77°59'47.9''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	36
STACK TEMPERATURE (K)	438.0
STACK VELOCITY (m/s)	10.6
STACK GAS FLOW RATE (Nm^3/hr)	20273.0
DIAMETER OF STACK AT PORTHOLE (m)	1.0
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	113	500
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	108	400
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	51.4	150
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	134	NA
5	CARBON DIOXIDE (CO_2)		%	13.0	NA
6	OXYGEN (O_2)		%	6.5	NA

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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CHENNAI TESTING LABORATORY PRIVATE LIMITED
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TEST REPORT

Test Report No & Date	CTL/CH/N-38325/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	7.5	NA
8	HYDROGEN SULPHIDE(H_2S)	IS 11255 PART 4 2006	mg/Nm^3	8	10.0

NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
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Testing redefined
CIN: U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-38326/2023-24 & 03.04.2024**
Sample Number	**N-38326/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Lime Kiln -2**
GPS Reading	**11°03'16.635''N & 77°59'47.131''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	44
STACK TEMPERATURE (K)	420.0
STACK VELOCITY (m/s)	11.3
STACK GAS FLOW RATE (Nm^3/hr)	18346.4
DIAMETER OF STACK AT PORTHOLE (m)	0.9
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	187	500
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	239	400
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	46	150
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	754	NA
5	CARBON DIOXIDE (CO_2)		%	13.9	NA
6	OXYGEN (O_2)		%	5.6	NA

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38326/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	6.5	NA
8	HYDROGEN SULPHIDE(H_2S)	IS 11255 PART 4 2006	mg/Nm^3	7.4	10.0

NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

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(CHEMICAL)

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38327/2023-24 & 03.04.2024**
Sample Number	**N-38327/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Recover Boiler #3**
GPS Reading	**11°03'13.762''N & 77°59'39.786''E**
Sample Drawn on	25.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	90
STACK TEMPERATURE (K)	423.0
STACK VELOCITY (m/s)	11.8
STACK GAS FLOW RATE (Nm^3/hr)	286771.9
DIAMETER OF STACK AT PORTHOLE (m)	3.5
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	88	300
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	52	600
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	31.1	150
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	588	NA
5	CARBON DIOXIDE (CO_2)		%	13.0	NA
6	OXYGEN (O_2)		%	6.4	NA

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38327/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	4.1	NA
8	HYDROGEN SULPHIDE(H_2S)	IS 11255 PART 4 2006	mg/Nm^3	9	10

NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38321/2023-24 & 03.04.2024**
Sample Number	**N-38321/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Power Boiler-4**
GPS Reading	**11°03'21.01''N & 77°59'39.89''E**
Sample Drawn on	25.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	86
STACK TEMPERATURE (K)	399.0
STACK VELOCITY (m/s)	9.2
STACK GAS FLOW RATE (Nm^3/hr)	198559.1
DIAMETER OF STACK AT PORTHOLE (m)	3.2
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	207	600
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	531	600
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	34.5	100
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	653	NA
5	CARBON DIOXIDE (CO_2)		%	7.0	NA
6	OXYGEN (O_2)		%	12.7	NA

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38321/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	1.3	NA
8	TOTAL MERCURY (Hg)	EPA Method 29	mg/Nm^3	BDL(DL:0.01)	NA

*Air Pollution Control Measures

BDL- Below Detection Limit , D.L-Detection Limit, NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38322/2023-24 & 03.04.2024**
Sample Number	**N-38322/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Power Boiler-5**
GPS Reading	**11°03'16.376''N & 77°59'45.032''E**
Sample Drawn on	25.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	90
STACK TEMPERATURE (K)	400.0
STACK VELOCITY (m/s)	8.4
STACK GAS FLOW RATE (Nm^3/hr)	181365.4
DIAMETER OF STACK AT PORTHOLE (m)	3.2
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	406	600
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	584	600
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	37.2	100
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	132	NA
5	CARBON DIOXIDE (CO_2)		%	8.6	NA
6	OXYGEN (O_2)		%	11.0	NA

For Chennai Testing Laboratory Pvt Ltd

Verified by

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CIN: U93000TN2000PTC043869

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TEST REPORT

Test Report No & Date	CTL/CH/N-38322/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	1.0	NA
8	TOTAL MERCURY (Hg)	EPA Method 29	mg/Nm^3	BDL(DL:0.01)	NA

*Air Pollution Control Measures

BDL- Below Detection Limit , D.L-Detection Limit, NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN

Head - Environment Division

(CHEMICAL)

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38323/2023-24 & 03.04.2024**
Sample Number	**N-38323/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Power Boiler-6**
GPS Reading	**11°03'10.138''N & 77°59'46.708''E**
Sample Drawn on	25.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	95
STACK TEMPERATURE (K)	404.0
STACK VELOCITY (m/s)	9.3
STACK GAS FLOW RATE (Nm^3/hr)	236056.2
DIAMETER OF STACK AT PORTHOLE (m)	3.5
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	305	450
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	541	600
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	30.5	50
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	44	NA
5	CARBON DIOXIDE (CO_2)		%	10.2	NA
6	OXYGEN (O_2)		%	9.3	NA

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

CHENNAI TESTING LABORATORY PRIVATE LIMITED
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TEST REPORT

Test Report No & Date	CTL/CH/N-38323/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	1.2	NA
8	TOTAL MERCURY (Hg)	EPA Method 29	mg/Nm^3	BDL(DL:0.01)	0.03

*Air Pollution Control Measures

BDL- Below Detection Limit , D.L-Detection Limit, NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

www.ctllabs.in

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38324/2023-24 & 03.04.2024**
Sample Number	**N-38324/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Stack Emission
Sample Description	**Stack Emission**
Sampling Location	**Stack attached with Power Boiler-7**
GPS Reading	**11°03'8.156''N & 77°59'46.95''E**
Sample Drawn on	25.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 11255
Sample Quantity	1 No
Equipment used for Sampling	Stack Kit 288 DTI 2020
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

PHYSICAL PARAMETERS:

STACK HEIGHT (m)	95
STACK TEMPERATURE (K)	411.0
STACK VELOCITY (m/s)	10.0
STACK GAS FLOW RATE (Nm^3/hr)	250483.1
DIAMETER OF STACK AT PORTHOLE (m)	3.5
*APCM STATUS AT THE TIME OF SAMPLING	ESP - ON Condition

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
1	OXIDES OF NITROGEN NOx (as NO_2)	IS 11255 PART 7 2005 (R 2017)	mg/Nm^3	181	450
2	SULPHUR DIOXIDE (SO_2)	IS 11255 PART 2 1985 (R 2019)	mg/Nm^3	330	600
3	PARTICULATE MATTER(PM)	IS 11255 PART 1 1985 (R 2019)	mg/Nm^3	43.2	50
4	CARBON MONOXIDE (CO)	CTL/SOP/STACK/10-2016 (Flue Gas Analyser)	mg/Nm^3	251	NA
5	CARBON DIOXIDE (CO_2)		%	11.0	NA
6	OXYGEN (O_2)		%	8.9	NA

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38324/2023-24 & 03.04.2024**

SL.NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS (as per EC condition)
7	MOISTURE CONTENT	IS 11255 PART 3 2008	%	1.6	NA
8	TOTAL MERCURY (Hg)	EPA Method 29	mg/Nm^3	BDL(DL:0.01)	0.03

*Air Pollution Control Measures

BDL- Below Detection Limit , D.L-Detection Limit, NA - Not Available

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
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ANNEXURE II

ONLINE - AMBIENT AIR QUALITY MONITORING DATA

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

REAL TIME AMBIENT AIR QUALITY MONITORING STATION DATA

Date	TNPL CH4	TNPL CHLORINE	TNPL CO_ABT	TNPL H2S	TNPL HCNM	TNPL HCT	TNPL NO	TNPL NO2	TNPL NOX	TNPL PM10	TNPL SO2	TNPL Barometric Pressure	TNPL RAIN	TNPL Relative Humidity	TNPL SOLAR	TNPL TEMP	TNPL Vertcal WS	TNPL Wind Speed	TNPL Wind Direction
	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Oct-23																			
01-10-2023	2.87	0.00	457.7	3.2	2.77	3.27	10.14	12.64	18.64	23.45	3.04	753	0.0	62.5	20.7	33.3	0.08	2.48	201.45
02-10-2023	2.05	0.00	457.1	3.4	1.95	2.45	10.27	12.77	18.77	24.09	3.18	753	0.0	62.7	21.8	33.5	0.09	1.34	214.36
03-10-2023	1.23	0.00	436.8	3.5	1.13	1.63	10.34	12.84	18.84	36.32	3.26	753	0.0	62.8	23.4	33.7	0.10	1.59	147.59
04-10-2023	1.33	0.00	444.6	3.6	1.22	1.75	9.96	13.02	19.02	32.44	3.26	756	0.0	63.2	22.8	34.1	0.08	1.26	124.56
05-10-2023	1.33	0.00	462.6	3.8	1.23	1.73	10.57	13.07	19.07	34.62	6.47	757	0.0	63.2	25.1	34.2	0.08	3.14	190.24
06-10-2023	1.26	0.00	488.2	3.8	1.16	1.66	10.51	13.01	19.01	31.26	11.52	757	0.0	63.1	24.7	34.0	0.08	2.15	223.64
07-10-2023	1.48	0.00	415.5	3.8	1.38	1.88	10.56	13.06	19.06	34.08	10.25	762	0.0	63.2	23.3	34.1	0.08	2.84	184.26
08-10-2023	1.33	0.00	299.8	4.3	1.23	1.73	10.86	13.36	19.36	40.58	7.46	762	0.0	63.7	20.1	34.7	0.08	3.69	182.17
09-10-2023	1.30	0.00	316.9	3.5	1.20	1.70	10.37	12.87	18.87	37.71	7.45	762	0.0	62.9	23.4	33.8	0.07	4.15	169.48
10-10-2023	1.15	0.00	360.2	2.9	1.05	1.55	9.98	12.48	18.48	38.01	8.41	762	0.0	62.2	42.7	33.0	0.08	0.48	144.26
11-10-2023	1.29	0.00	345.0	2.9	1.19	1.69	9.96	12.46	18.46	37.22	8.37	762	0.0	62.2	26.5	32.9	0.08	2.48	254.3
12-10-2023	1.08	0.00	316.2	3.2	0.98	1.48	10.13	12.63	18.63	38.97	8.57	757	0.0	62.5	25.5	33.3	0.08	1.84	274.68
13-10-2023	1.64	0.00	339.6	3.6	1.28	2.34	10.17	12.95	20.12	44.13	8.73	753	0.3	63.2	17.1	34.1	0.09	4.21	96.48
14-10-2023	2.42	0.00	319.7	3.6	1.90	3.46	11.02	13.31	21.06	50.88	8.89	754	1.7	63.0	15.9	33.8	0.14	5.48	174.23
15-10-2023	1.18	0.00	327.4	2.4	1.08	1.58	9.66	12.16	18.16	39.07	8.03	753	0.0	61.7	70.0	32.3	0.27	6.14	214.23
16-10-2023	1.54	0.00	331.8	2.7	1.44	1.94	9.82	12.32	18.32	37.77	8.21	753	0.0	62.0	24.7	32.7	0.20	0.66	104.25
17-10-2023	1.18	0.00	343.7	2.6	1.08	1.58	9.66	12.16	18.16	62.89	8.04	753	9.5	61.7	38.3	32.3	0.08	1.49	100.47
18-10-2023	0.91	0.00	345.3	2.8	0.81	1.31	9.36	11.86	17.86	53.38	7.69	753	0.0	61.2	27.9	31.7	0.09	0.38	178.25
19-10-2023	1.21	0.00	374.8	3.9	1.11	1.61	10.65	13.15	19.15	31.95	7.83	753	3.3	63.4	24.6	34.3	0.08	0.48	180.24
20-10-2023	1.08	0.00	510.7	3.3	0.98	1.48	10.21	12.71	18.71	56.48	3.96	753	5.1	62.6	20.1	33.4	0.08	3.2	171.25
21-10-2023	1.19	0.00	513.2	3.1	1.09	1.59	10.09	12.59	18.59	67.35	3.84	753	0.0	62.4	17.8	33.2	0.08	2.47	164.29
22-10-2023	1.08	0.00	510.1	2.9	0.98	1.48	9.98	12.48	18.48	57.68	3.71	753	0.0	62.2	17.2	33.0	0.09	3.16	163.48
23-10-2023	1.24	0.00	527.4	3.2	1.14	1.64	10.14	12.64	18.64	46.41	3.88	753	0.0	62.5	15.8	33.3	0.08	2.55	150.24
24-10-2023	1.08	0.00	524.6	3.0	0.98	1.48	10.03	12.53	18.53	33.22	3.78	753	0.0	62.3	17.9	33.1	0.08	2.45	174.56
25-10-2023	1.40	0.00	491.9	3.4	1.30	1.80	10.31	12.81	18.81	95.31	4.08	754	0.0	62.8	18.4	33.6	0.08	1.14	245.68
26-10-2023	1.35	0.00	482.6	3.5	1.25	1.75	10.35	12.85	18.85	91.24	4.12	760	0.0	62.9	18.5	33.7	0.08	0.97	202.4
27-10-2023	1.31	0.00	502.6	4.1	1.21	1.71	10.73	13.23	19.23	95.97	4.54	762	0.0	63.5	19.0	34.5	0.08	1.69	198.5
28-10-2023	1.44	0.00	450.7	4.3	1.34	1.84	10.90	13.40	19.40	82.70	16.03	762	0.0	63.8	17.6	34.8	0.10	3.45	194.36
29-10-2023	1.09	0.00	359.4	2.5	0.99	1.49	9.72	12.22	18.22	119.23	42.61	762	0.0	61.8	14.2	32.5	0.12	2.69	164.28
30-10-2023	1.55	0.00	427.9	3.5	1.45	1.95	10.39	12.89	18.89	27.19	21.14	762	0.0	62.9	16.8	33.8	0.08	2.14	174.58
31-10-2023	1.33	0.00	482.6	3.5	1.23	1.73	10.32	12.82	18.82	55.17	7.76	762	4.1	62.8	16.0	33.7	0.08	3.14	164.28
MINIMUM	**0.9**	**0.0**	**299.8**	**2.4**	**0.8**	**1.3**	**9.4**	**11.9**	**17.9**	**23.5**	**3.0**	**753.0**	**0.0**	**61.2**	**14.2**	**31.7**	**0.1**	**0.4**	**96.5**
MAXIMUM	**2.9**	**0.0**	**527.4**	**4.3**	**2.8**	**3.5**	**11.0**	**13.4**	**21.1**	**119.2**	**42.6**	**762.0**	**9.5**	**63.8**	**70.0**	**34.8**	**0.3**	**6.1**	**274.7**
AVERAGE	**1.4**	**0.0**	**418.3**	**3.3**	**1.3**	**1.8**	**10.2**	**12.8**	**18.8**	**50.2**	**8.3**	**756.7**	**0.8**	**62.7**	**23.5**	**33.5**	**0.1**	**2.4**	**178.3**

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

REAL TIME AMBIENT AIR QUALITY MONITORING STATION DATA

Date	TNPL CH4	TNPL CHLORINE	TNPL CO_ABT	TNPL H2S	TNPL HCNM	TNPL HCT	TNPL NO	TNPL NO2	TNPL NOX	TNPL PM10	TNPL SO2	TNPL Barometric Pressure	TNPL RAIN	TNPL Relative Humidity	TNPL SOLAR	TNPL TEMP	TNPL Vertcal WS	TNPL Wind Speed	TNPL Wind Direction
	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Nov-23																			
01-11-2023	1.09	0.00	498.7	3.2	0.99	1.49	10.18	12.68	18.68	43.50	7.59	762	12.1	62.6	13.8	33.4	0.08	2.48	144.26
02-11-2023	1.13	0.00	494.6	3.9	1.03	1.53	10.59	13.09	19.09	43.15	8.06	765	0.0	63.3	29.2	34.2	0.08	1.84	69.48
03-11-2023	1.19	0.00	481.3	4.0	1.09	1.59	10.66	13.16	19.16	51.85	8.14	764	3.6	63.4	14.8	34.3	0.08	4.21	189.4
04-11-2023	1.22	0.00	461.0	3.4	1.12	1.62	10.27	12.77	18.77	45.75	7.68	762	32.8	62.7	19.8	33.5	0.09	3.64	274.3
05-11-2023	1.09	0.00	468.9	3.4	0.99	1.49	10.26	12.76	18.76	35.45	7.68	771	2.0	62.7	35.0	33.5	0.07	6.14	162.4
06-11-2023	1.40	0.00	380.5	4.3	1.30	1.80	10.89	13.39	19.39	31.12	6.43	753	0.5	63.8	19.9	34.8	0.08	5.49	214.23
07-11-2023	1.26	0.00	338.9	3.5	1.16	1.66	10.33	12.83	18.83	61.62	4.32	746	12.2	62.8	13.9	33.7	0.08	6.18	104.25
08-11-2023	1.42	0.00	327.3	3.5	1.32	1.82	10.38	12.88	18.88	81.52	4.36	753	8.9	62.9	36.9	33.8	0.08	4.21	100.47
09-11-2023	1.08	0.00	347.4	2.1	0.98	1.48	9.40	11.90	17.90	105.42	3.32	754	50.4	61.2	15.6	31.8	0.08	2.48	169.48
10-11-2023	1.07	0.00	410.9	1.9	0.97	1.47	8.98	11.48	17.48	22.88	8.73	754	0.0	60.5	25.2	31.0	0.09	3.2	164.29
11-11-2023	1.07	0.00	458.8	3.0	0.97	1.47	10.01	12.51	18.51	34.82	12.48	754	0.0	62.3	14.5	33.0	0.12	2.48	163.48
12-11-2023	1.00	0.00	521.3	2.8	0.90	1.40	9.68	12.18	18.18	162.55	9.22	755	0.0	61.7	14.6	32.4	0.08	1.84	150.24
13-11-2023	0.96	0.00	543.5	2.6	0.86	1.36	9.73	12.23	18.11	78.39	9.27	753	14.7	61.8	15.8	32.2	0.08	4.21	174.56
14-11-2023	0.94	0.00	523.8	1.6	0.84	1.34	9.07	11.57	17.57	45.54	8.49	753	17.4	60.7	22.4	31.2	0.07	5.48	174.23
15-11-2023	1.12	0.00	539.5	2.6	1.02	1.52	9.75	12.25	18.25	54.21	9.30	753	0.0	61.8	15.6	32.5	0.08	6.14	214.23
16-11-2023	1.15	0.00	392.1	3.1	1.05	1.55	10.08	12.58	18.58	59.21	7.72	753	0.0	62.4	16.8	33.2	0.09	0.66	104.25
17-11-2023	1.25	0.00	306.0	3.8	1.15	1.65	10.55	13.05	19.05	69.25	7.10	753	0.0	63.2	16.4	34.1	0.08	1.49	100.47
18-11-2023	1.05	0.00	312.9	3.7	0.95	1.45	10.49	12.99	18.99	40.75	7.03	753	0.0	63.1	13.4	34.0	0.08	0.38	178.25
19-11-2023	1.13	0.00	335.2	3.7	1.03	3.83	10.23	11.36	19.56	36.88	5.00	753	0.0	63.1	14.2	34.0	0.07	0.48	180.24
20-11-2023	1.25	0.00	377.9	3.9	1.15	5.85	10.09	10.09	20.09	37.21	4.93	753	0.0	63.3	15.5	34.2	0.08	3.2	171.25
21-11-2023	1.36	0.00	373.9	4.9	1.26	5.96	10.76	10.76	20.76	63.45	7.74	753	0.0	64.4	15.7	35.5	0.08	2.47	164.29
22-11-2023	1.51	0.00	412.3	4.4	1.41	6.11	10.47	10.47	20.47	75.22	8.84	754	21.2	63.9	14.4	34.9	0.14	3.16	163.48
23-11-2023	1.73	0.00	407.1	2.9	1.63	5.28	9.46	9.46	19.46	61.30	7.15	753	0.0	62.2	23.5	32.9	0.20	0.66	150.24
24-11-2023	1.42	0.00	430.8	4.0	1.32	4.12	10.16	10.16	20.16	58.17	7.57	753	0.0	63.4	15.4	34.3	0.09	1.49	174.56
25-11-2023	1.17	0.00	455.9	3.1	1.07	3.87	9.59	9.59	19.59	51.17	6.92	753	0.0	62.4	15.1	33.2	0.09	0.38	245.68
26-11-2023	1.00	0.00	465.4	2.2	0.90	3.70	9.02	9.02	19.02	42.94	6.28	753	0.0	61.4	10.2	32.0	0.10	0.97	202.4
27-11-2023	1.23	0.00	410.2	3.4	1.13	3.93	9.40	9.40	19.40	48.91	5.26	753	0.0	62.1	17.2	32.8	0.09	1.69	198.5
28-11-2023	0.88	0.00	438.2	2.1	0.78	3.58	8.95	8.95	18.95	37.38	6.45	753	4.3	61.3	20.4	31.9	0.09	3.45	194.36
29-11-2023	1.20	0.00	501.0	2.7	1.10	3.90	9.36	9.36	19.36	50.00	7.78	753	0.0	62.0	18.3	32.7	0.08	2.69	164.28
30-11-2023	1.06	0.00	544.5	1.8	0.96	3.76	8.72	8.72	18.72	34.23	6.38	753	2.6	60.9	13.5	31.5	0.08	2.14	174.58
MINIMUM	**0.9**	**0.0**	**306.0**	**1.6**	**0.8**	**1.3**	**8.7**	**8.7**	**17.5**	**22.9**	**3.3**	**746.0**	**0.0**	**60.5**	**10.2**	**31.0**	**0.1**	**0.4**	**69.5**
MAXIMUM	**1.7**	**0.0**	**544.5**	**4.9**	**1.6**	**6.1**	**10.9**	**13.4**	**20.8**	**162.6**	**12.5**	**771.0**	**50.4**	**64.4**	**36.9**	**35.5**	**0.2**	**6.2**	**274.3**
AVERAGE	**1.2**	**0.0**	**432.0**	**3.2**	**1.1**	**2.7**	**9.9**	**11.5**	**19.0**	**55.5**	**7.2**	**754.9**	**6.1**	**62.4**	**18.2**	**33.2**	**0.1**	**2.8**	**167.9**

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

REAL TIME AMBIENT AIR QUALITY MONITORING STATION DATA

Date	TNPL CH4	TNPL CHLORINE	TNPL CO_ABT	TNPL H2S	TNPL HCNM	TNPL HCT	TNPL NO	TNPL NO2	TNPL NOX	TNPL PM10	TNPL SO2	TNPL Barometric Pressure	TNPL RAIN	TNPL Relative Humidity	TNPL SOLAR	TNPL TEMP	TNPL Vertcal WS	TNPL Wind Speed	TNPL Wind Direction
	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Dec-23																			
01-12-2023	0.89	0.00	438.7	2.6	0.79	3.59	7.87	9.02	19.02	40.46	4.32	753	0.00	61.5	14.6	32.1	0.09	0.99	212.3
02-12-2023	0.90	0.00	345.3	2.7	0.80	3.60	6.58	8.59	17.24	53.70	2.94	753	0.00	59.6	12.4	31.1	0.08	2.15	154.26
03-12-2023	1.15	0.00	328.8	2.3	1.05	3.85	4.52	6.52	11.52	36.90	3.27	753	0.00	57.2	12.8	27.1	0.08	0.63	241.36
04-12-2023	1.65	0.00	334.5	1.9	1.19	4.01	3.44	5.39	9.47	38.86	3.23	754	0.00	62.8	12.9	27.9	0.08	1.68	178.25
05-12-2023	2.38	0.00	327.8	5.7	1.25	4.25	4.82	6.37	8.31	62.47	3.07	758	0.02	73.3	12.9	29.2	0.13	1.21	155.36
06-12-2023	2.42	0.00	332.6	7.1	1.45	4.92	7.45	9.12	14.54	65.81	4.05	757	0.00	70.3	21.7	30.2	0.08	3.24	124.17
07-12-2023	1.43	0.00	354.4	7.1	3.52	5.36	7.55	10.14	18.24	57.35	5.20	756	0.01	72.9	12.4	30.1	0.08	2.15	182.17
08-12-2023	2.39	0.00	331.3	5.7	4.34	6.79	7.54	8.86	16.64	59.67	5.63	758	0.00	72.8	28.1	29.6	0.08	2.36	178.63
09-12-2023	2.85	0.00	367.7	5.1	4.56	7.84	7.24	9.05	16.91	66.22	6.42	756	0.00	74.6	12.9	29.3	0.07	2.16	187.4
10-12-2023	3.28	0.00	340.8	5.3	3.98	7.58	7.48	9.30	17.29	56.31	6.80	757	0.00	74.6	15.8	29.4	0.22	0.99	195.47
11-12-2023	2.87	0.00	314.7	4.7	3.88	7.02	7.87	7.92	15.70	83.34	6.53	758	0.00	74.1	10.9	28.7	0.21	3.24	187.45
12-12-2023	2.80	0.00	341.6	4.5	3.61	6.97	8.14	8.31	17.11	58.15	5.29	757	0.00	73.2	12.0	28.3	0.07	1.32	150.24
13-12-2023	3.70	0.00	329.5	4.1	3.98	8.31	7.66	8.29	16.92	51.23	4.70	758	0.00	74.6	7.9	27.8	0.07	2.15	164.25
14-12-2023	4.73	0.00	335.9	4.7	2.86	7.56	6.15	6.95	15.26	44.62	7.26	756	0.01	73.9	15.1	28.5	0.08	0.99	134.2
15-12-2023	3.05	0.00	348.1	4.4	2.98	6.33	7.40	7.84	16.29	59.93	5.89	757	0.00	73.5	7.7	28.3	0.14	4.15	159.84
16-12-2023	4.51	0.00	322.0	6.6	5.26	7.26	10.51	10.82	19.20	54.97	7.05	758	0.00	73.3	8.8	31.3	0.08	1.51	204.83
17-12-2023	4.42	0.00	299.9	6.1	5.17	7.17	9.79	10.21	18.57	35.61	6.62	756	0.00	73.1	6.5	31.2	0.08	2.31	189.4
18-12-2023	3.77	0.00	354.7	4.8	4.97	7.35	8.33	9.00	17.31	41.97	4.70	756	0.00	74.9	7.8	29.4	0.08	1.51	241.3
19-12-2023	4.65	0.00	275.2	5.3	5.10	7.75	8.07	8.69	17.41	66.04	5.72	755	0.00	72.5	16.9	30.1	0.08	2.31	203.24
20-12-2023	4.53	0.00	333.0	5.2	4.92	7.93	7.99	8.29	16.81	65.40	4.03	758	0.00	74.3	10.4	29.5	0.08	2.36	178.69
21-12-2023	3.29	0.00	361.8	4.7	4.00	7.58	8.16	8.42	17.51	61.91	5.25	756	0.00	73.3	15.1	28.5	0.09	2.48	127.45
22-12-2023	3.50	0.00	375.2	5.2	3.35	5.98	8.95	9.36	19.10	71.47	4.80	756	0.00	73.7	16.0	29.3	0.09	1.96	152.48
23-12-2023	1.90	0.00	338.5	4.7	1.87	3.81	8.17	8.48	17.96	74.88	4.40	757	0.00	73.9	12.3	28.6	0.08	2.15	124.17
24-12-2023	1.96	0.00	423.4	4.4	1.75	4.01	6.17	7.26	16.93	73.39	4.62	756	0.00	75.5	9.1	28.1	0.08	1.43	214.26
25-12-2023	1.77	0.00	395.3	5.6	1.67	3.47	6.97	8.07	17.41	42.17	5.31	757	0.01	74.7	29.5	29.8	0.07	2.15	208.54
26-12-2023	2.25	0.00	349.4	5.3	2.89	3.51	7.90	7.93	18.07	42.79	4.45	757	0.00	75.4	15.8	29.3	0.08	2.15	161.24
27-12-2023	3.16	0.00	322.1	5.0	4.26	5.93	8.19	7.54	16.91	41.31	4.37	756	0.00	74.6	18.5	29.3	0.08	1.26	184.57
28-12-2023	3.60	0.00	310.1	5.8	3.36	4.80	7.64	8.27	17.57	54.09	4.28	758	0.00	74.9	13.4	30.0	0.08	4.26	187.45
29-12-2023	3.68	0.00	351.5	5.5	2.44	5.12	7.96	8.71	17.25	53.22	4.22	758	0.00	74.1	10.7	29.6	0.09	0.83	164.25
30-12-2023	3.16	0.00	366.0	5.0	2.84	6.44	8.73	9.08	18.12	52.04	5.93	755	0.00	73.8	14.6	29.0	0.08	2.1	165.28
31-12-2023	2.73	0.00	385.9	5.0	3.33	6.93	7.73	8.73	18.93	72.50	7.48	757	0.00	74.1	8.5	28.9	0.08	2.15	254.16
MINIMUM	**0.9**	**0.0**	**275.2**	**1.9**	**0.8**	**3.5**	**3.4**	**5.4**	**8.3**	**35.6**	**2.9**	**753.0**	**0.0**	**57.2**	**6.5**	**27.1**	**0.1**	**0.6**	**124.2**
MAXIMUM	**4.7**	**0.0**	**423.4**	**7.1**	**5.3**	**8.3**	**10.5**	**10.8**	**19.2**	**83.3**	**7.5**	**758.0**	**0.0**	**75.5**	**29.5**	**31.3**	**0.2**	**4.3**	**254.2**
AVERAGE	**2.9**	**0.0**	**343.2**	**5.0**	**3.2**	**6.0**	**7.5**	**8.4**	**16.6**	**56.6**	**5.1**	**756.5**	**0.0**	**72.5**	**13.6**	**29.2**	**0.1**	**2.0**	**178.5**

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	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Jan-24																			
01-01-2024	2.67	0.00	371.1	4.9	3.27	6.87	7.68	8.67	18.87	73.79	7.66	757	0.00	73.6	8.7	28.8	0.08	1.59	144.26
02-01-2024	3.47	0.00	353.6	5.0	3.83	7.36	7.44	8.76	17.33	79.84	5.80	758	0.00	73.5	22.2	28.9	0.08	2.15	69.48
03-01-2024	3.23	0.00	323.7	4.9	3.24	7.99	6.33	7.50	15.25	66.86	5.65	757	0.00	73.5	11.8	28.8	0.08	1.05	154.2
04-01-2024	2.68	0.00	330.8	5.2	3.26	6.54	7.87	7.02	16.90	64.43	6.01	756	0.00	72.7	9.7	29.2	0.11	2.15	231.59
05-01-2024	2.87	0.00	375.5	4.7	4.24	5.44	7.64	6.83	16.12	46.04	4.62	757	0.03	73.5	22.5	28.7	0.08	4.59	124.58
06-01-2024	3.24	0.00	375.3	5.6	4.74	5.94	9.14	7.81	16.96	58.66	5.04	756	0.00	72.9	13.3	29.7	0.10	3.26	201.59
07-01-2024	2.61	0.00	331.2	4.8	4.61	5.81	9.01	6.81	15.91	36.87	7.33	757	0.00	72.8	14.7	29.4	0.08	1.26	104.25
08-01-2024	2.28	0.00	309.1	4.7	4.28	5.48	8.93	8.23	17.02	32.17	5.44	758	0.00	72.8	8.1	28.8	0.10	2.15	120.59
09-01-2024	3.48	0.00	298.9	4.1	3.76	7.16	8.88	9.33	18.35	22.35	5.18	757	0.11	73.5	15.2	27.7	0.08	1.78	169.58
10-01-2024	4.55	0.00	334.2	4.7	3.81	8.42	9.07	9.57	18.34	50.57	6.03	758	0.00	70.1	32.2	28.5	0.10	3.2	210.48
11-01-2024	3.75	0.00	355.7	5.4	3.26	7.83	8.02	8.33	16.98	49.24	7.24	757	0.00	71.6	23.9	29.5	0.10	1.59	163.48
12-01-2024	2.66	0.00	360.3	4.9	2.46	7.46	6.87	6.66	15.55	59.84	4.86	756	0.00	71.7	16.9	28.7	0.10	3.26	195.48
13-01-2024	2.56	0.00	334.8	4.7	2.36	7.36	7.80	7.70	15.85	55.72	4.40	758	0.00	73.6	15.7	28.5	0.08	4.21	215.48
14-01-2024	2.76	0.00	345.1	5.0	2.56	7.56	9.06	9.06	16.86	62.16	5.18	756	0.00	73.1	15.6	28.9	0.13	4.26	245.2
15-01-2024	2.65	0.00	338.7	4.8	2.45	7.45	8.95	8.95	16.75	65.01	5.89	757	0.00	73.6	18.1	28.7	0.14	6.14	214.23
16-01-2024	2.85	0.00	344.4	5.1	2.65	7.65	9.15	9.15	16.95	58.90	5.33	757	0.00	73.8	17.5	29.1	0.17	0.66	103.26
17-01-2024	2.73	0.00	343.3	5.0	2.53	7.53	9.04	9.03	16.83	49.66	5.59	756	0.00	73.4	17.7	28.9	0.17	2.48	198.47
18-01-2024	3.65	0.00	389.5	5.1	3.57	7.33	8.52	8.58	16.38	65.35	6.12	757	0.00	73.7	18.5	29.1	0.09	2.69	165.24
19-01-2024	3.86	0.00	370.4	5.2	3.86	7.42	7.84	7.93	16.01	63.81	6.19	757	0.00	72.5	18.0	29.3	0.10	1.26	180.24
20-01-2024	4.20	0.00	321.6	5.0	3.88	7.86	8.22	8.50	17.26	50.58	5.02	758	0.00	73.5	14.4	29.4	0.10	3.69	171.25
21-01-2024	4.52	0.00	383.3	5.2	4.77	8.17	9.47	9.77	18.69	55.23	5.81	756	0.00	74.2	18.2	29.8	0.32	1.48	195.48
22-01-2024	5.06	0.00	328.5	5.5	4.66	8.06	9.36	9.66	18.06	58.77	5.99	756	0.00	71.9	19.2	29.5	0.11	3.29	163.48
23-01-2024	4.19	0.00	337.7	5.2	3.85	7.25	8.49	8.73	16.57	64.78	6.13	757	0.00	71.6	19.1	29.2	0.10	0.54	150.24
24-01-2024	3.96	0.00	355.6	5.4	3.66	7.06	8.27	8.46	15.96	81.60	6.42	756	0.00	73.9	19.3	29.5	0.07	1.49	174.56
25-01-2024	3.38	0.00	327.7	4.0	3.18	6.30	8.16	8.32	17.09	63.65	5.46	756	0.00	72.0	23.9	29.8	0.14	0.38	195.48
26-01-2024	3.50	0.00	341.4	4.7	3.28	7.03	10.36	10.59	20.98	53.91	5.60	755	0.00	64.2	19.2	30.1	0.32	2.15	202.4
27-01-2024	4.32	0.00	299.2	6.0	4.19	7.44	9.06	9.33	18.12	54.34	6.19	754	0.00	70.2	20.4	30.1	0.15	1.69	155.2
28-01-2024	4.18	0.00	326.7	5.8	3.88	7.28	8.48	8.68	16.18	57.47	6.05	758	0.00	73.4	17.7	30.0	0.11	3.45	194.36
29-01-2024	2.93	0.00	362.7	5.6	2.14	5.30	7.56	8.65	15.76	59.33	5.16	756	0.00	70.6	31.2	29.2	0.08	4.78	201.59
30-01-2024	3.19	0.00	333.1	5.5	3.67	6.03	8.22	9.50	16.88	64.20	5.95	757	0.00	69.9	44.8	28.8	0.08	2.14	174.58
31-01-2024	4.12	0.00	268.7	6.1	4.12	7.72	9.42	10.42	18.12	61.86	6.84	756	0.00	71.4	42.1	29.7	0.08	3.26	124.59
MINIMUM	**2.3**	**0.0**	**268.7**	**4.0**	**2.1**	**5.3**	**6.3**	**6.7**	**15.3**	**22.4**	**4.4**	**754.0**	**0.0**	**64.2**	**8.1**	**27.7**	**0.1**	**0.4**	**69.5**
MAXIMUM	**5.1**	**0.0**	**389.5**	**6.1**	**4.8**	**8.4**	**10.4**	**10.6**	**21.0**	**81.6**	**7.7**	**758.0**	**0.1**	**74.2**	**44.8**	**30.1**	**0.3**	**6.1**	**245.2**
AVERAGE	**3.4**	**0.0**	**341.0**	**5.1**	**3.5**	**7.1**	**8.5**	**8.6**	**17.1**	**57.6**	**5.8**	**756.7**	**0.0**	**72.3**	**19.7**	**29.2**	**0.1**	**2.5**	**171.4**

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	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Feb-24																			
01-02-2024	4.63	0.00	338.1	6.9	4.63	8.23	9.25	10.37	18.01	62.61	6.18	757	0.00	71.3	41.2	30.7	0.09	1.03	121.5
02-02-2024	4.65	0.00	369.9	7.0	4.72	8.32	8.92	10.12	17.72	67.10	6.04	756	0.00	70.2	42.5	30.8	0.09	1.105	155.42
03-02-2024	4.57	0.00	385.5	6.8	4.57	8.17	8.77	9.97	17.57	70.24	5.93	755	0.00	71.5	43.0	30.5	0.20	1.23	162.95
04-02-2024	4.24	0.00	372.4	6.3	4.24	7.84	8.44	9.64	17.24	63.89	5.93	757	0.00	69.9	44.2	29.9	0.07	1.13	181.87
05-02-2024	3.96	0.00	380.6	5.9	3.96	7.56	8.79	9.92	17.96	54.18	6.19	756	0.00	71.3	43.9	29.3	0.08	1.04	174.68
06-02-2024	3.80	0.00	383.1	5.7	3.80	7.40	9.01	10.10	18.40	56.43	7.09	757	0.00	70.4	42.4	29.0	0.09	0.96	171.8
07-02-2024	3.79	0.00	362.2	6.1	3.99	7.01	9.04	10.09	18.22	69.22	7.03	755	0.00	72.5	40.3	29.6	0.08	1.11	162.09
08-02-2024	3.08	0.00	328.7	6.2	3.78	5.38	8.48	9.38	17.08	70.10	7.88	754	0.00	71.1	27.8	29.8	0.08	1.14	161.38
09-02-2024	3.21	0.00	313.3	6.4	3.91	5.51	8.61	9.51	17.21	84.38	8.61	750	0.00	73.2	29.0	30.0	0.09	1.21	131.28
10-02-2024	3.06	0.00	297.8	6.2	3.76	5.36	8.47	9.36	17.06	90.08	8.46	754	0.00	74.0	27.1	29.7	0.07	1.11	146.25
11-02-2024	2.96	0.00	297.3	6.0	3.66	5.26	8.36	9.26	16.96	52.02	7.79	756	0.00	70.9	27.6	29.5	0.07	1.27	146.93
12-02-2024	3.72	0.00	336.0	5.8	4.05	5.59	8.82	9.34	17.72	67.43	5.64	756	0.00	70.4	29.3	29.2	0.08	1.23	153.13
13-02-2024	4.61	0.00	362.2	6.3	4.71	6.21	9.51	9.81	18.61	62.55	5.10	756	0.00	69.0	28.3	29.8	0.07	1.09	151.71
14-02-2024	3.91	0.00	393.0	6.3	4.75	6.98	10.29	10.40	19.26	61.18	6.21	756	0.00	69.0	26.4	29.9	0.07	1.17	154.67
15-02-2024	3.18	0.00	398.3	5.9	4.48	7.18	10.48	10.48	19.38	60.68	6.81	755	0.00	69.9	28.0	29.4	0.07	1.27	142.31
16-02-2024	4.18	0.00	349.2	6.1	4.17	6.87	9.86	9.67	18.76	60.94	6.08	756	0.00	68.4	28.0	29.6	0.07	1.13	153.83
17-02-2024	4.88	0.00	333.5	6.4	4.08	6.78	9.58	9.28	18.48	61.70	6.83	755	0.00	69.7	29.0	30.0	0.10	1.21	167.21
18-02-2024	5.12	0.00	363.7	6.7	4.32	7.02	9.82	9.52	18.72	64.05	7.76	756	0.00	69.4	29.8	30.5	0.12	1.13	153.23
19-02-2024	5.12	0.00	378.4	6.7	4.32	7.02	9.82	9.52	18.72	69.81	7.24	756	0.00	69.8	28.7	30.4	0.11	1.24	136.73
20-02-2024	5.63	0.00	390.9	6.9	4.09	7.57	9.44	9.34	18.29	65.17	6.60	756	0.00	69.2	28.3	30.7	0.10	1.42	113.66
21-02-2024	6.53	0.00	422.9	7.4	3.93	8.53	9.06	9.23	17.83	57.13	6.44	756	0.00	70.1	26.8	31.3	0.18	1.27	127.82
22-02-2024	7.11	0.00	393.0	8.2	4.51	9.11	9.64	9.81	18.41	70.17	6.36	756	0.00	70.2	27.6	32.4	0.20	1.15	137.84
23-02-2024	7.26	0.00	393.9	8.5	4.66	9.26	9.79	9.96	18.56	67.37	5.62	752	0.00	70.4	28.2	32.7	0.10	1.27	175.07
24-02-2024	7.28	0.00	373.2	8.5	4.68	9.28	9.81	9.98	18.58	64.85	5.72	755	0.00	70.1	26.7	32.8	0.12	1.49	137.56
25-02-2024	7.06	0.00	370.0	8.2	4.46	9.06	9.60	9.76	18.36	69.41	5.86	755	0.00	69.1	27.2	32.3	0.12	1.34	125.13
26-02-2024	6.93	0.00	361.7	8.0	4.33	8.93	9.20	8.96	18.04	54.22	5.41	756	0.00	71.1	27.0	32.1	0.11	1.3	129.38
27-02-2024	7.77	0.00	316.0	9.2	5.17	9.77	9.38	8.07	18.37	63.09	6.15	757	0.00	69.9	27.2	33.8	0.10	1.3	150.78
28-02-2024	8.95	0.00	331.5	11.0	6.35	10.95	10.56	9.25	19.55	57.90	6.35	755	0.00	70.4	28.4	36.1	0.09	1.13	158.97
29-02-2024	9.12	0.00	325.8	11.0	6.19	10.50	10.22	9.71	19.30	65.88	6.44	757	0.00	72.4	28.9	36.0	0.09	1.18	155.37
MINIMUM	**3.0**	**0.0**	**297.3**	**5.7**	**3.7**	**5.3**	**8.4**	**8.1**	**17.0**	**52.0**	**5.1**	**750.0**	**0.0**	**68.4**	**26.4**	**29.0**	**0.1**	**1.0**	**113.7**
MAXIMUM	**9.1**	**0.0**	**422.9**	**11.0**	**6.4**	**11.0**	**10.6**	**10.5**	**19.6**	**90.1**	**8.6**	**757.0**	**0.0**	**74.0**	**44.2**	**36.1**	**0.2**	**1.5**	**181.9**
AVERAGE	**5.2**	**0.0**	**359.4**	**7.1**	**4.4**	**7.7**	**9.3**	**9.6**	**18.2**	**65.0**	**6.5**	**755.4**	**0.0**	**70.5**	**31.5**	**31.0**	**0.1**	**1.2**	**149.7**

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

REAL TIME AMBIENT AIR QUALITY MONITORING STATION DATA

Date	TNPL CH4	TNPL CHLORINE	TNPL CO_ABT	TNPL H2S	TNPL HCNM	TNPL HCT	TNPL NO	TNPL NO2	TNPL NOX	TNPL PM10	TNPL SO2	TNPL Barometric Pressure	TNPL RAIN	TNPL Relative Humidity	TNPL SOLAR	TNPL TEMP	TNPL Vertcal WS	TNPL Wind Speed	TNPL Wind Direction
	ug/m3	ppm	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	mmHg	mm	%	W/m2	degree C	m/s	m/s	degree
Mar-24																			
01-03-2024	10.00	0.00	368.0	11.6	6.30	9.90	9.90	11.30	19.20	75.30	6.00	752	0.00	72.4	28.3	36.8	0.09	1.2	155.48
02-03-2024	9.31	0.00	377.8	10.5	5.61	9.21	9.22	10.61	18.51	72.94	5.31	753	0.00	73.7	28.7	35.4	0.09	1.11	151.03
03-03-2024	8.33	0.00	352.2	9.0	4.63	8.23	8.24	9.63	17.53	77.01	4.33	752	0.00	72.2	28.5	33.5	0.10	1.02	147.15
04-03-2024	7.93	0.00	344.9	9.4	4.87	8.47	9.12	10.28	18.35	73.82	5.74	757	0.00	73.1	28.2	34.0	0.09	1.03	136.9
05-03-2024	7.18	0.00	329.1	9.0	4.58	8.18	9.28	10.28	18.48	73.33	6.28	755	0.00	71.6	28.0	33.4	0.10	1	130.96
06-03-2024	7.31	0.00	310.0	9.2	4.71	8.31	9.42	10.41	18.61	65.04	6.41	754	0.00	73.7	25.9	33.6	0.09	1.03	138.39
07-03-2024	7.53	0.00	318.5	9.5	4.93	8.53	9.63	10.63	18.83	62.16	6.63	757	0.00	73.1	28.2	34.1	0.08	1.07	130.42
08-03-2024	7.59	0.00	331.3	9.6	4.99	8.59	9.69	10.69	18.89	69.00	6.69	756	0.00	74.3	27.7	34.2	0.08	1.25	133.36
09-03-2024	7.81	0.00	335.0	9.9	5.21	8.81	9.91	10.91	19.11	74.39	6.91	758	0.00	75.5	27.3	34.6	0.07	1.28	134.97
10-03-2024	7.79	0.00	324.4	9.9	5.19	8.79	9.89	10.89	19.09	78.47	6.89	756	0.00	74.4	27.1	34.6	0.07	1.37	119.44
11-03-2024	7.58	0.00	316.5	9.6	4.98	8.58	9.68	10.68	18.88	76.91	6.68	757	0.00	74.5	26.9	34.2	0.06	1.17	161.39
12-03-2024	7.62	0.00	333.4	9.6	5.02	8.62	9.72	10.72	18.92	81.62	6.72	757	0.00	76.0	27.4	34.2	0.06	1.3	133.18
13-03-2024	7.68	0.00	315.8	9.7	5.08	8.68	9.78	10.78	18.98	79.80	6.78	758	0.00	73.5	27.2	34.4	0.06	1.49	142
14-03-2024	8.02	0.00	313.2	10.2	5.42	9.02	10.13	11.12	19.32	77.38	7.12	761	0.00	75.5	26.7	35.1	0.07	1.14	187.57
15-03-2024	7.82	0.00	326.6	9.9	5.22	8.82	9.92	10.92	19.12	81.99	6.92	760	0.00	75.5	26.1	34.7	0.07	1.44	147.85
16-03-2024	7.76	0.00	318.1	9.8	5.16	8.76	9.86	10.86	19.06	67.11	6.86	761	0.00	74.2	26.3	34.5	0.07	1.31	114.3
17-03-2024	7.51	0.00	322.9	9.5	4.91	8.51	9.61	10.61	18.81	58.09	6.61	759	0.00	73.1	27.4	34.0	0.08	1.35	123.27
18-03-2024	7.45	0.00	315.2	9.4	4.85	8.45	9.56	10.55	18.75	66.06	6.55	760	0.00	75.1	27.6	33.9	0.07	1.12	148.84
19-03-2024	7.50	0.00	314.8	9.4	4.90	8.50	9.61	10.60	18.80	81.93	6.60	761	0.00	75.4	27.9	34.0	0.07	1.1	134.75
20-03-2024	7.46	0.00	343.6	9.4	4.86	8.46	9.56	10.56	18.76	79.69	6.56	760	0.00	73.5	27.7	33.9	0.08	1.11	131.11
21-03-2024	7.45	0.00	320.9	9.4	4.85	8.45	9.56	10.55	18.75	67.92	6.55	759	0.00	75.0	24.9	33.9	0.07	1.14	139.06
22-03-2024	7.65	0.00	311.1	9.7	5.05	8.65	9.75	10.75	18.95	70.69	6.75	762	0.00	76.0	25.1	34.3	0.07	1.13	132.09
23-03-2024	7.79	0.00	324.3	9.9	5.19	8.79	9.89	10.89	19.09	66.42	6.89	762	0.00	75.1	26.7	34.6	0.07	1.37	119.04
24-03-2024	7.37	0.00	320.0	9.2	4.77	8.37	9.48	10.47	18.67	62.21	6.47	758	0.00	74.8	23.8	33.8	0.08	1.01	123.68
25-03-2024	7.44	0.00	334.9	8.1	5.20	8.80	10.28	10.24	19.52	73.17	7.31	759	0.00	72.1	26.4	34.6	0.09	1.01	142.06
26-03-2024	8.10	0.00	384.2	10.3	5.50	9.10	11.01	10.10	20.10	62.67	9.58	759	0.00	71.9	26.8	35.2	0.07	1.17	154.9
27-03-2024	8.17	0.00	448.2	10.5	5.57	9.17	11.08	10.17	20.17	51.21	8.57	764	0.00	74.7	27.8	35.4	0.07	1.24	118.3
28-03-2024	8.78	0.00	440.6	11.4	6.18	9.78	11.69	10.78	20.78	58.34	9.18	761	0.00	72.6	27.0	36.6	0.07	1.1	124.65
29-03-2024	8.77	0.00	438.1	11.4	6.17	9.77	11.68	10.77	20.77	61.68	9.17	761	0.00	74.3	26.4	36.6	0.07	1.3	130.76
30-03-2024	8.86	0.00	432.1	11.5	6.26	9.86	11.77	10.86	20.86	76.34	9.26	757	0.00	73.5	26.7	36.7	0.07	1.05	149.29
31-03-2024	8.82	0.00	437.7	11.4	6.22	9.82	11.73	10.82	20.82	64.99	9.22	758	0.00	73.2	26.6	36.7	0.09	1.17	128.98
MINIMUM	**7.2**	**0.0**	**310.0**	**8.1**	**4.6**	**8.2**	**8.2**	**9.6**	**17.5**	**51.2**	**4.3**	**752.0**	**0.0**	**71.6**	**23.8**	**33.4**	**0.1**	**1.0**	**114.3**
MAXIMUM	**10.0**	**0.0**	**448.2**	**11.6**	**6.3**	**9.9**	**11.8**	**11.3**	**20.9**	**82.0**	**9.6**	**764.0**	**0.0**	**76.0**	**28.7**	**36.8**	**0.1**	**1.5**	**187.6**
AVERAGE	**7.9**	**0.0**	**348.5**	**9.9**	**5.2**	**8.8**	**10.0**	**10.6**	**19.2**	**70.6**	**7.0**	**758.2**	**0.0**	**74.0**	**27.0**	**34.7**	**0.1**	**1.2**	**137.6**

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

CONTINUOUS AMBIENT AIR QUALITY MONITORING STATION DATA

MONTH	TNPL PM2.5_COAL_ YARD	MONTH	TNPL PM2.5_COAL_ YARD	MONTH	TNPL PM2.5_COAL_ YARD	MONTH	TNPL PM2.5_COAL_ YARD	MONTH	TNPL PM2.5_COAL_ YARD	MONTH	TNPL PM2.5_COAL_ YARD
	ug/m3		ug/m3		ug/m3		ug/m3		ug/m3		ug/m3
1-Oct-23	16.48	1-Nov-23	9.67	1-Dec-23	11.86	1-Jan-24	18.42	1-Feb-24	14.43	1-Mar-24	16.51
2-Oct-23	14.26	2-Nov-23	12.59	2-Dec-23	11.98	2-Jan-24	16.83	2-Feb-24	16.36	2-Mar-24	16.75
3-Oct-23	17.48	3-Nov-23	16.48	3-Dec-23	11.57	3-Jan-24	15.06	3-Feb-24	16.59	3-Mar-24	15.90
4-Oct-23	12.45	4-Nov-23	15.24	4-Dec-23	15.20	4-Jan-24	15.14	4-Feb-24	15.51	4-Mar-24	15.89
5-Oct-23	10.23	5-Nov-23	17.49	5-Dec-23	20.92	5-Jan-24	15.06	5-Feb-24	14.37	5-Mar-24	15.25
6-Oct-23	7.48	6-Nov-23	18.49	6-Dec-23	17.71	6-Jan-24	14.52	6-Feb-24	12.35	6-Mar-24	14.67
7-Oct-23	12.31	7-Nov-23	12.48	7-Dec-23	16.27	7-Jan-24	15.19	7-Feb-24	14.57	7-Mar-24	15.14
8-Oct-23	15.40	8-Nov-23	16.48	8-Dec-23	17.41	8-Jan-24	14.57	8-Feb-24	16.85	8-Mar-24	15.14
9-Oct-23	16.25	9-Nov-23	14.28	9-Dec-23	16.41	9-Jan-24	14.04	9-Feb-24	17.25	9-Mar-24	15.29
10-Oct-23	10.78	10-Nov-23	13.27	10-Dec-23	15.20	10-Jan-24	14.71	10-Feb-24	17.06	10-Mar-24	14.10
11-Oct-23	13.48	11-Nov-23	12.94	11-Dec-23	15.53	11-Jan-24	14.67	11-Feb-24	15.12	11-Mar-24	15.42
12-Oct-23	15.29	12-Nov-23	10.48	12-Dec-23	15.92	12-Jan-24	16.31	12-Feb-24	16.58	12-Mar-24	15.12
13-Oct-23	17.42	13-Nov-23	8.47	13-Dec-23	15.46	13-Jan-24	16.40	13-Feb-24	18.10	13-Mar-24	16.13
14-Oct-23	13.25	14-Nov-23	16.49	14-Dec-23	15.21	14-Jan-24	19.26	14-Feb-24	15.49	14-Mar-24	17.18
15-Oct-23	18.49	15-Nov-23	11.69	15-Dec-23	14.13	15-Jan-24	15.82	15-Feb-24	13.84	15-Mar-24	15.40
16-Oct-23	16.35	16-Nov-23	11.52	16-Dec-23	13.40	16-Jan-24	16.05	16-Feb-24	13.51	16-Mar-24	15.04
17-Oct-23	12.32	17-Nov-23	11.46	17-Dec-23	14.33	17-Jan-24	15.22	17-Feb-24	14.72	17-Mar-24	14.06
18-Oct-23	15.36	18-Nov-23	12.61	18-Dec-23	14.06	18-Jan-24	14.30	18-Feb-24	15.26	18-Mar-24	14.97
19-Oct-23	11.80	19-Nov-23	13.67	19-Dec-23	13.40	19-Jan-24	13.84	19-Feb-24	15.79	19-Mar-24	15.25
20-Oct-23	23.47	20-Nov-23	14.52	20-Dec-23	14.20	20-Jan-24	17.23	20-Feb-24	16.55	20-Mar-24	15.22
21-Oct-23	20.14	21-Nov-23	12.69	21-Dec-23	14.83	21-Jan-24	18.29	21-Feb-24	17.27	21-Mar-24	15.03
22-Oct-23	17.52	22-Nov-23	11.20	22-Dec-23	14.62	22-Jan-24	15.56	22-Feb-24	17.17	22-Mar-24	15.16
23-Oct-23	11.09	23-Nov-23	10.81	23-Dec-23	14.25	23-Jan-24	15.55	23-Feb-24	16.03	23-Mar-24	15.01
24-Oct-23	12.36	24-Nov-23	11.09	24-Dec-23	13.90	24-Jan-24	16.21	24-Feb-24	16.57	24-Mar-24	14.55
25-Oct-23	8.46	25-Nov-23	11.59	25-Dec-23	14.47	25-Jan-24	17.24	25-Feb-24	16.47	25-Mar-24	14.51
26-Oct-23	10.63	26-Nov-23	15.48	26-Dec-23	13.64	26-Jan-24	14.72	26-Feb-24	16.25	26-Mar-24	14.30
27-Oct-23	14.59	27-Nov-23	11.40	27-Dec-23	14.95	27-Jan-24	15.49	27-Feb-24	18.06	27-Mar-24	17.38
28-Oct-23	16.70	28-Nov-23	18.47	28-Dec-23	15.60	28-Jan-24	15.95	28-Feb-24	18.22	28-Mar-24	17.33
29-Oct-23	13.48	29-Nov-23	11.51	29-Dec-23	15.27	29-Jan-24	15.88	29-Feb-24	17.94	29-Mar-24	17.30
30-Oct-23	15.40	30-Nov-23	20.48	30-Dec-23	15.15	30-Jan-24	13.81			30-Mar-24	16.25
31-Oct-23	9.47		15.48	31-Dec-23	17.07	31-Jan-24	12.32			31-Mar-24	16.75
MINIMUM	**7.48**	**MINIMUM**	**8.47**	**MINIMUM**	**11.57**	**MINIMUM**	**12.32**	**MINIMUM**	**12.35**	**MINIMUM**	**14.06**
MAXIMUM	**23.47**	**MAXIMUM**	**20.48**	**MAXIMUM**	**20.92**	**MAXIMUM**	**19.26**	**MAXIMUM**	**18.22**	**MAXIMUM**	**17.38**
AVERAGE	**14.20**	**AVERAGE**	**13.57**	**AVERAGE**	**14.97**	**AVERAGE**	**15.60**	**AVERAGE**	**16.01**	**AVERAGE**	**15.55**

ONLINE - STACK EMISSION MONITORING DATA

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Oct-23																															
1-Oct-23	9.98	18.2	9.88	50.66	12.08	25.58	25.41	10.27	347.13	222.69	120.8	317.75	305.37	64.57	104.5	13.08	-2.2	336	0.36	-0.012	0.6	0.01	2.22	11.83	0.57	7.35	62.57	6.62	1.03	9.53	6.2
2-Oct-23	10.35	17.9	6.88	27.57	16.86	26.22	23.88	9.69	347.24	203.78	168.6	451.18	306.65	60.64	101.84	14.74	-2.2	61.7	0.36	-0.013	0.01	0.01	2.22	0.07	0.53	5.07	51.51	6.6	1.03	0.14	6.2
3-Oct-23	9.82	32.91	8.64	123.09	11.4	30.48	25.05	9.97	328.63	183.05	162.03	371.03	286.56	52.74	92.99	11.07	-2.2	82.3	0.36	-0.013	0.31	0.01	2.22	1.15	0.54	4.27	32.72	6.59	1.03	0.33	6.2
4-Oct-23	10.68	8.77	8.57	36.59	13.38	28.55	25.34	9.94	189.07	78.99	224.47	343.21	151.19	31.44	86.65	9.52	-2.2	90.5	0.36	-0.012	0.82	0.01	2.22	11.72	0.57	6.49	72.23	6.56	1.03	4.06	6.21
5-Oct-23	10.51	5.18	8	152.03	13.64	33.26	25.77	10.09	179.3	64.89	175.95	369.21	142.65	23.98	101.56	9.13	-2.2	89.4	0.36	-0.011	0.61	0.01	2.22	15.04	0.58	3.15	91.16	6.52	1.03	4.85	6.21
6-Oct-23	9.81	4.77	5.49	230.89	17.32	31.31	25.72	10.73	180.75	58.72	132.2	328.66	143.33	17.49	108.57	11.14	-2.2	61.7	0.36	-0.012	0.01	0.01	2.22	0.07	0.56	0.1	133.95	6.43	1.02	0.15	6.22
7-Oct-23	9.81	4.69	17.59	279.57	16.95	29.63	25.4	10.52	177.21	51.18	93.16	249.84	138.93	17.83	104.32	8.74	-2.2	61.9	0.36	-0.012	0.01	0.01	2.22	0.07	0.56	0.1	119.7	6.38	1.03	0.15	6.22
8-Oct-23	9.83	9.19	9.5	276.57	10.93	28.5	23.64	9.87	181.11	73.49	199.87	397.12	140.94	34.39	103.89	9.8	-2.2	67.7	0.36	-0.012	0.23	0.01	2.22	1.95	0.56	3.64	39.9	6.28	1.03	0.22	6.23
9-Oct-23	10.42	120.64	5.13	416.6	12.25	31.24	23.66	9.87	186.41	111.41	158.89	379.68	145.86	54.49	102.69	9.3	-2.2	299.8	0.36	-0.011	0.81	0.01	2.22	24.18	0.58	6.05	71.64	6.23	1.03	24.22	6.24
10-Oct-23	9.84	23.81	4.89	186.72	11.49	25.45	24.57	9.68	204.61	132.5	98.51	307.97	159.85	58.82	122.25	10.23	-2.2	392.6	0.36	-0.011	0.83	0.01	2.22	31.97	0.58	6.31	78.1	6.19	1.03	21.24	6.25
11-Oct-23	11.07	22.17	3.75	293.24	14.07	28.97	25.48	10.12	219.43	174.7	80.01	312.45	173.26	63.14	113.95	10.52	-2.2	92.5	0.36	-0.011	0.82	0.01	2.22	18.54	0.57	6.24	82.63	6.12	1.03	8.27	6.26
12-Oct-23	10.46	129.29	6.75	582.01	12.55	32.16	22.48	11.14	229.24	222.28	104.29	227.86	185.79	56.89	104.88	5.58	-2.2	289.5	0.36	-0.012	0.78	0.01	2.22	19.3	0.57	3.06	86.46	6.05	1.03	26.69	6.27
13-Oct-23	9.98	21.33	5.9	641.81	13.1	30.08	24.13	11.9	233.94	228.76	50.97	222.02	194.53	70.56	108.58	3.2	-2.2	241.7	0.36	-0.012	0.71	0.01	2.22	9.07	0.55	4.58	95.5	6.02	1.03	24.14	6.27
14-Oct-23	10.8	24.7	5.26	599.59	16.06	30.7	23.43	12.17	226.68	160.64	56.53	233.99	188.66	71.07	104.9	4.03	-2.2	175.2	0.36	-0.012	0.75	0.01	2.22	10.82	0.56	4.41	99.92	6.04	1.03	34.21	6.28
15-Oct-23	10.45	31.19	6.12	203.77	59.35	32.6	23.99	11.52	241.19	144.81	178.25	338.4	189.34	77.07	107.78	6.39	-2.2	172	0.36	-0.012	0.8	0.01	2.22	17.02	0.54	2.55	106.75	6	1.03	37.77	6.28
16-Oct-23	10.79	63.62	6.64	251.68	57.74	33.98	23.59	11.65	250.5	151.8	71.55	317.81	196.39	76.07	132.12	8.31	-2.2	483.8	0.36	-0.012	0.59	0.01	2.22	1.74	0.54	5.26	101.75	5.96	1.03	52.43	6.3
17-Oct-23	9.5	17.85	14.27	204.93	57.85	31.63	25.16	11.84	263.78	8.51	257.79	335.68	204.14	52.22	137.41	6.99	-2.2	149	0.36	-0.013	0.5	0.01	2.22	1.06	0.51	6.4	102.76	7.47	1.03	33.25	6.3
18-Oct-23	10.64	32.77	14.62	122.96	58.65	28.06	23.18	11.71	258.3	78.75	249.32	377.96	218.16	58.21	136.98	6.99	-2.1	58.5	0.36	-0.013	0.01	0.01	2.22	0.11	0.51	2.13	1.89	12.57	1.03	0.13	6.3
19-Oct-23	11.1	55.77	12.65	319.25	59.42	29.96	25.08	9.8	248.54	266.22	292.62	353.06	209.71	85.55	107.27	10.44	-2.2	79.5	0.36	-0.013	0.01	0.01	2.22	0.1	0.51	2.03	0.16	16.26	1.03	0.14	6.3
20-Oct-23	11.06	64.97	12.22	392.64	63	32.31	24.07	8.17	234.29	320.81	188.3	471.34	197.2	89.68	142.46	17.8	-2.2	54.3	0.36	-0.013	0.01	0.01	2.22	0.09	0.53	2.01	0.17	1.86	1.03	0.14	6.3
21-Oct-23	9.98	45.13	19.59	166.76	62.6	27.06	24.69	8.55	225.96	290.8	155.21	339.45	176.93	94.56	144.93	16.33	-2.2	55	0.36	-0.012	0.01	0.01	2.22	0.08	0.55	2.08	4.4	0.96	1.03	0.14	6.3
22-Oct-23	9.44	73.38	8.54	762.77	63.24	34.24	23.56	8.86	223.54	242.16	229.4	468.87	187.48	88.99	120.6	4.7	-2.2	62.7	0.36	-0.012	0.15	0.01	2.22	0.6	0.57	3.11	23.22	0.95	1.03	2.86	6.3
23-Oct-23	10.77	88.02	5.67	413.33	61.87	34.82	23.79	8.67	222.29	243.19	80.78	185.93	184.86	84.41	103.43	0.94	-2.2	131.7	0.36	-0.01	0.75	0.01	2.22	8.07	0.59	1.77	98.77	0.95	1.02	79.05	6.3
24-Oct-23	9.93	37.7	5.03	315.95	63.81	32.66	23.54	9.24	215.32	303.94	137.39	190.25	166.81	82.37	122.21	1.92	-2.2	216.4	0.36	-0.01	0.77	0.01	2.22	10.33	0.59	0.18	101.01	1.1	1.02	80.6	6.3
25-Oct-23	10.39	33.98	4.78	149.63	64.08	30.38	25.12	8.79	207.32	283.59	211.79	247.47	158.82	91.76	116.29	4.77	-2.2	72.1	0.34	-0.011	0.81	0.01	2.22	13.72	0.57	0.1	109.34	1.4	1.03	71.5	6.29
26-Oct-23	10.04	44.2	6.58	60.43	39.97	28.64	24.86	10.37	210.08	196.03	139.61	238.68	163.47	84.67	153.48	8.7	7.8	117.9	0.35	0.61	0.83	0.01	6.39	8.68	2.14	12.93	112.39	1.53	10.28	53.12	6.29
27-Oct-23	9.17	18.29	14.74	155.98	12.26	5.77	24.39	10.36	205.71	32.78	291.95	287.84	156.33	41.46	163.64	7.52	18.4	60.8	0.32	1.27	0.81	0.01	20.96	16.23	51.21	5.2	125.54	1.47	29.41	40.52	6.28
28-Oct-23	5.57	9.11	23.52	435.85	12.24	1.31	25.02	10.37	199.33	4.66	256.19	279.29	163.39	31.98	212.85	7.58	17.9	114.4	0.33	1.267	0.8	0.09	17.08	3.17	58.57	5.71	128.7	1.47	31.86	72.26	9.67
29-Oct-23	4.83	8.87	18.24	116.52	7.16	17.15	22.45	10.02	89.88	8.97	249.06	247.82	161.83	34.93	212.69	8.68	18.4	226.9	0.32	1.292	0.92	0.34	8.6	10.38	62.77	6.27	127	1.47	66.17	89.2	19.05
30-Oct-23	NA	141.61	25.03	74.28	2.41	30.85	22.49	9.81	1.43	114.78	307.47	361.82	NA	72.37	130.39	7.12	18.1	171.6	0.32	1.256	0.8	0.39	25.63	9.09	65.86	8.92	130.52	1.47	39.95	93.86	27.35
31-Oct-23	NA	157.5	14.38	180.66	2.41	31.56	23.29	9.31	1.44	234.36	271.09	374.61	NA	83.02	112.23	6.78	19.5	333.3	0.32	1.321	0.8	0.23	34.87	4.41	61.6	5.98	143.08	1.47	57.76	103.55	28.66
MINIMUM	**4.83**	**4.69**	**3.75**	**27.57**	**2.41**	**1.31**	**22.45**	**8.17**	**1.43**	**4.66**	**50.97**	**185.93**	**138.93**	**17.49**	**86.65**	**0.94**	**-2.20**	**54.30**	**0.32**	**-0.01**	**0.01**	**0.01**	**2.22**	**0.07**	**0.51**	**0.10**	**0.16**	**0.95**	**1.02**	**0.13**	**6.20**
MAXIMUM	**11.10**	**157.50**	**25.03**	**762.77**	**64.08**	**34.82**	**25.77**	**12.17**	**347.24**	**320.81**	**307.47**	**471.34**	**306.65**	**94.56**	**212.85**	**17.80**	**19.50**	**483.80**	**0.36**	**1.32**	**0.92**	**0.39**	**34.87**	**31.97**	**65.86**	**12.93**	**143.08**	**16.26**	**66.17**	**103.55**	**28.66**
AVERAGE	**9.90**	**44.11**	**10.29**	**265.30**	**30.33**	**28.23**	**24.27**	**10.16**	**210.63**	**157.85**	**174.00**	**320.27**	**186.15**	**61.53**	**123.17**	**8.45**	**1.46**	**158.14**	**0.35**	**0.22**	**0.54**	**0.04**	**5.45**	**8.41**	**10.19**	**4.30**	**81.79**	**4.94**	**8.42**	**31.25**	**8.19**

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Nov-23																															
1-Nov-23	2.29	105.85	11.72	189.42	2.41	30.73	21.67	8.41	1.44	270.81	284.78	423.15	NA	77.86	115.79	7.73	19.2	325.5	0.32	1.321	0.75	0.48	23.26	5.11	64.68	5.89	148.68	1.47	17.73	92.05	29.14
2-Nov-23	NA	56.48	18.34	151.72	2.41	27.73	22.71	8.88	1.42	242.09	278.41	383.02	NA	78.02	122.57	8.19	16.2	466.7	0.33	1.179	0.84	0.58	8.81	1.49	65.19	15.47	146.88	13.57	34.23	71.54	25.21
3-Nov-23	NA	80.68	22.33	130.79	2.41	29.88	23.47	8.84	1.43	217.67	292.17	418.26	NA	74.75	108.02	6.14	17.6	105.7	0.33	1.271	0.19	0.52	18.66	0.42	68.45	6.61	55.18	55.72	50.42	24.74	16.09
4-Nov-23	NA	82.53	23.3	88.23	2.41	31.49	23.05	9.26	1.42	201.94	260.56	401.39	NA	83.84	154.47	3.52	19.1	581.6	0.6	1.323	0.73	0.57	7.56	1	69.37	4.35	148.7	52.8	16.57	91.17	15.92
5-Nov-23	NA	131.1	25.58	209.76	2.41	34.14	23.39	10.31	1.43	224.85	282.82	276.05	NA	93.35	185.97	0.87	14.6	642.4	0.33	1.331	0.89	0.64	11.96	4.13	66.76	5.31	148.7	57.09	9.87	98.77	14.96
6-Nov-23	8.9	60.16	37.88	99.1	6.95	27.98	23.67	9.67	57.83	243.8	287.38	333.33	201.84	99	121.57	1.14	4.4	649.7	0.35	1.252	0.76	0.63		1.91	62.37	5.03	148.7	56.48	2.3	109.22	13.84
7-Nov-23	10.08	69.47	23.28	187.24	4.53	27.73	24.22	9.36	227.33	214.82	187.91	239.57	200.19	85.91	247.32	2.74	5.2	580.4	0.35	1.28	0.9	0.59		2.18	66.18	4.38	148.7	57.69	2.45	93.67	15.67
8-Nov-23	9.28	78.57	15.75	406.95	6.01	28.21	24.99	9.44	241.08	253.6	264.99	287.88	212.53	84.45	180.93	1.18	6	632.9	1.92	1.263	0.77	0.55	4.73	0.98	73.17	4.13	148.7	42.44	2.5	74.35	16.59
9-Nov-23	9.3	83.41	19.47	369.23	3.37	29.43	24.07	10.47	210.19	232.82	212.91	229.65	192.27	79.08	205.55	0.45	5.6	441.7	16.93	1.266	0.97	0.48		4.33	66.41	4.41	97.45	22.18	2.46	99.16	16.95
10-Nov-23	10.64	53.52	15.46	404.09	3.84	27.9	23.37	11.29	136.89	146.24	120.51	170.15	146.41	71.97	257.53	2.91	4	208.1	136.38	1.285	1.06	0.58		57.87	69.18	4.73	2.63	18.28	2.17	126.14	17.57
11-Nov-23	9.26	77.23	16.43	146.31	4.84	27.97	25.36	10.09	134.03	154.75	123.49	170.47	142.45	64.01	256.08	5.56	5.3	595	316.9	1.276	0.86	0.61	25.19	109.19	69.94	4.31	2.36	13.91	67.78	242.72	16.61
12-Nov-23	9.54	56.57	15.32	113.58	5.06	27.8	25.79	9.95	131.92	126.22	170.54	199.35	139.63	52.8	236.2	2.94	2.8	634.6	226.99	1.321	0.83	0.64		74.53	65.8	5.02	2.47	13.88		243.21	13.79
13-Nov-23	8.71	45.54	15	155.7	5.63	27.86	24.72	10.33	130.03	84.34	175.88	230.8	137.67	35.62	225.15	2.3	6.1	836.5	177.25	1.365	0.77	0.67	143.13	52.74	68.17	4.79	2.56	13.87	2.23	210.38	19.03
14-Nov-23	9.26	68.6	21.06	559.46	5.41	26.58	25.23	11.15	129.03	69.6	181.54	215.51	136.81	28.57	243.71	1.41	5.3	764.8	311.28	1.365	0.79	0.62	126.49	52.22	64.51	3.82	4.79	13.64	2.29	207.8	17.14
15-Nov-23	10.61	50.96	19.29	501.05	6	25.18	25.56	10.39	128.06	105.36	128.23	273.7	136.41	61.12	120.74	6.68	5.3	763.2	349.16	1.326	0.77	0.56		47.65	59.85	4.09	4.65	13.74	2.31	204.29	30.55
16-Nov-23	10.04	67.85	24.48	139.93	5.8	27.03	23.88	9.73	127.44	165.58	69.03	219.11	135.32	77.24	205.08	7	4.4	706.1	306.83	1.301	0.8	0.61		45.98	64.75	4.12	6.66	13.87	2.1	190.57	32.17
17-Nov-23	9.72	52.63	9.95	363.61	5.72	29.26	24.07	10.68	126.86	198.39	104.75	205.4	134.74	78.12	191.34	0.55	1246.4	588.5	190.77	1.278	0.73	0.61		129.13	68.15	4.07	3.95	13.95		207.55	26.45
18-Nov-23	9.53	45.3	25.59	299.57	5.77	29.03	24.59	11.1	125.7	168.25	121.12	186.47	133.9	73.18	194.14	0.26	5.6	629.6	116.87	1.282	0.85	0.65		206.78	64.74	4.21	10.91	13.9	2.25	249.1	20.84
19-Nov-23	9.99	28.33	12	443.21	6.02	30.65	24.38	11.18	124.69	161.62	116.18	203.72	132.57	67.76	190.4	0.34	4.2	467.9	120.6	1.282	0.71	0.73		125.53	65.99	3.49	23.53	13.8	2.64	176.07	50.65
20-Nov-23	10.17	29.36	6.96	761.85	6.03	33.2	26.36	12.17	124.06	205.77	186.9	304.15	132.06	78.33	153.04	0.41	4	57.4	134.75	1.255	0.01	0.77		11.36	64.82	5.88	74.42	13.78	2.09	10.79	80.65
21-Nov-23	9.41	29.49	11.33	275.47	6.26	26.6	25.01	11.04	123.27	223.35	158.14	330.55	131.07	80.92	138.54	0.57	813.5	109	304.16	1.257	0.23	0.62	49.78	36.17	71.38	2.84	20.05	13.91		15.47	62.81
22-Nov-23	9.87	65.55	13.51	150.88	6.39	28.13	24.95	10.44	122.75	211.89	73.25	300.7	130.62	73.08	127.77	0.67	422.5	420.8	258.89	1.263	0.8	0.68	23.56	136.54	64.24	3.76	31.59	13.83	2.4	48.71	91.14
23-Nov-23	10.71	97.91	10.54	213.82	5.02	30.67	24.77	10	121.88	141	85.59	269.73	129.53	58.57	146.46	0.14	6.2	550.1	129.57	1.254	0.88	0.69	4.65	128.15	67.26	3.71	24.19	13.72	2.41	30.39	84.05
24-Nov-23	10.44	74.42	17.41	294.04	5.75	32.11	25.27	10.45	121.63	89.14	91.65	205.65	129.34	44.08	217.39	0.24	5.5	480.7	160.11	1.259	0.92	0.68		127.9	58.08	3.22	25.97	13.83	2.27	50.01	99.09
25-Nov-23	10.64	36.17	36.3	177.47	5.5	28.96	24.07	9.89	121.84	72.63	77.87	200.89	129.17	41.07	170.47	0.19	5.1	587.8	270.86	1.292	0.89	0.75	119.92	117.39	63.76	1.83	36.71	13.97	2.25	45.31	157.48
26-Nov-23	11.13	79.58	13.95	730.4	6.97	31.94	23.58	13	120.86	96.72	129.5	259.66	128.15	46.18	149.2	0.01	5.2	577	187.66	1.297	0.81	0.75	221.27	106.28	68.28	3.2	29.66	14	2.28	51.79	178.4
27-Nov-23	9.93	84.46	7.22	434.41	9.68	31.32	24.92	12.75	120.46	145.06	151.17	292.86	128.15	54.67	124.17	0	6	136.3	208.59	1.273	0.71	0.8	89.82	121.18	66.13	3.08	38.63	14.06	2.36	53.78	200.61
28-Nov-23	10.28	124.73	13.43	494.53	17.37	31.76	24	12.42	120.59	175.19	137.47	252.48	127.67	61.39	113.47	0.02	6.3	323	259.13	1.285	0.67	0.67	4.46	128.72	65.46	3.29	40.45	14.18	2.41	55.13	196.42
29-Nov-23	10.4	176.29	15.21	733.3	18.08	34.1	24.53	11.35	120.33	171.82	172.21	312.01	127.51	62.53	188.47	0.05	5	43	195.71	1.266	0.74	0.76	219.16	118.61	61.07	2.3	44.51	14.28	2.28	52.51	236.74
30-Nov-23	10.34	201.29	16.53	472.66	32.43	34.13	24.62	11.31	119.99	178.47	148.53	301.29	127.26	63.14	202.85	0.26	5	338.8	306.11	1.285	0.69	0.61	340.04	112.3	71.86	2.24	31.54	14.22	2.21	45.31	230.47
MINIMUM	2.29	28.33	6.96	88.23	2.41	25.18	21.67	8.41	1.42	69.60	69.03	170.15	127.26	28.57	108.02	0.00	2.80	43.00	0.32	1.18	0.01	0.48	4.46	0.42	58.08	1.83	2.36	1.47	2.09	10.79	13.79
MAXIMUM	11.13	201.29	37.88	761.85	32.43	34.14	26.36	13.00	241.08	270.81	292.17	423.15	212.53	99.00	257.53	8.19	1246.40	836.50	349.16	1.37	1.06	0.80	340.04	206.78	73.17	15.47	148.70	57.69	67.78	249.10	236.74
AVERAGE	9.63	76.47	17.82	323.26	6.88	29.65	24.34	10.51	112.53	173.13	169.18	269.90	144.13	67.69	176.48	2.15	89.39	474.83	156.33	1.29	0.74	0.64	80.14	68.93	66.20	4.45	55.13	21.87	9.08	109.06	67.57

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Dec-23																															
1-Dec-23	10.21	81.49	29.48	135.86	33.57	26.74	25.91	11.32	119.79	167.27	248.29	303.32	126.93	67.28	211.22	0.59	6.2	427.9	302.01	1.287	0.66	0.62	4.45	108.01	59.85	4.62	40.74	14.14	2.41	35.49	219.3
2-Dec-23	11.49	78.63	25.2	453.61	39.01	27.66	28.09	11.49	119.87	149.12	131.08	323	126.72	63.98	146.24	0.91	4.7	453	140.42	1.287	0.63	0.75		99	55.84	4.62	47.47	14.14	2.14	36.88	193.62
3-Dec-23	12.12	281.96	9.44	398	31.13	33.47	29.74	10.89	119.43	157.17	284.93	336.57	126.22	52.56	130.16	0.01	5	216.3	158.55	1.298	0.55	0.74	205.84	89.84	53.29	3.31	42.84	14.15	2.26	34.4	188.01
4-Dec-23	11.25	110.41	11.43	626.75	32.86	28.88	26.77	11.61	119.88	140.01	262.96	331.82	125.99	47.77	120.09	0.03	6.3	387.3	240.04	1.271	0.65	0.71	4.7	82.54	54.76	3.36	26.7	15.05	2.41	31.34	177.89
5-Dec-23	10.57	0	9.89	302.03	30.6	1.56	23.82	11.38	119.54	1.15	264.65	346.64	125.54	0.01	114.97	0.03	5.7	25.7	286	1.263	0.01	0.68		0.71	60.44	7.71	87.2	16.29	2.29	1.21	176.14
6-Dec-23	10.86	0	11.96	462.4	32.64	1.55	24.64	10.56	118.36	0	293.16	372.68	126.05	0.1	106.69	0	4.8	25.3	290.7	1.261	0.01	0.59		0.07	55.19	7.82	25.08	16.56	2.16	0.13	179.44
7-Dec-23	10.48	0	14.46	827.08	27.06	NA	24.6	11.05	116.59	0	240.6	341.95	125.32	0.59	129.83	0	4.5	33.1	295.27	1.255	0.1	0.56		9.41	68.13	6.18	23.7	16.74	2.09	5.46	178.59
8-Dec-23	9.99	0	5.91	719.91	5.92	NA	24.79	11.12	116.04	0.2	202.54	353.56	124.08	2.51	107.05	0	5.2	288	283.03	1.259	0.74	0.65	64.15	77.81	62.33	6.7	148.71	16.91	2.24	33.25	184.48
9-Dec-23	6.92	0	9.12	858.3	6.54	NA	25.44	11.15	79.55	4.1	162.54	354.35	123.77	39.66	111.8	0	5.2	433.7	343.75	1.265	0.72	0.65	229.98	82.4	61.3	7.08	148.74	17.28	2.2	34.67	199.75
10-Dec-23	NA	0.01	8.78	409.5	2.41	NA	25.22	11.41	1.47	5.57	155.05	341.81	NA	43.15	108.57	0	5.6	411.6	273.31	1.269	0.69	0.61	105.99	84.5	64.89	6.09	148.76	19	2.28	35.5	191.62
11-Dec-23	7.07	0	5.65	652.75	2.41	NA	24.49	11.25	1.46	1.05	189.08	332.36	NA	11.14	111.78	7.76	5.9	494	237.5	1.28	0.7	0.67	4.79	84.97	63.7	4.53	148.76	22.23	2.35	31.69	189.5
12-Dec-23	3.06	0	6.09	952.72	2.41	NA	24.69	13.39	1.46	1.37	195.79	359.77	NA	12.47	116.97	27.35	5.4	29.5	277.99	1.255	0.02	0.63	95.24	2.76	58.76	6.5	75.36	24.72	2.31	3.77	185.04
13-Dec-23	NA	0	6.72	593.81	2.41	NA	25.01	11.86	1.46	1.88	225.42	271.04	NA	18.78	118.18	22.68	-0.5	96.5	192.34	0.301	0.4	0.65	51.55	34.56	55.05	4.13	17.6	23.59	1.33	0.25	163.87
14-Dec-23	NA	0	6.35	829.35	2.41	NA	24.8	11.03	1.45	2.07	269.01	330.57	NA	21.06	112.82	23.72	-2.2	27.6	82.77	-0.011	0.01	0.73	2.22	0.46	61.06	2.01	29.36	22.85	1.03	0.12	158.88
15-Dec-23	9.6	0	5.39	428.39	12.86	NA	22.82	10.02	58.87	2.25	311.39	316.82	121.11	21.82	97.48	23.33	-0.8	302.3	133.35	0.208	0.66	0.71	2.58	69.09	55.91	4.82	90.19	46.31	1.24	5.1	172.12
16-Dec-23	10.28	0	5.78	1039.73	15.53	NA	24.27	13.16	112.06	2.3	306.25	348.77	120.26	18.42	100.47	18.46	5.2	598	117.74	1.288	0.74	0.71		93.92	55.18	4.51	53.38	67.38	2.19	32.23	127.34
17-Dec-23	10.49	0	4.89	1226.76	15.42	NA	23.26	12	112.06	2.43	306.6	375.08	120	14.91	95.03	12.22	0.1	775.6	198.22	0.344	0.76	0.75	3.12	64.55	57.47	5.03	14.32	65.32	1.39	6.09	99.56
18-Dec-23	10.02	0	9.03	646.36	14.98	NA	23.97	12.37	112.28	2.76	253.67	254.26	119.58	14.99	115.43	10.24	5.2	442.5	293.42	1.261	0.87	0.67	124.48	27.15	59.74	12.36	29.01	65.94	2.26	35.45	134.84
19-Dec-23	9.96	0	5.36	740.83	15.59	NA	25.35	12.42	111.7	2.72	280.35	325.91	119.82	16.89	110.74	13.8	4.5	285.1	170.28	1.195	0.73	0.67		24.19	58.64	5.81	14.75	67.51	2.04	28.54	74.03
20-Dec-23	10.81	0	3.04	936.29	15.12	1.33	23.81	11.56	111.15	2.28	75.92	274.49	120.09	14.38	117.13	20.27	5.3	290.8	0.55	1.28	0.73	0.77	53.24	73.5	60.09	7.59	12.72	70.19	2.24	33.16	61.04
21-Dec-23	9.95	0	31.62	664.27	14.52	1.32	23.16	13.5	110.46	4.4	82.69	170.72	118.83	29.79	182.23	24.61	4.8	158.9	47.5	1.276	0.75	0.67		62.52	60.55	7.31	12.25	74.88	2.18	33.68	55.4
22-Dec-23	8.76	0	11.65	487.95	13.82	1.32	25.32	13.33	110.58	6.19	196.11	274.64	119.2	39.32	191.66	32.02	5.3	194.6	197.48	1.27	0.58	0.64	4.45	49.43	57.87	9.68	13.93	68.75	2.22	35.38	53.38
23-Dec-23	9.89	0	12.66	862.6	15.6	1.32	23.54	14.43	110.52	4.87	168.71	254.68	119.08	26.88	199.68	30.25	8.6	182.3	232.73	1.263	0.65	0.71	18.69	60.22	60.41	12.24	9.66	70.62	60.38	33.65	75.48
24-Dec-23	10.47	0	17.4	861.87	17.55	1.32	23.93	14.41	109.8	3.28	331.03	311.62	117.67	19.42	200.18	24.26	82.7	434.3	276.44	1.276	0.55	0.74		42.3	58.99	8.01	16.48	69.81	70.95	28.29	49.67
25-Dec-23	9.87	0	8.32	1269.81	16.81	1.32	24.06	14.48	108.66	2.97	273.8	315.75	119.79	19.2	131.02	15.38	58.1	761.4	180.1	1.32	0.4	0.74	77.82	22.15	54.65	6.22	11.63	64.22	106.07	30.15	61.1
26-Dec-23	8.95	0	4.91	859.2	16.07	1.32	23.8	15.13	108.53	2.37	280.78	322.24	119.92	14.01	119.26	14.82	94.7	265.2	150.78	1.263	0.38	0.7		34.32	53.14	8.05	20.79	80.02	76.61	32.65	92.1
27-Dec-23	8.29	0	12.63	237.69	36.69	1.32	25.15	14.72	107.79	2.06	289.5	357.39	119.83	8.7	111.13	16.99	78.1	329.8	240.05	1.304	0.67	0.64		59.19	54.72	6.27	4.79	76.41	64.9	34.27	60.66
28-Dec-23	NA	0	7.25	1013.12	11.66	1.32	23.6	14.56	40.78	1.94	289.65	322.55	45.7	3.83	116.48	10.99	43.2	577.8	210.21	1.278	0.61	0.7		51.09	57.02	7	2.89	62.26	21.53	32.64	147.38
29-Dec-23	6.91	0	4.42	1335.27	0.25	1.32	23.36	15.73	1.47	2.4	286.29	350.8	0.16	10.62	116.62	13.98	2.7	791.9	169.97	0.348	0.65	0.69	15.82	49.19	54.35	4.56	4.73	63.77	7.54	2.78	100.44
30-Dec-23	3.44	0	5.21	1326.27	0.25	1.32	23.65	15.09	1.47	2.88	293.01	363.83	0.13	13.31	125.35	15.18	-2.2	374.7	153.78	-0.01	0.75	0.72	2.22	69.16	59.48	16.24	8.89	65.58	1.02	0.39	102.24
31-Dec-23	NA	0	5.85	1640.75	0.25	1.32	23.4	15.65	1.47	3.43	263.4	320.42	0.12	13.78	134.74	14.69	9	469.6	155.76	0.891	0.66	0.73	60.41	64.18	68.66	12.64	6.86	66.13	6.78	25.15	107.5
MINIMUM	**3.06**	**0.00**	**3.04**	**135.86**	**0.25**	**1.32**	**22.82**	**10.02**	**1.45**	**0.00**	**75.92**	**170.72**	**0.12**	**0.01**	**95.03**	**0.00**	**-2.20**	**25.30**	**0.55**	**-0.01**	**0.01**	**0.56**	**2.22**	**0.07**	**53.14**	**2.01**	**2.89**	**14.14**	**1.02**	**0.12**	**49.67**
MAXIMUM	**12.12**	**281.96**	**31.62**	**1640.75**	**39.01**	**33.47**	**29.74**	**15.73**	**119.88**	**167.27**	**331.03**	**375.08**	**126.93**	**67.28**	**211.22**	**32.02**	**94.70**	**791.90**	**343.75**	**1.32**	**0.87**	**0.77**	**229.98**	**108.01**	**68.66**	**16.24**	**148.76**	**80.02**	**106.07**	**36.88**	**219.30**
AVERAGE	**9.30**	**17.82**	**10.19**	**767.72**	**15.62**	**7.54**	**24.66**	**12.65**	**79.55**	**22.02**	**239.17**	**321.27**	**105.07**	**21.98**	**129.39**	**12.73**	**15.04**	**341.43**	**204.26**	**1.05**	**0.55**	**0.68**	**56.59**	**53.97**	**58.76**	**6.87**	**43.17**	**45.12**	**14.87**	**23.02**	**134.21**

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Jan-24																															
1-Jan-24	NA	0	11.69	1286.06	0.25	1.32	23.85	15.81	1.5	3.57	291.98	327.71	0.14	14.14	118.08	11.93	43	401.8	235.51	1.274	0.71	0.79	0	70.81	56.56	8.24	8.28	74.05	89.71	34.06	116.65
2-Jan-24	NA	0	5.49	1166.76	0.25	1.32	24.09	16.11	1.53	3.6	288.46	339.91	0.13	13.76	103.19	10.56	45.3	478.1	266.71	1.298	0.64	0.64	67.5	67.3	64.69	7.75	8.76	70.04	0	36.84	134.92
3-Jan-24	NA	0	8.29	1535.93	0.25	1.32	23.34	17.01	1.5	3.83	288.79	340.33	0.12	16.25	93.28	10.14	26.7	57.3	317.41	1.254	0.02	0.66	0	1.39	57.09	9.05	60.52	59.9	103.61	5.13	121.3
4-Jan-24	10.9	0	7.34	1534.41	4.9	1.32	24.1	17.3	31.12	4.01	205.7	367.47	46.59	17.09	87.94	11.37	51.8	81.8	121.87	1.261	0.01	0.64	0	0.05	61.93	5.78	61.03	62.17	53.05	0.15	57.83
5-Jan-24	10.05	0	9.68	818.61	18.66	1.32	23.82	16.76	108.26	4.44	175.32	333.3	216.01	19.82	109.92	13.25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6-Jan-24	10.38	0	11.05	643.86	20.67	1.32	24.52	16.59	108.26	4.53	194.57	316.34	286.39	22.6	123.88	13.67	45.7	82.5	0.36	0.774	0.01	0.15	0	0.03	9.76	10.03	5.27	55.4	45.43	0.16	5.68
7-Jan-24	10.05	0	4.84	1103.52	20.66	1.32	23.28	17.29	105.16	4.14	95.5	332.96	367.39	20.93	99.07	12.19	3.8	358.8	0.42	0.376	0.01	0.62	21.99	0.02	69.66	4.93	16.09	60.13	1.71	0.16	6.25
8-Jan-24	9.89	0	3.72	1257.15	20.05	1.32	24	17.32	102.89	4.02	163.16	345.34	364.43	18.31	99.46	11.71	15.7	105.8	0.54	1.259	0.01	0.71	0	0.01	66.03	8.42	12.32	60.84	0	0.16	7.18
9-Jan-24	9.45	0	4.11	1310.62	20.53	1.32	23.89	16.98	100.98	4.97	200.36	335.82	363.93	20.66	91.88	7.14	29.8	138.4	0.7	1.266	0.02	0.66	0	0.1	67.05	5.35	1.08	68.11	0	3.58	6.32
10-Jan-24	9.94	0	4.54	1135.95	20.32	1.32	24.29	16.99	100.17	5.51	110.15	288.54	358.13	26.18	94.85	10.17	450.6	456.6	0.41	1.313	0.82	0.65	0	18.37	69.91	5.65	20.22	70.05	0	34.94	6.33
11-Jan-24	10.09	0	3.55	1476.63	20.95	1.32	25.83	17.61	99.93	4.9	178.17	299.78	353.39	24.62	94.3	8.77	168.8	419.9	241.73	1.293	0.75	0.64	37.24	22.07	69.38	4.63	19.72	69.98	0	34.2	57.13
12-Jan-24	10.22	0	2.93	1713.09	22.88	1.32	24.51	18.05	99.06	4.68	138.45	329.94	347.8	22.31	92.66	7.14	145.6	564.9	328.74	1.277	0.69	0.64	0	25.06	56.47	4.09	19.64	72.51	0	36.4	65.32
13-Jan-24	10.7	0	4.49	1996.59	23.42	1.32	24.44	19.14	98.24	4.87	61.6	328.35	348.64	22.87	80.88	10.42	488.2	118.2	264.36	1.259	0.02	0.64	0	0.72	53.57	4.61	56.78	73.42	0	5.5	40.37
14-Jan-24	10.58	32.43	2.37	2069.76	21.89	1.32	23.46	19.04	97.68	5.44	66.82	348.51	325.45	27.47	75.28	10.38	373.2	130.3	268.23	1.257	0.01	0.67	45.04	0.04	57.08	5.57	18.57	72.88	0	0.16	85.08
15-Jan-24	10.12	61.02	1.68	1878.3	22.26	1.32	24.51	19.56	97.47	5.92	119.7	358.33	337.13	30.14	78.38	9.85	86.6	133.4	479.75	1.256	0.01	0.56	0	0.05	55.35	4.48	0.23	68.05	0	0.16	86.43
16-Jan-24	11.32	49.21	2.02	2051.91	24.17	1.32	25.64	20.08	97.42	5.72	114.57	336.36	321.23	24.23	79.3	8.56	250.8	140.9	469.29	1.257	0.21	0.51	0	13.49	58.94	4.45	16.34	68.86	0	13.31	109.9
17-Jan-24	10.56	54.46	5.06	1865.07	24.07	1.32	25.62	19.12	97.5	5.74	122.18	323.85	301.41	28.62	75.17	6.68	68.9	650.1	410.13	1.275	0.7	0.53	11.18	28.05	63.59	6.43	8.2	69.49	46.57	35.88	78.14
18-Jan-24	9.76	61.13	4.9	1640.17	24.4	1.32	26.14	20.37	97.13	5.77	65.11	233.86	283.49	29.88	73.74	5.89	263.6	612.8	314.63	1.266	0.84	0.62	0	45.89	64.16	5.72	9.44	70.14	93.72	37.31	55.88
19-Jan-24	10.66	44	6.3	1600.24	23.78	1.32	24.91	20.6	96.68	4.9	79.54	249.33	287.14	22.19	61.99	6.88	281.1	628.4	354.71	1.281	0.81	0.65	0	34.4	63.79	5.1	11.63	70.9	47.57	36.66	62.59
20-Jan-24	9.99	53.08	9.09	1563.17	23.72	1.32	24.14	21.48	96.35	4.79	25.9	184.21	286.48	22.03	59.42	5.95	152.6	496.7	284.94	1.277	0.74	0.61	0	32.19	59.73	5.43	12.99	70.99	0	33.35	49.71
21-Jan-24	10.75	44.85	9.92	1093.43	22.51	1.32	24.65	19.61	96.21	4.55	100.17	313.94	284.91	21.66	65.1	5.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22-Jan-24	10.45	51.93	44.93	790.63	22.71	1.32	25.72	18.31	95.69	4.55	190.29	319.65	246.24	17.25	70.73	6.72	836.1	414.1	333.14	1.266	0.81	0.59	0	54.85	59.63	6.72	17.18	70.45	0	37.66	85.77
23-Jan-24	11.52	57.55	3.12	1094.78	23.27	1.32	25.79	18.06	95.54	5.17	104.02	314.29	235.07	20.48	82.35	9.55	95.1	680.6	282.7	1.28	0.76	0.62	0	36.45	52.24	6.21	16.59	66.95	79.22	35.19	80.14
24-Jan-24	9.64	56.65	3.93	1242.83	23.29	1.32	26.87	17.67	95.09	5.61	126.58	361	227.27	23.25	88.05	10.37	46.8	546.1	350.15	1.273	0.76	0.64	0	39.66	62.03	5.87	13.17	72.61	0	36.4	71.93
25-Jan-24	10.7	61.16	3.11	1269.44	22.63	1.32	26.81	19.08	94.79	5.71	188.65	315.29	220.69	25.4	87.87	7.84	107.6	695.5	285.16	1.265	0.75	0.6	0	21.3	62.73	6.18	12.38	71.56	52.21	35.61	55.4
26-Jan-24	10.32	61.16	3.54	1158.98	20.67	1.32	27.31	19.47	94.51	5.54	156.32	313.31	228.4	23.44	85.77	6.31	261.3	569.4	407.62	1.271	0.78	0.62	38.02	24.54	57.86	5.49	16.91	73.25	0	31.31	50.59
27-Jan-24	10.49	58.78	6.64	1240	20.54	1.32	27.17	19.71	94.2	5.54	130.8	318.23	239.95	23.15	92.45	7.84	31.3	259.5	422.59	1.266	0.74	0.61	0	40.22	63.71	6.31	18.57	72.59	46.38	32.34	77.69
28-Jan-24	9.73	58.48	2.72	1266.61	20.04	1.32	28.64	18.04	94.15	5.55	110.47	367.89	227.78	24.26	96.46	6.49	43.1	503	376.96	1.282	0.74	0.64	0	39.38	65.51	7.38	16.43	75.68	0	29.61	49.28
29-Jan-24	9.38	57.36	14.27	722.6	27.57	1.32	26.52	15.5	93.76	5.48	161.51	316.7	213.89	22.83	82.29	4.41	16.6	671.7	313.27	0.416	0.61	0.65	0	15.97	68.75	2.19	12.11	72.01	14.74	6.81	64.15
30-Jan-24	NA	58.26	4.68	1362.6	23.24	1.32	26.9	18.87	94.46	5.63	117.55	192.23	209.19	23.91	92.48	8.26	0	441.2	377.26	-0.011	0.65	0.58	2.22	31.1	70.33	0.1	17.86	69.35	1.03	0.39	34.21
31-Jan-24	NA	53.9	5.63	1596.41	23.31	1.32	26.69	19.38	39.73	5.42	211.38	220.82	79.61	18.74	122.41	8.36	0	351.1	322.88	-0.011	0.75	0.65	2.22	37.22	65.48	0.1	14	66.01	1.03	0.42	70.19
MINIMUM	**9.38**	**0.00**	**1.68**	**643.86**	**0.25**	**1.32**	**23.28**	**15.50**	**1.50**	**3.57**	**25.90**	**184.21**	**0.12**	**13.76**	**59.42**	**4.41**	**0.00**	**0.00**	**0.00**	**-0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
MAXIMUM	**11.52**	**61.16**	**44.93**	**2069.76**	**27.57**	**1.32**	**28.64**	**21.48**	**108.26**	**5.92**	**291.98**	**367.89**	**367.39**	**30.14**	**123.88**	**13.67**	**836.10**	**695.50**	**479.75**	**1.31**	**0.84**	**0.79**	**67.50**	**70.81**	**70.33**	**10.03**	**61.03**	**75.68**	**103.61**	**37.66**	**134.92**
AVERAGE	**10.29**	**31.46**	**6.96**	**1370.52**	**19.61**	**1.32**	**25.21**	**18.29**	**84.74**	**4.97**	**147.86**	**312.05**	**245.43**	**22.21**	**88.99**	**8.84**	**142.89**	**360.93**	**252.65**	**1.03**	**0.46**	**0.57**	**7.27**	**22.60**	**56.55**	**5.23**	**16.85**	**64.46**	**21.81**	**19.16**	**57.82**

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Feb-24																															
1-Feb-24	49.7	47.07	8.96	766.01	22.61	1.32	27.08	19.55	2.81	5	53.43	112.22	0.21	15.76	127.67	6.11	49.7	508.1	386.21	0.72	0.77	0.59	0	42.09	67.94	8.44	9.71	66.55	27.87	19.1	70.03
2-Feb-24	0.13	34.02	6.58	470.56	22.61	1.32	27.09	19.69	2.8	4.63	183.86	199.97	0.19	12.13	119.5	7.11	94.3	356	361.03	1.263	0.77	0.58	0	51.25	65.93	7.17	10.53	66.51	42.83	38.98	58.94
3-Feb-24	NA	40.7	6.33	887.22	22.61	1.32	27.41	19.84	2.78	4.56	305.66	363.39	0.17	9.12	109.36	10.49	252.5	444.4	217.22	1.27	0.8	0.67	0	47.02	67.23	8.12	11.65	65.6	0	35.87	32.38
4-Feb-24	NA	22.03	14.82	996.74	22.61	1.32	25.78	21.01	2.8	4.53	246.05	386.64	0.17	9.35	110.12	10.29	135.4	467.5	201.91	1.277	0.79	0.67	0	41.98	59.85	11.92	7.34	66.16	61.57	38.83	38.33
5-Feb-24	NA	32.69	11.31	1545.03	22.61	1.32	25.85	21.62	2.8	5.36	302.72	372.1	0.17	21.43	100.5	8.43	407.3	396.1	252.84	1.269	0.81	0.72	0	39.03	61.32	9.1	5.74	67.08	0	37.23	58.88
6-Feb-24	NA	58.02	24.11	1256.69	22.61	1.32	25.56	22.18	2.81	9.01	263.2	384.32	0.17	32.65	104.32	9.15	196.8	438.5	255.06	1.295	0.8	0.67	0	30.31	55.6	11.61	5.79	67.65	62.04	38.27	50.44
7-Feb-24	NA	66.7	14.36	1466.51	22.61	1.32	25.9	21.43	2.81	11.04	208.09	350.05	0.17	40.39	113.47	9.5	148.4	399.3	228.9	1.275	0.82	0.68	0	50.08	52.42	11.02	7.43	67.81	50.22	35.89	32.43
8-Feb-24	NA	66.57	2.15	866.73	22.61	1.32	25.9	20.86	2.81	11.64	286.43	287.58	0.16	59.96	97.2	5.39	81.1	400.8	289.08	1.282	0.83	0.66	0	41.04	56.7	14.06	11.53	74.06	0	30.32	44.69
9-Feb-24	NA	70.09	5.82	939.98	22.61	1.33	27.19	23.31	2.8	12.22	183.13	134.38	0.17	73.08	108.73	0.81	60.2	350	343.98	1.274	0.82	0.63	0	33.88	53.64	12.68	13.33	76.19	96.2	34.35	23.3
10-Feb-24	NA	68.28	5.83	585.77	22.6	1.33	26.29	22.87	2.75	12.95	98.79	89.34	0.22	79.73	101.97	0.37	61.6	130.1	258.33	1.278	0.83	0.69	0	48.77	60.98	22.19	14.09	75.65	0	40.16	28.09
11-Feb-24	NA	71.25	9.36	871.38	22.6	1.33	25.45	22.79	2.72	13.53	168.04	115.02	0.22	84.69	102.68	0.49	294	308.6	313.82	1.296	0.84	0.68	25.73	39.14	59.61	19.9	12.74	75.55	0	39.06	17.6
12-Feb-24	NA	69.1	4.24	1017.61	22.6	1.34	24.9	23.12	2.74	14	272.89	173.03	0.2	90.35	91.34	0.5	39.7	210.4	358.17	1.275	0.93	0.58	0	33.87	64.17	40.2	16.51	75.4	43.76	41.23	21.82
13-Feb-24	NA	39.44	3.59	831.86	22.61	1.38	26.09	23.07	2.76	14.08	191.7	173.54	0.23	90.29	104.65	0.7	601.6	594.3	367.47	1.286	0.85	0.63	0	28.52	63.78	32.46	19.27	75.46	88.25	40.96	21.52
14-Feb-24	NA	58.68	7.15	926.1	22.61	1.39	25.87	24.63	2.78	13.84	96.13	144.56	0.25	91.88	108.5	1.86	343.6	272.4	278.93	1.276	0.78	0.64	0	34.23	55.79	18.9	16.05	75.31	0	35.91	13.81
15-Feb-24	NA	95.83	8.33	1001.77	22.61	1.39	25.37	24.23	2.79	14.01	117.92	154.25	0.22	92.82	103.96	1.35	97.6	499.4	414.6	1.297	0.89	0.63	0	31.95	60.08	14.86	16.22	79.37	33.59	29.9	22.04
16-Feb-24	NA	66.75	5.21	866.58	22.61	5.4	25.9	24.41	2.77	14.66	85.87	120	0.21	95.21	109.25	0.7	133.6	406.1	394.56	1.272	0.93	0.6	0	47.8	58.15	9.73	51.72	80.33	48.46	25.78	16.8
17-Feb-24	NA	59.04	4.85	633.26	22.61	10.58	25.73	23.55	2.8	14.43	81.92	72.73	0.21	96.07	103.63	0.41	219.7	465.8	173.68	1.28	0.83	0.63	0	35.46	63.99	16.04	48.34	80.71	0	34	8.18
18-Feb-24	NA	38.19	3.64	954.63	22.61	5.07	26.29	25.05	2.79	11.86	143.39	150.35	0.21	91.04	102.85	0.25	100.1	548.8	86.34	1.283	0.91	0.63	33.05	26.9	60.21	8.87	26.78	80.77	0	29.83	6.48
19-Feb-24	NA	37.25	5.26	871.14	22.61	1.57	27.19	25.55	2.8	123.16	174.86	136.83	0.22	79.53	100.65	0.14	2.6	526.7	108.81	0.22	0.83	0.62	7	13.69	56.83	29.86	15	80.8	3.37	0.6	6.48
20-Feb-24	NA	30.42	3.23	1119.9	22.61	1.54	27.59	25.05	2.77	243.99	176.58	170.92	0.22	91.32	97.41	0.09	-2.2	496.5	69.96	-0.008	0.8	0.67	2.22	23.51	58.72	28.56	2.33	81.07	1.03	0.42	6.48
21-Feb-24	NA	31.71	5.15	1000.14	22.61	2.8	27.51	25.35	2.77	274.42	223.49	225.34	0.24	106.77	91.61	0.19	-2.2	631.1	118.2	-0.008	0.82	0.67	2.22	28.38	53.89	0.1	2.01	79.23	1.03	0.41	17.16
22-Feb-24	NA	22.21	3.99	937.05	22.61	6.18	27.35	24.72	2.8	254.19	93.83	120.8	0.23	102.7	102.41	0.06	110.4	797.5	376.14	0.837	0.84	0.63	0	12.05	51.27	13.3	1.91	76.57	0	17.14	33.66
23-Feb-24	NA	30.77	5.48	637.27	22.61	10.18	26.67	24.7	2.81	232.52	117.27	107.38	0.25	85.1	104.05	0.04	104.9	489	409.58	1.265	0.8	0.63	0	26.31	55.53	14.91	2.69	76.7	44.13	32.5	17.07
24-Feb-24	NA	10.4	3.72	842.7	22.61	9.94	28.6	26.33	2.81	198.39	184.03	115.98	0.24	71.51	106.89	0.03	32.3	590.3	290.68	1.266	0.8	0.68	47.05	11.04	55.33	7.94	2.03	75.67	0	34.22	9.06
25-Feb-24	NA	15.33	7.92	716.73	22.61	9.69	19.56	26.95	2.81	280.02	269.11	78.4	0.25	55.75	92.38	0.08	17.9	610.4	273.27	1.268	0.83	0.68	41.93	10.64	57.46	7.56	2.03	75.41	81.19	41.13	97.47
26-Feb-24	NA	23.25	NA	591.04	22.61	7.01	2.23	20.61	2.81	300.8	NA	25.05	0.26	79.4	NA	0.32	161	616.7	396.56	1.281	0.77	0.64	0	9.32	56.48	8.14	2.45	77.24	0	40.07	53.63
27-Feb-24	NA	20.79	NA	597.44	22.61	7.37	2.39	16.03	2.8	305.53	NA	33.67	0.26	69.62	NA	0.18	92.6	623.5	371.07	1.28	0.82	0.62	0	18.29	61.57	9.14	3.03	79.95	49.96	45.45	16.76
28-Feb-24	NA	21.22	NA	559.37	22.61	7	2.48	15.35	2.81	329.56	NA	139.83	0.27	76.85	NA	0.09	33.4	333.9	287.02	1.282	0.87	0.65	0	39.18	59.77	13.77	5.8	82.75	0	40.96	25.22
29-Feb-24	NA	20.05	NA	982.26	22.62	7	2.5	15.43	2.81	316.92	NA	185.26	0.27	82.79	NA	1.43	25.1	258.3	344.89	1.269	0.79	0.62	0	20.3	59.76	13.75	5.24	83.53	0	40.79	39.45
MINIMUM	**0.13**	**10.40**	**2.15**	**470.56**	**22.60**	**1.32**	**2.23**	**15.35**	**2.72**	**4.53**	**53.43**	**25.05**	**0.16**	**9.12**	**91.34**	**0.03**	**-2.20**	**130.10**	**69.96**	**-0.01**	**0.77**	**0.58**	**0.00**	**9.32**	**51.27**	**0.10**	**1.91**	**65.60**	**0.00**	**0.41**	**6.48**
MAXIMUM	**49.70**	**95.83**	**24.11**	**1545.03**	**22.62**	**10.58**	**28.60**	**26.95**	**2.81**	**329.56**	**305.66**	**386.64**	**0.27**	**106.77**	**127.67**	**10.49**	**601.60**	**797.50**	**414.60**	**1.30**	**0.93**	**0.72**	**47.05**	**51.25**	**67.94**	**40.20**	**51.72**	**83.53**	**96.20**	**45.45**	**97.47**
AVERAGE	**24.92**	**43.72**	**7.26**	**887.57**	**22.61**	**3.84**	**22.89**	**22.39**	**2.79**	**105.20**	**181.14**	**176.65**	**0.22**	**68.53**	**104.60**	**2.64**	**134.24**	**454.16**	**283.73**	**1.12**	**0.83**	**0.64**	**5.49**	**31.59**	**59.10**	**14.63**	**12.04**	**75.35**	**25.36**	**31.70**	**30.63**

SUMMARY OF REALTIME STACK EMISSION MONITORING DATA TRANSMITTED TO TNPCB CARE AIR CENTRE																															
DAY WISE	PB 4 _ CO	PB 5 _ CO	PB 6 _ CO	PB 7 _ CO	PB 4 _ PM	PB 5 _ PM	PB 6 _ PM	PB 7 _ PM	PB 4 _ SO2	PB 5 _ SO2	PB 6 _ SO2	PB 7 _ SO2	PB 4 _ NO2	PB 5 _ NO2	PB 6 _ NO2	PB 7 _ NO2	SRP CO_ LK_1	SRP CO_ LK_2	SRP CO_ RB # 3	SRP H2S_ LK_1	SRP H2S_ LK_2	SRP H2S_ RB#3	SRP NOX_ LK_1	SRP NOX_ LK_2	SRP NOX_ RB # 3	SRP PM_ LK 1	SRP PM_ LK 2	SRP PM_ RB # 3	SRP SO2_ LK_1	SRP SO2_ LK_2	SRP SO2_ RB # 3
UOM	(mg/Nm3)																ppm									mg/Nm3			ppm		
Mar-24																															
1-Mar-24	NA	20.98	35.38	1738.24	22.62	7.02	7.4	15.93	2.81	253.77	49.96	350.35	0.27	88.81	88.13	19.62	18.2	321.9	385.54	1.275	0.84	0.63	33.51	13.02	60.9	6	6.19	89.24	83.03	39.54	21.09
2-Mar-24	NA	25.73	15.71	2860.48	22.62	7	16.36	16.04	2.82	294.49	140.02	341.71	0.27	81.55	135.29	15.05	40.2	637.5	289.96	1.288	0.78	0.71	0	6.27	61.63	6.81	5.29	88.5	0	42.7	39.53
3-Mar-24	NA	40.5	9.83	4455.17	22.61	8.19	25.21	16.79	2.81	215.76	84.08	402.39	0.22	79.83	165.95	16.64	21.4	414.4	311.56	1.262	0.81	0.69	36.59	17.02	62.53	6.74	9.58	92.49	140.27	42.78	28.18
4-Mar-24	NA	20.63	7.16	2097.77	22.61	8.66	25.04	18.41	2.8	300.64	166.24	200.18	0.26	75.28	91.91	3.3	14.8	410.4	334.71	1.269	0.77	0.63	0	8.35	59.99	7.32	14.26	95.17	72.97	44.96	49.78
5-Mar-24	NA	18.75	6.7	917.05	22.62	8.86	24.91	16.86	2.82	302.41	72.96	77.49	0.24	75.98	69.53	0	30.7	516.9	268.55	1.27	0.68	0.69	0	5	59.55	6.73	13.63	89.63	36.85	38.23	31.6
6-Mar-24	NA	27.75	5.72	3272.95	22.62	9	25.09	17.26	2.82	294.72	47.95	248.4	0.24	83.52	81.4	12.38	17	568	195.31	1.28	0.7	0.79	0	5.79	53.25	6.88	14.6	86.68	63.18	38.78	52.95
7-Mar-24	NA	23.39	4.55	3724.22	22.62	9.18	25.04	16.73	2.82	269.27	72.13	370.54	0.23	101.88	86.38	15.9	16.1	28.3	347.3	1.251	0.02	0.69	0	0.28	52.16	10.89	5.66	88.38	158.59	11	80.83
8-Mar-24	NA	22.7	49.94	2519.49	22.61	9.28	24.91	15.13	2.81	241.57	162.76	337.69	0.26	89.29	110.09	19.15	20.6	27.2	188.62	1.256	0.01	0.78	74.37	0.09	55.4	5.72	0.57	97.21	68.51	0.16	6.48
9-Mar-24	NA	14.51	10.09	3231.26	22.61	9.34	24.9	14.54	2.81	185.28	111.9	302.32	0.24	86.34	197.15	19.18	19.1	188.5	186.25	1.256	0.01	0.79	0	0.09	55.08	8.03	0.23	97.81	38.6	0.16	6.54
10-Mar-24	NA	9.95	13.41	3773.3	22.61	9.38	25.29	14.61	2.8	131.39	129.82	281.61	0.26	81.15	226.31	18.32	18.6	170.5	110	1.254	0.02	0.8	0	0.09	52.12	9.37	19.03	97.31	22.31	0.16	6.49
11-Mar-24	NA	13.06	19.28	2927.33	22.61	9.44	24.93	13.81	2.79	111.95	150.33	242.5	0.27	80.54	200.01	15.91	28.3	158.9	183.95	1.254	0.02	0.81	0	0.07	53.61	8.52	0.25	96.57	21.14	0.16	16.15
12-Mar-24	NA	16.09	23.44	3563.37	22.61	9.55	25.24	14.5	2.8	94.97	187.92	290.64	0.27	80.93	189.44	16.4	22.6	276.3	119.14	1.26	0.25	0.81	0	0.43	0	0	15.3	96.05	65.45	15.67	24.89
13-Mar-24	9.81	14.4	26.5	1837.16	22.61	9.56	24.59	10.43	2.8	163.97	151.24	161.33	0.25	97.34	198.74	13.62	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14-Mar-24	9.63	9.34	36.46	12.23	22.61	9.62	24.54	1.65	33.51	196.52	226.67	0	71.16	83.58	135.8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-Mar-24	11.06	5.92	19.46	8.88	22.61	9.66	24.46	1.59	94.7	287.97	235.96	0	198.82	66.86	96.39	0	17.5	434.2	106.09	1.243	0.74	0.79	0	8.23			14.4	94.44	45.27	36.59	53.16
16-Mar-24	10.3	15.42	14.58	9.72	22.61	26.43	24.63	0.17	97.05	244.76	253.69	0	172.62	71.6	114.1	0	16.6	570.5	155.82	1.282	0.76	0.77	0	14.86	56.76	17.72	7.59	95.07	76.54	38.91	67.44
17-Mar-24	10.55	27.66	8.68	8.45	22.61	33.14	24.84	0.03	100.12	286.36	209.91	0	153.25	73.49	126.42	0	22	380.5	240.62	1.268	0.65	0.8	0	9.14	57.46		9.55	93.89		86.22	249.33
18-Mar-24	11.19	31.38	9.72	7.69	12.68	29.27	24.85	0.03	101.45	280.57	144.23	0	161.18	91.95	91.28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19-Mar-24	10.32	27.4	12.17	29.35	6.26	29.28	24.77	1.44	101.53	182.4	206.28	0	162.2	90.76	126.16	8.36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-Mar-24	10.62	27.74	26.63	8.46	1.17	28.47	25.36	9.06	99.39	178.35	232.12	182.17	148.46	77.1	110.21	57.6	18.2	463.1	211.91	1.262	0.71	0.79	0	31.74	57.56	11.36	7.01	94.34	25.92	35.58	19.16
21-Mar-24	10.72	25.09	36.36	4.66	5.41	27.54	25.64	15.77	99.52	131.39	178.39	224.58	143.09	68.84	132.49	60.34	18.6	840	271.9	1.308	0.62	1.38	0	17.83	60.03	6.18	6.54	102.9	42.14	506.16	19.9
22-Mar-24	11.48	21.18	19.18	80.26	0.81	28.59	25.84	19.75	168.86	125.23	63.03	206.91	348.69	66.07	104.8	38.05	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23-Mar-24	10.57	17.54	16.51	139.4	0.85	29.82	25.32	24.37	249.21	174.06	63.31	264.73	0	73.74	100.12	32.96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24-Mar-24	11.32	20.22	14.57	154.58	9.38	30.56	24.93	28.81	10.08	188.84	135.89	154.72	309.62	68.52	166.72	33.98	20.9	849.4	200.55	1.303	0.59	1.39	0	11.24	60.35	8.34	11.34	95.53	38.01	29.5	14.3
25-Mar-24	10.85	22.57	15.57	109.29	11.57	32.16	24.02	31.34	1.71	220.19	279.2	248.4	308.11	70.64	140	28.71	16.5	838.6	208.02	1.262	0.62	0.75	0	11.49	57.6	7.97	8.31	96.69	46.16	37.42	23.31
26-Mar-24	11.18	27.38	20.77	41.81	12.83	30.88	23.88	33.29	113.49	191.46	285.91	234.95	337.15	64.08	126.65	13.92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27-Mar-24	8.86	27.01	24.77	111.29	14.23	26.01	24.22	32.49	76.31	131.42	307.14	102.91	369.24	56.14	146.81	3.46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28-Mar-24	10.29	19.31	28.68	38.04	15.05	26.15	24.47	31.1	91.26	89.42	262.69	121.45	328.78	57.96	162.97	20.96	19.7	537.4	234.74	1.254	2.05	2.16	0	8.51	59.45	5.44	42.64	88.8	34.45	36.27	74.61
29-Mar-24	10.2	16.75	28.65	126.53	15.9	25.71	25.43	30.72	1.15	74.29	242.12	240.65	251.47	55.09	186.35	29.13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30-Mar-24	10.22	18.42	29.41	29.08	17.43	26.09	25.46	31.19	0.72	114.39	218.37	123.5	241.72	62.7	211.8	35.04	23.4	699.2	276.11	1.243	0.3	1.95	0	3.39	50.42	4.56	2.57	88.57	101.93	27.17	37.79
31-Mar-24	10.83	13.08	52.45	7.25	66.19	26.88	25.71	31.24	0.61	135.45	238.02	94.35	215.12	59.25	214.95	38.26	22.6	671.4	186.53	1.249	0.31	0.73	0	3.47	57.55	20.72	2.66	95.02	130.4	40.88	41.93
MINIMUM	**8.86**	**5.92**	**4.55**	**4.66**	**0.81**	**7.00**	**7.40**	**0.03**	**0.61**	**74.29**	**47.95**	**0.00**	**0.00**	**55.09**	**69.53**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
MAXIMUM	**11.48**	**40.50**	**52.45**	**4455.17**	**66.19**	**33.14**	**25.84**	**33.29**	**249.21**	**302.41**	**307.14**	**402.39**	**369.24**	**101.88**	**226.31**	**60.34**	**40.20**	**849.40**	**385.54**	**1.31**	**2.05**	**2.16**	**74.37**	**31.74**	**62.53**	**20.72**	**42.64**	**102.90**	**158.59**	**506.16**	**249.33**
AVERAGE	**10.53**	**20.70**	**20.72**	**1220.80**	**18.52**	**19.06**	**24.11**	**16.94**	**47.65**	**196.56**	**171.30**	**187.31**	**126.58**	**76.16**	**139.82**	**18.91**	**14.95**	**322.68**	**161.72**	**0.90**	**0.40**	**0.66**	**4.66**	**5.69**	**38.11**	**5.70**	**7.01**	**66.46**	**43.72**	**37.06**	**31.14**

ANNEXURE III

TNPCB - WATER ANALYSIS REPORT

Report No. DEL/DGL/860

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur.
2. Date and time of Collection : 21.02.2024 at 12.20PM - 12.40PM
3. Date and time of Receipt at Laboratory : 21.02.2024 at 04.45PM.
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 5 Nos.
5. Nature and Number of Samples : Five Nos. of Trade Effluent Samples.

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
315/AEE/KAR	2090	Low BOD Stream	Untreated
316/AEE/KAR	2091	Inlet of ASL Combined Effluent (Low & High BOD)	Partially treated
317/AEE/KAR	2092	Secondary Clarifier Outlet of ETP	Treated
318/AEE/KAR	2093	Seepage Canal	-----
319/AEE/KAR	2094	High BOD Stream	Untreated

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul

Sl.No	Parameters	LAB Code	2090	2091	2092	2093	2094
		DEE Code	315/AEE/KAR	316/AEE/KAR	317/AEE/KAR	318/AEE/KAR	319/AEE/KAR
1.	pH		6.03	6.74	7.75	7.83	4.74
2.	Total Suspended Solids (mg/l)		764	316	22	08	1920
3.	Total Dissolved Solids at 180° (mg/l)		2216	2252	1284	1064	2060
4.	Chloride (as Cl) (mg/l)		965	1010	735	440	710
5.	Sulphate (as SO_4) (mg/l)		597	499	290	248	224
6.	BOD 3 days at 27^0 C (mg/l)		836	300	18	06	2350
7.	Chemical Oxygen Demand (mg/l)		3320	1280	176	48	9280
8.	Ammonical Nitrogen (mg/l)		59.9	31.9	<5.0	<5.0	75.6
9.	Total Kjeldhal Nitrogen (mg/l)		90.7	52.6	<5.0	<5.0	107.5
10.	Sulphide (as S) (mg/l)		8.8	4.0	<1.0	<1.0	9.6
11.	Phenolic Compounds (as Phenol) (mg/l)		0.087	0.043	<0.005	<0.005	0.097
12.	Percent Sodium (%)		25	23	18	21	24

End of the Report

24/20/8/24
Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Report No. DEL/DGL/773

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur.
2. Date and time of Collection : 24.01.2024 at 12.25PM - 12.45PM
3. Date and time of Receipt at Laboratory : 24.01.2024 at 05.30PM.
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 5 Nos.
5. Nature and Number of Samples : Five Nos. of Trade Effluent Samples

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
274/AEE/KAR	1866	Low BOD Stream	Untreated
275/AEE/KAR	1867	Inlet of ASL Combined Effluent (Low & High BOD)	Partially treated
276/AEE/KAR	1868	Secondary Clarifier Outlet of ETP	Treated
277/AEE/KAR	1869	Seepage Canal	-------
278/AEE/KAR	1870	High BOD Stream	Untreated

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Sl.No	Parameters	LAB Code	1866	1867	1868	1869	1870
		DEE Code	274/AEE/KAR	275/AEE/KAR	276/AEE/KAR	277/AEE/KAR	278/AEE/KAR
1.	pH		6.19	6.85	7.78	8.10	4.18
2.	Total Suspended Solids (mg/l)		376	232	16	20	1750
3.	Total Dissolved Solids at 180° C (mg/l)		2428	2256	1392	1428	2040
4.	Chloride (as Cl) (mg/l)		1710	1685	665	680	810
5.	Sulphate (as SO_4) (mg/l)		235	392	235	315	393
6.	BOD 3 days at 27^0 C (mg/l)		340	124	14	07	1834
7.	Chemical Oxygen Demand (mg/l)		1280	720	96	40	5600
8.	Ammonical Nitrogen (mg/l)		48.2	30.2	6.78	<5.0	74.5
9.	Total Kjeldhal Nitrogen (mg/l)		81.86	64.40	20.16	7.8	95.8
10.	Sulphide (as S) (mg/l)		9.6	8.8	<1.0	<1.0	64.0
11.	Phenolic Compounds (as Phenol) (mg/l)		0.089	0.084	<0.0005	<0.0005	0.15
12.	Percent Sodium (%)		24	16	23	30	28

End of the Report

28/05/2024

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Report No. DEL/DGL/720

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur.
2. Date and time of Collection : 29.12.2023.at 12.25PM - 12.45PM
3. Date and time of Receipt at Laboratory : 29.12.2023at 4.45PM.
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 5 Nos.
5. Nature and Number of Samples : Five Nos. of Trade Effluent Samples

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
223/AEE/KAR	1720	Low BOD Stream	Untreated
224/AEE/KAR	1721	Inlet of ASL Combined Effluent (Low & High BOD)	Partially treated
225/AEE/KAR	1722	Secondary Clarifier Outlet of ETP	Treated
226/AEE/KAR	1723	Seepage Canal	-------
227/AEE/KAR	1724	High BOD Stream	Untreated

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Sl.No	Parameters	LAB Code	1720	1721	1722	1723	1724
		DEE Code	223/AEE/KAR	224/AEE/KAR	225/AEE/KAR	226/AEE/KAR	227/AEE/KAR
1.	pH		6.39	6.82	7.96	8.11	4.51
2.	Total Suspended Solids	(mg/l)	180	154	30	22	1340
3.	Total Dissolved Solids at 180° C	(mg/l)	1812	2372	1602	1588	1880
4.	Chloride (as Cl)	(mg/l)	785	660	315	605	815
5.	Sulphate (as SO_4)	(mg/l)	290	336	89	398	436
6.	BOD 3 days at 27^0 C	(mg/l)	135	151	09	18	736
7.	Chemical Oxygen Demand	(mg/l)	400	456	72	112	2200
8.	Ammonical Nitrogen	(mg/l)	31.36	22.96	5.6	<5.0	37.52
9.	Total Kjeldhal Nitrogen	(mg/l)	66.08	49.84	12.3	6.72	77.28
10.	Sulphide (as S)	(mg/l)	3.2	1.6	1.6	1.2	14.8
11.	Phenolic Compounds (as Phenol)	(mg/l)	0.18	0.047	<0.0005	<0.0005	0.07
12.	Percent Sodium	(%)	15	13	13	10	17

End of the Report

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Report No. DEL/DGL/627

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur.
2. Date and time of Collection : 28.11.2023 at 11.25 AM to 11.45 AM.
3. Date and time of Receipt at Laboratory : 28.11.2023 at 04.00 PM.
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 5 Nos.
5. Nature and Number of Samples : Five Nos. of Trade Effluent Samples

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
192/AEE/KAR	1489	Low BOD Stream	Untreated
193/AEE/KAR	1490	Inlet of ASL Combined Effluent (Low & High BOD)	Partially treated
194/AEE/KAR	1491	Secondary Clarifier Outlet of ETP	Treated
195/AEE/KAR	1492	Seepage Canal	-------
196/AEE/KAR	1493	High BOD Stream	Untreated

28/11/23
Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Sl.No	Parameters	LAB Code	1489	1490	1491	1492	1493
		DEE Code	192/AEE/KAR	193/AEE/KAR	194/AEE/KAR	195/AEE/KAR	196/AEE/KAR
1.	pH		5.97	6.90	7.95	8.01	4.35
2.	Total Suspended Solids	(mg/l)	382	168	68	12	1028
3.	Total Dissolved Solids at 180° C	(mg/l)	2324	1956	1444	1382	2344
4.	Chloride (as Cl)	(mg/l)	840	640	420	510	540
5.	Sulphate (as SO_4)	(mg/l)	522	186	281	368	292
6.	BOD 3 days at 27^0 C	(mg/l)	648	365	43.2	4.4	`386
7.	Chemical Oxygen Demand	(mg/l)	3840	1456	216	40	7680
8.	Ammonical Nitrogen	(mg/l)	41.4	62.7	19	<5.0	66.1
9.	Total Kjeldhal Nitrogen	(mg/l)	71.7	90.7	41.4	6.16	121.0
10.	Sulphide (as S)	(mg/l)	6.4	10.4	1.6	<1.0	24
11.	Phenolic Compounds (as Phenol)	(mg/l)	0.074	0.083	0.018	<0.0005	0.098
12.	Percent Sodium	(%)	33	42	31	28	36

End of the Report

28/25/1/24
Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Report No. DEL/DGL/546

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur.
2. Date and time of Collection : 26.10.2023 at 11.25 AM to 11.50 AM.
3. Date and time of Receipt at Laboratory : 26.10.2023 at 04.25 PM.
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 6 Nos.
5. Nature and Number of Samples : Five Nos. of Trade Effluent Samples & One No. of Sewage Sample.

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
174/AEE/KAR	1291	Low BOD Stream	Untreated
175/AEE/KAR	1292	Inlet of ASL Combined Effluent (Low & High BOD)	Partially treated
176/AEE/KAR	1293	Secondary Clarifier Outlet of ETP	Treated
177/AEE/KAR	1294	Seepage Canal	-------
178/AEE/KAR	1295	High BOD Stream	Untreated
179/AEE/KAR	1296	Outlet of Colony STP	Treated

30/10/2023

Env.Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Sl.No	Parameters	LAB Code	1291	1292	1293	1294	1295	1296
		DEE Code	174/AEE/KAR	175/AEE/KAR	176/AEE/KAR	177/AEE/KAR	178/AEE/KAR	179/AEE/KAR
1.	pH		8.23	8.55	7.95	7.97	4.76	7.41
2.	Total Suspended Solids	(mg/l)	348	108	32	08	1860	08
3.	Total Dissolved Solids at 180° C	(mg/l)	2868	1640	1208	1708	1700	-
4.	Chloride (as Cl)	(mg/l)	990	480	350	490	410	-
5.	Sulphate (as SO_4)	(mg/l)	370	534	169	414	181	-
6.	BOD 3 days at 27° C	(mg/l)	624	86	26	15	2730	03
7.	Chemical Oxygen Demand	(mg/l)	2200	576	264	104	8320	48
8.	Ammonical Nitrogen	(mg/l)	52.6	39.8	13.4	<5.0	94.1	<5.0
9.	Total Kjeldhal Nitrogen	(mg/l)	70.7	55.4	23.5	14	108.1	-
10.	Sulphide (as S)	(mg/l)	10.4	2.4	1.2	<1.0	18.4	-
11	Total Nitrogen (as N)	(mg/l)	-	-	-	-	-	0.89
12.	Phenolic Compounds (as Phenol)	(mg/l)	0.150	0.084	<0.0005	<0.0005	0.163	-
13.	Percent Sodium	(%)	35	27	29	26	31	-
14.	Fecal Coliform	(mg/l)	*	*	*	*	*	-

***Fecal Coliform – Facility is not available.**

End of the Report

20/4/2023

Env.Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB – WATER ANALYSIS TEST REPORT

CHENNAI TESTING LABORATORY PRIVATE LIMITED
Testing redefined
CIN: U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-38345/2023-24 & 03.04.2024**
Sample Number	**N-38345/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Effluent Water**
Sampling Location	**High BOD Stream - Inlet**
GPS Reading	**11°03'19.32''N & 77°59'56.616''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	5.1
2	Colour	IS : 3025 (Part 4)- 2021	HU	500
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3640
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	3880
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	4798
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	6124
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	511
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	383
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	32
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	83
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	66
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	58.68
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	31.2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38346/2023-24 & 03.04.2024**
Sample Number	**N-38346/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Effluent Water**
Sampling Location	**Low BOD Stream - Inlet**
GPS Reading	**11°03'16.446''N & 77°59'50.595''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	6.6
2	Colour	IS : 3025 (Part 4)- 2021	HU	100
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3620
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	895
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	646
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	1640
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	938
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	546
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	12
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	36
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	27
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	66.80
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	7.2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38347/2023-24 & 03.04.2024**
Sample Number	**N-38347/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Effluent Water**
Sampling Location	**Inlet to ASL**
GPS Reading	**11°03'9.941''N & 77°59'54.337''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.3
2	Colour	IS : 3025 (Part 4)- 2021	HU	100
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2940
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	372
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	178
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	636
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	627
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	412
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	5.9
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	20.6
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	11.8
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	56.85
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	4.5

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38348/2023-24 & 03.04.2024**
Sample Number	**N-38348/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Seepage Water**
Sampling Location	**Seepage Canal**
GPS Reading	**11°03'17.578''N & 78°00'15.442''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	10
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3050
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	25
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	4
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	20
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	738
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	466
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	1.2
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	5.6
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	3.4
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	59.85
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)

BDL - Below Detection Limit; DL - Detection limit;

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt ltd

Verified by

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38349/2023-24 & 03.04.2024**
Sample Number	**N-38349/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805''N & 77°59'59.05''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2040	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	37	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	17	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	148	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	669	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	398	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	2.1	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	9.4	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	5.3	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	35.29	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

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TEST REPORT

Test Report No & Date	CTL/CH/N-38349/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	55.63	-
17	AOX	EPA 1653,5021&8260	mg/l	4.5	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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ANNEXURE IV

ONLINE – WATER QUALITY WATCH MONITORING DATA

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Oct-23				
01-10-2023	4.68	41.81	13.14	8.27
02-10-2023	4.34	38.64	19.55	8.24
03-10-2023	4.51	40.27	19.88	8.27
04-10-2023	5.22	46.7	20.43	8.25
05-10-2023	4.38	39.05	17.12	8.23
06-10-2023	3.49	30.85	18.06	8.09
07-10-2023	5.01	44.75	24.63	8.15
08-10-2023	5.16	46.26	24.34	8.23
09-10-2023	4.77	42.66	23.72	8.13
10-10-2023	3.65	32.34	19.75	8.07
11-10-2023	3.46	30.55	14.5	8.13
12-10-2023	4.66	41.61	21.15	8.22
13-10-2023	4.77	42.69	18.51	8.18
14-10-2023	4.69	41.87	20.1	8.18
15-10-2023	4.05	36.06	11.38	8.16
16-10-2023	4.84	43.22	19.69	8.2
17-10-2023	4.33	38.69	29.22	8.02
18-10-2023	3.76	33.31	20.33	8.03
19-10-2023	4.51	40.15	16.17	8.14
20-10-2023	4.8	42.94	18.66	8.21
21-10-2023	4.7	41.97	11.77	8.24
22-10-2023	5.38	48.25	15.41	8.28
23-10-2023	5.13	45.86	17.49	8.26
24-10-2023	5.94	53.33	19.76	8.31
25-10-2023	5.17	46.24	12.21	8.31
26-10-2023	4.6	41.01	10.03	8.32
27-10-2023	3.95	35.01	16.73	8.23
28-10-2023	4.73	42.29	20.04	8.25
29-10-2023	5.89	52.95	19.92	8.28
30-10-2023	6.91	62.44	20.18	8.32
31-10-2023	4.77	42.62	13.2	8.22
MINIMUM	**3.46**	**30.55**	**10.03**	**8.02**
MAXIMUM	**6.91**	**62.44**	**29.22**	**8.32**
AVERAGE	**146.25**	**1306.39**	**567.07**	**254.42**

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Nov-23				
01-11-2023	5.08	45.4	21.6	8.21
02-11-2023	6.06	54.4	16.63	8.26
03-11-2023	7.37	66.63	20.12	8.29
04-11-2023	6.38	57.44	15.21	8.33
05-11-2023	5.75	51.7	12.63	7.99
06-11-2023	4.82	42.99	14.64	8.13
07-11-2023	6.06	54.63	16.53	8.29
08-11-2023	6.48	58.32	13.12	8.27
09-11-2023	6.33	57.02	16.4	8.23
10-11-2023	7.18	64.76	24.43	8.28
11-11-2023	7.46	67.46	27.07	8.33
12-11-2023	8.05	72.84	18.63	8.35
13-11-2023	8.9	80.79	19.7	8.38
14-11-2023	7.08	63.99	17.53	8.23
15-11-2023	7.02	63.4	20.33	7.91
16-11-2023	7.1	64.21	21.84	8.07
17-11-2023	5.28	47.27	14.4	8.11
18-11-2023	8.26	74.73	18.9	8.25
19-11-2023	9.04	82.11	16.94	7.85
20-11-2023	7.83	70.84	18.07	8.05
21-11-2023	9.33	84.79	19.29	8.15
22-11-2023	6.66	59.92	15.33	8.05
23-11-2023	7.43	67.11	16.04	8.26
24-11-2023	8.33	75.38	19.41	8.34
25-11-2023	7.47	67.59	17.03	8.21
26-11-2023	6.45	58.06	15.14	8.27
27-11-2023	7.2	65.08	17.6	7.88
28-11-2023	7.89	71.15	19.73	7.94
29-11-2023	11.06	100.59	18.65	8.25
30-11-2023	12.21	111.24	20.16	8.24
MINIMUM	**4.82**	**42.99**	**12.63**	**7.85**
MAXIMUM	**12.21**	**111.24**	**27.07**	**8.38**
AVERAGE	**7.39**	**66.73**	**18.10**	**8.18**

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Dec-23				
01-12-2023	11.48	104.46	19.3	8.23
02-12-2023	10.73	97.55	17.97	8.24
03-12-2023	10.85	98.75	20.92	8.2
04-12-2023	9.03	81.92	22.5	8.2
05-12-2023	8.56	77.69	23.72	8.2
06-12-2023	10.37	94.14	22.4	8.16
07-12-2023	11.19	101.88	15.07	8.17
08-12-2023	11.62	105.79	21.76	8.16
09-12-2023	12.27	111.76	16.76	8.17
10-12-2023	11.12	101.28	14.18	8.18
11-12-2023	11.46	104.27	14.11	8.19
12-12-2023	11.35	103.37	14.55	8.19
13-12-2023	10.19	92.64	12.98	8.18
14-12-2023	10.28	93.53	13.57	8.16
15-12-2023	11.36	103.41	14.92	8.17
16-12-2023	10.66	96.97	14.32	8.15
17-12-2023	10.47	95.26	14.47	8.15
18-12-2023	10.6	96.54	14.76	8.2
19-12-2023	11.33	103.19	18.71	8.21
20-12-2023	10.09	91.83	13.83	8.22
21-12-2023	10.58	96.24	14	8.19
22-12-2023	10.17	92.51	15.27	8.17
23-12-2023	11.37	103.53	19.42	8.14
24-12-2023	12.1	110.31	21.47	8.13
25-12-2023	10.52	95.65	17.32	8.13
26-12-2023	12.03	109.58	20.1	8.11
27-12-2023	11.01	100.21	19.83	8.07
28-12-2023	11.68	106.3	19.15	8.09
29-12-2023	11.13	101.22	18.42	8.07
30-12-2023	10.47	95.15	17.23	8.05
31-12-2023	10.19	92.58	18.08	8.04
MINIMUM	**8.56**	**77.69**	**12.98**	**8.04**
MAXIMUM	**12.27**	**111.76**	**23.72**	**8.24**
AVERAGE	**10.85**	**98.69**	**17.45**	**8.16**

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Jan-24				
01-01-2024	11.71	106.7	21.82	8.03
02-01-2024	9.57	86.86	16.25	8.04
03-01-2024	10.41	94.58	17.93	8.05
04-01-2024	10.3	93.64	17.22	8.06
05-01-2024	10.45	95	15.72	8.05
06-01-2024	9.5	86.31	14.26	8.1
07-01-2024	9.28	84.2	17.44	8.09
08-01-2024	8.36	75.67	22.62	7.83
09-01-2024	10.1	91.76	20.28	8.08
10-01-2024	10.81	98.27	24.65	8.07
11-01-2024	10.06	91.47	17.71	8.08
12-01-2024	10.06	91.3	17.97	8.12
13-01-2024	10.06	91.45	16.82	8.15
14-01-2024	8.96	81.44	14.74	8.15
15-01-2024	5.76	51.74	11.31	8.18
16-01-2024	5.27	47.2	8.7	8.09
17-01-2024	6.4	57.53	15.8	8.1
18-01-2024	7.82	70.9	20.82	8.09
19-01-2024	5.42	48.63	17.36	8.07
20-01-2024	10.91	99.04	27.56	8.14
21-01-2024	6.44	58.18	21.79	7.72
22-01-2024	7.64	69.13	26.61	8.07
23-01-2024	5.33	48.37	24.16	7.91
24-01-2024	6.07	54.59	26.99	7.77
25-01-2024	7.21	65.17	26.83	7.96
26-01-2024	7.33	66.34	22.61	7.91
27-01-2024	8.01	72.6	23.48	7.97
28-01-2024	8.8	79.86	22.13	8.11
29-01-2024	8.56	77.78	17.13	7.85
30-01-2024	8.53	77.33	15.33	8.01
31-01-2024	8.19	74.26	17.61	8.15
MINIMUM	**5.27**	**47.20**	**8.70**	**7.72**
MAXIMUM	**11.71**	**106.70**	**27.56**	**8.18**
AVERAGE	**8.49**	**77.01**	**19.41**	**8.03**

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Feb-24				
01-02-2024	10.52	95.62	17.84	7.82
02-02-2024	12.3	112.19	16.14	7.55
03-02-2024	10.55	96.04	17.59	7.45
04-02-2024	7.19	65.18	19.13	7.63
05-02-2024	6.18	55.65	18.29	8.08
06-02-2024	7.04	63.64	20.15	8.05
07-02-2024	8.28	75.11	20.93	8.01
08-02-2024	11.05	100.44	25.94	8.08
09-02-2024	12.41	113.19	21.66	8.06
10-02-2024	12.74	112.88	22.42	8.07
11-02-2024	11.23	102.4	20.3	8.08
12-02-2024	10.07	91.55	19.28	8.03
13-02-2024	10.99	100.18	22.17	8.05
14-02-2024	9.53	86.74	21.07	8.06
15-02-2024	10.59	96.5	21.93	8.07
16-02-2024	10.4	94.57	25.19	8.06
17-02-2024	11.3	99.55	22.45	8.07
18-02-2024	10.06	91.59	19.43	8.05
19-02-2024	11.79	107.4	24.63	8.05
20-02-2024	11.89	108.36	26.22	8.05
21-02-2024	11.45	104.37	24.66	8.01
22-02-2024	11.76	107.26	28.78	8
23-02-2024	11.38	103.76	34.18	7.98
24-02-2024	11.51	104.98	34.48	8
25-02-2024	10.75	97.97	19.96	8.02
26-02-2024	9.88	89.86	18.5	8
27-02-2024	10.7	97.54	20.1	8.01
28-02-2024	9.6	87.49	18.23	8.07
29-02-2024	8.37	75.91	13.81	8.13
MINIMUM	**6.18**	**55.65**	**13.81**	**7.45**
MAXIMUM	**12.74**	**113.19**	**34.48**	**8.13**
AVERAGE	**10.40**	**94.41**	**21.91**	**7.99**

TNPL *TAMILNADU NEWSPRINT AND PAPERS LIMITED*

ONLINE WATER QUALITY WATCH MONITORING DATA

Date	ETP_1_OUTLET-BOD (mg/l)	ETP_1_OUTLET-COD (mg/l)	ETP_1_OUTLET-TSS (mg/l)	ETP_1_OUTLET-pH
Mar-24				
01-03-2024	7.56	68.67	11.61	8.1
02-03-2024	6.39	57.74	9.65	8.13
03-03-2024	6.76	61.14	10.52	8.14
04-03-2024	8.49	77	12.72	8.1
05-03-2024	10.48	95.39	16.73	8.13
06-03-2024	10.74	97.88	17.88	8.12
07-03-2024	10.54	95.96	16.65	8.12
08-03-2024	11.39	103.97	18.4	8.1
09-03-2024	8.82	80.18	13.62	8.15
10-03-2024	7.92	71.81	14.36	8.14
11-03-2024	8.37	75.99	13.01	8.12
12-03-2024	10.26	93.32	20.62	8.15
13-03-2024	10.33	93.97	23.25	8.15
14-03-2024	8.72	79.33	22.76	8.14
15-03-2024	7.55	68.34	15.46	8.15
16-03-2024	9.2	83.68	19.22	8.11
17-03-2024	11.99	109.39	28.21	8.11
18-03-2024	10.95	99.62	24.66	8.11
19-03-2024	8.22	74.8	19.98	8.12
20-03-2024	8.38	76.08	21.7	8.13
21-03-2024	8.8	79.73	20.65	8.13
22-03-2024	8.36	75.82	19.9	8.14
23-03-2024	7.88	71.69	18.31	8.15
24-03-2024	7.03	63.41	14.26	8.18
25-03-2024	8.89	80.81	18.47	8.18
26-03-2024	8.46	76.82	16.67	8.18
27-03-2024	8.56	77.65	16.2	8.21
28-03-2024	6.71	60.62	13.65	8.21
29-03-2024	10.11	91.89	21.48	8.2
30-03-2024	8.48	76.95	14.42	8.2
31-03-2024	8.25	74.93	14.77	8.18
MINIMUM	**6.39**	**57.74**	**9.65**	**8.10**
MAXIMUM	**11.99**	**109.39**	**28.21**	**8.21**
AVERAGE	**8.86**	**80.47**	**17.41**	**8.14**

ANNEXURE V

TNPCB - GROUND WATER ANALYSIS REPORT

Report No. DEL/DGL/722

Tamil Nadu Pollution Control Board

DISTRICT ENVIRONMENTAL LABORATORY, DINDIGUL-624 004.

REPORT OF ANALYSIS

1. Name and Address of the Sender : The District Environmental Engineer, Tamil Nadu Pollution Control Board, Karur – 1.
2. Date and time of Collection : 29.12.2023 at 1.05PM - 01.45PM.
3. Date and time of Receipt at Laboratory : 29.12.2023 at 4.45PM
4. Condition of Seals, Fastening and Container : Sealed and Fastened Condition in Polythene Carbuoy of 2.5 Lit x 09 Nos.
5. Nature and Number of Samples : Nine Nos. of Open Well Water Samples.

DEE Code No.	Lab Code No.	Point of Collection	T/UT/PT/NM
230/AEE/KAR	1727	Palamapuram Bhagavathi Amman temple irrigation open well	------
231/AEE/KAR	1728	Periyasamy open well	------
232/AEE/KAR	1729	Ponnusamy Irrigation open well	------
233/AEE/KAR	1730	Pandipalayam Hand pump	------
234/AEE/KAR	1731	Pandipalayam Open well	------
235/AEE/KAR	1732	Moolimangalam Pandipalayam Road (Rasappan Open Well)	------
236/AEE/KAR	1733	E.Palanisamy Open Well	------
237/AEE/KAR	1734	Thangavelu Open Well	------
238/AEE/KAR	1735	Periyasamy open well Sakthi pallam	------

21/02/2024

Environmental Scientist

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

Sl. No	Parameters	LAB Code	1727	1728	1729	1730	1731	1732	1733	1734	1735
		DEE Code	230/AEE/ KAR	231/AEE/ KAR	232/AEE/ KAR	233/AEE/ KAR	234/AEE/ KAR	235/AEE/ KAR	236/AEE/ KAR	237/AEE/ KAR	238/AEE/ KAR
1.	pH		7.10	7.35	7.03	7.79	7.36	7.53	7.48	7.51	6.83
2.	Total Suspended Solids	(mg/l)	08	08	10	08	06	08	04	06	06
3.	Total Dissolved Solids at 180° C	(mg/l)	2908	3008	3636	2512	2876	2436	2062	2040	4372
4.	Chloride (as Cl)	(mg/l)	1260	1415	1500	950	1100	985	720	655	1896
5.	Sulphate (as SO_4)	(mg/l)	113	237	316	203	303	229	436	380	208
6.	BOD 3 days at 27° C	(mg/l)	03	03	04	03	03	03	<2.0	04	03
7.	Chemical Oxygen Demand	(mg/l)	24	16	32	24	32	32	16	32	16
8.	Fluoride (as F)	(mg/l)	1.13	1.11	1.04	<1.0	<1.0	<1.0	1.01	1.06	<1.0
9.	Alkalinity (as $CaCO_3$)	(mg/l)	180	164	196	120	180	120	136	148	186
10.	Total Hardness	(mg/l)	1370	1310	1600	990	1070	1050	830	830	1400
11.	Calcium (as Ca)	(mg/l)	501	397	537	244	301	305	208	212	372
12.	Magnesium (as Mg)	(mg/l)	126	151	143	92	78	76	75	69	114
13.	Percent Sodium	(%)	26	31	30	33	26	25	28	28	29
14.	IronTotal(asFe)	(mg/l)	0.054	0.065	0.097	0.053	0.071	0.045	0.031	0.062	0.066

End of the Report

21/02/2024

Environmetal Scientist

21/02/2024

Deputy Chief Scientific Officer,
DEL, TNPC Board, Dindigul.

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB – GROUND WATER ANALYSIS TEST REPORT

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

www.ctllabs.in

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38336/2023-24 & 03.04.2024**
Sample Number	**N-38336/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Palamapuram Bhagavathi Amman Temple Irrigation Open Well**
GPS Reading	**11°01'11.259''N & 78°00'42.063''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	2
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3390
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	130
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	1133
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.31
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.29
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	108
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	660
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	447
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	768
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	3
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

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CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined
CIN: U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-38336/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	7.5
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	73
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	6.9
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	68.66
24	Sodium absorption ratio	IS 11624 – 2019	-	13.62
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

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CHENNAI TESTING LABORATORY PRIVATE LIMITED

www.ctllabs.in

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38337/2023-24 & 03.04.2024**
Sample Number	**N-38337/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Periyasamy Open Well, Sakthipallam**
GPS Reading	**11°00'54.519''N & 77°59'28.836''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.3
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	1
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	4030
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	381
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	1226
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.27
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.26
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	133
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	736
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	618
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	1497
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	2
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

Verified by

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CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined
www.ctllabs.in
CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	CTL/CH/N-38337/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	9.4
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	70
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	7.0
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	55.49
24	Sodium absorption ratio	IS 11624 – 2019	-	10.22
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38338/2023-24 & 03.04.2024**
Sample Number	**N-38338/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Ponnusamy Irrigation Open Well**
GPS Reading	**11°00'55.553''N & 77°59'24.75''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.9
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	< 1
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3150
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	259
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	924
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.26
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.22
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	160
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	575
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	490
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	1304
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	< 2
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

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TEST REPORT

Test Report No & Date	CTL/CH/N-38338/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	5.4
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	47
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	7.1
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	53.93
24	Sodium absorption ratio	IS 11624 – 2019	-	8.84
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38339/2023-24 & 03.04.2024**
Sample Number	**N-38339/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Pandipalayam Hand Pump**
GPS Reading	**11°01'39.44''N & 77°59'44.61''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.8
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	2
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2920
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	170
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	808
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.28
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.23
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	81
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	544
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	692
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	757
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	3
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

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TEST REPORT

Test Report No & Date	CTL/CH/N-38339/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	7.6
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	43
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	7.0
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	62.80
24	Sodium absorption ratio	IS 11624 – 2019	-	9.96
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38340/2023-24 & 03.04.2024**
Sample Number	**N-38340/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Rasappan Open Well, Moolimangalam**
GPS Reading	**11°01'47.588''N & 77°59'44.078''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.9
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	2
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2940
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	134
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	892
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.34
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.39
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	81
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	544
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	596
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	667
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	4
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

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Authorised Signatory
A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

TEST REPORT

Test Report No & Date	CTL/CH/N-38340/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	5.8
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	52
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	6.9
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	66.91
24	Sodium absorption ratio	IS 11624 – 2019	-	11.49
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38341/2023-24 & 03.04.2024**
Sample Number	**N-38341/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**E.Palanisamy Open Well**
GPS Reading	**11°00'49.21''N & 78°05'44.31''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.7
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	1
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	4850
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	251
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	1728
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.35
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.27
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	147
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	927
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	383
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	1231
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	2
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38341/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	11.5
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	95
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	7.1
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	68.26
24	Sodium absorption ratio	IS 11624 – 2019	-	16.57
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

*****END OF REPORT*****

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38342/2023-24 & 03.04.2024**
Sample Number	**N-38342/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Pandipalayam Open Well**
GPS Reading	**11°01'28.085''N & 77°59'45.562''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.6
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	1
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2670
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	219
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	957
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.36
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.27
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	65
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	80
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	596
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	810
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	2
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38342/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	9.7
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	54
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	6.9
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	64.44
24	Sodium absorption ratio	IS 11624 – 2019	-	11.19
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38343/2023-24 & 03.04.2024**
Sample Number	**N-38343/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Thangavelu Open Well**
GPS Reading	**11°00'57.235''N & 77°59'48.272''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	2
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.7
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	4
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2680
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	231
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	734
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.41
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.57
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	59
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	454
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	671
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	819
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	7
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	CTL/CH/N-38343/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	3.60
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	40
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	6.5
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	58.70
24	Sodium absorption ratio	IS 11624 – 2019	-	8.64
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38344/2023-24 & 03.04.2024**
Sample Number	**N-38344/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ground Water
Sample Description	**Ground Water**
Sampling Location	**Periyasamy Open Well, Thathampalayam**
GPS Reading	**11°01'36.904''N & 78°00'47.622''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
1	Colour	IS : 3025 (Part 4)- 2021	HU	5
2	Odour	IS : 3025 (Part 5) - 2018	-	Agreeable
3	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.7
4	Taste	IS 3025 (Part 8)-1984 (R.2017)	-	Disagreeable
5	Turbidity	IS 3025 (Part 10)-1984 (R.2017)	NTU	4
6	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	3640
7	Calcium as Ca	IS 3025 (Part 40)-1991 (R.2019)	mg/l	283
8	Chloride as Cl^-	IS 3025 (Part 32)-1988 (R.2019)	mg/l	1115
9	Fluoride as F	IS 3025 (Part 60)-2008 (R.2019)	mg/l	0.31
10	Iron as Fe	IS 3025 (Part 53)-2003 (R.2019)	mg/l	0.74
11	Magnesium as Mg	IS 3025 (Part 46)-1994 (R.2019)	mg/l	93
12	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/Sec 1) 2022	mg/l	BDL(DL:0.001)
13	Sulphate as SO_4	IS 3025 (Part 24/Sec -1) - 2022	mg/l	693
14	Total Alkalinity as $CaCO_3$	IS 3025 (Part 23)-1986 (R.2019)	mg/l	554
15	Total Hardness as $CaCO_3$	IS 3025 (Part 21)-2009 (R.2019)	mg/l	1088
16	Cyanide as CN	IS 3025 (Part 27/Sec-1) - 2021	mg/l	BDL(DL:0.01)
17	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	6
18	Chromium as Cr	IS 3025 (Part 52)-2003 (RA.2019)	mg/l	BDL(DL:0.01)
19	Mercury as Hg	IS 3025 (Part 48)-1994 (RA.2019)	mg/l	BDL(DL:0.001)
20	Arsenic as As	IS 3025 (Part 37)-1988(RA.2019)	mg/l	BDL(DL:0.001)

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

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TEST REPORT

Test Report No & Date	CTL/CH/N-38344/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS
18	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	< 2
19	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	< 4
20	Nitrate Nitrogen as N	IS 3025 (Part 34)-1988 (R.2019)	mg/l	8.2
21	Potassium as K	IS 3025 (Part 45)-1993 (RA.2019)	mg/l	63
22	Dissolved Oxygen	IS 3025 (Part 38) - 1989 (RA.2019)	mg/l	6.7
23	Percent Sodium	CTL/SOP/WATER/60-2022	%	60.35
24	Sodium absorption ratio	IS 11624 – 2019	-	10.78
25	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2

BDL - Below Detection Limit; DL - Detection limit;

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

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ANNEXURE VI

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB - AOX AND TOC TEST REPORT

INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (WM)

14.5.2024

Shami Ahmed 18/5/24

Thro' DGM (R&D)

AOX & TOC analysis report of final treated effluent water sample collected on **26.3.2024**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	27861
2	Paper Production	Tons	1364.81
3	AOX generated per ton of Paper	kg/t	0.09
4	TOC generated per ton of Paper	kg/t	1.14

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R. S. Tamilarasan
AGM (LAB)

CC:

CGM (O) – I /c
AGM (ENV)
CM (ENV) ✓
File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
CIN: U93000TN2000PTC043869

ilac-MRA

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38349/2023-24 & 03.04.2024**
Sample Number	**N-38349/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.1°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2040	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	37	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	17	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	148	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	669	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	398	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	2.1	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	9.4	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	5.3	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	35.29	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

TEST REPORT

Test Report No & Date	CTL/CH/N-38349/2023-24 & 03.04.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	55.63	-
17	AOX	EPA 1653,5021&8260	mg/l	4.5	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Pdn- ~~to~~ 1364.8101
flow- 27869.

Aox = ·0.09

TOC = 1.14

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INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (Env)

19.3.2024

Shamim Ahmed 19/3/24

Thro' DGM (R&D)

AOX & TOC analysis report of final treated effluent water sample collected on **22.2.2024**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	26876
2	Paper Production	Tons	1058.32
3	AOX generated per ton of Paper	kg/t	0.10
4	TOC generated per ton of Paper	kg/t	0.90

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R. S. Tamilarasan
AGM (LAB)

CC:

CGM (O) – I /c
AGM (ENV)
CM (ENV)
File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
CIN : U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-36807/2023-24 & 06.03.2024**
Sample Number	**N-36807/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	22.02.2024
Sample Received on	24.02.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 31.5°C and Humidity- 57.0%
Equipment used for Sampling	NA
Analysis Started on	24.02.2024
Analysis Completed on	06.03.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2076	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	32	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	16	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	194	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	656	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	329	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	2.4	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	9.5	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	6.3	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	41.07	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu, India.
Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869

www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-36807/2023-24 & 06.03.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	35.4	-
17	AOX	EPA 1653,5021&8260	mg/l	4.1	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

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Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (Env)

20.2.2024

Shamim Ahmed 20/2/24

Thro' DGM (R&D)

AOX & TOC analysis report of final treated effluent water sample collected on **30.1.2024**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	27432
2	Paper Production	Tons	1113.55
3	AOX generated per ton of Paper	kg/t	0.08
4	TOC generated per ton of Paper	kg/t	0.97

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R. S. Tamboney
AGM (LAB)

CC:

CGM (O) – I /c

CM (ENV)

File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869

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TEST REPORT

Test Report No & Date	**CTL/CH/N-35279/2023-24 & 07.02.2024**
Sample Number	**N-35279/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	30.01.2024
Sample Received on	01.02.2024
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.3°C and Humidity- 56.0%
Equipment used for Sampling	NA
Analysis Started on	01.02.2024
Analysis Completed on	07.02.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	1970	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	34	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	22	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	116	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	630	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	294	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	3.5	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	15.3	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	9.4	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	40.08	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

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CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869

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TEST REPORT

Test Report No & Date	CTL/CH/N-35279/2023-24 & 07.02.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	39.4	-
17	AOX	EPA 1653,5021&8260	mg/l	3.2	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

Verified by

For Chennai Testing Laboratory Pvt ltd

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

30/1/24

Flow - 2#432.

pdn - [illegible]

1113 5503

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Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (Env)

20.2.2024

Shamsi Ahmed 20/2/24

Thro' DGM (R&D)

AOX & TOC analysis report of final treated effluent water sample collected on **27.12.2023**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	27152
2	Paper Production	Tons	857.2873
3	AOX generated per ton of Paper	kg/t	0.11
4	TOC generated per ton of Paper	kg/t	1.07

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R. S. Tamilarasu
AGM (LAB)

CC:

CGM (O) – I /c

CM (ENV)
File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
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TEST REPORT

Test Report No & Date	**CTL/CH/N-33777/2023-24 & 05.01.2024**
Sample Number	**N-33777/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	27.12.2023
Sample Received on	29.12.2023
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 32.0°C and Humidity- 55.2%
Equipment used for Sampling	NA
Analysis Started on	29.12.2023
Analysis Completed on	05.01.2024

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.3	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	1980	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	30	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	23	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	102	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	596	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	288	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	4.1	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	13.9	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	8.6	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	50.21	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu - India
Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869 www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-33777/2023-24 & 05.01.2024

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	33.68	-
17	AOX	EPA 1653,5021&8260	mg/l	3.4	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

27/12/23,

Floco - 27152

pdn - 857.2873

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Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (Env)

18.12.2023

AOX & TOC analysis report of final treated effluent water sample collected on **22.11.2023.**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	23981
2	Paper Production	Tons	1325.582
3	AOX generated per ton of Paper	kg/t	0.04
4	TOC generated per ton of Paper	kg/t	0.67

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R. Srinivasan
AGM (LAB)
18/12/23

CC:

ED (O)-FAC
GM (Energy, Pulp & SR)
File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
CIN : U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-31459/2023-24 & 30.11.2023**
Sample Number	**N-31459/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	22.11.2023
Sample Received on	23.11.2023
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 31.3°C and Humidity- 54.8%
Equipment used for Sampling	NA
Analysis Started on	23.11.2023
Analysis Completed on	30.11.2023

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	8.1	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	50	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2010	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	14	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	20	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	110	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	656	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	403	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	3.5	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	11.9	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	7.8	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	52.86	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

Verified by

The Report shall not be used to malign, defame and for any malicious purpose.
The Report is meant only for sole use of the addressee to promote his/her own business.

Authorised Signatory
A. RAJKUMAR
Head - Testing Division
(CHEMICAL)

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu, India
Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitesting.com

CHENNAI
TESTING LABORATORY PRIVATE LIMITED

CIN : U93000TN2000PTC043869

www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-31459/2023-24 & 30.11.2023

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	36.8	-
17	AOX	EPA 1653,5021&8260	mg/l	2.1	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.

*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu - India
Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

INTER OFFICE MEMORANDUM

From	To
AGM (Lab)	AGM (WM)

18.11.2023

AOX & TOC analysis report of final treated effluent water sample collected on **26.10.2023**

S.No	Particulars	Unit	Results
1	Volume of effluent water discharged	m^3	25640
2	Paper Production	Tons	1065.05
3	AOX generated per ton of Paper	kg/t	0.07
4	TOC generated per ton of Paper	kg/t	0.91

Remarks: Norms: AOX -1kg / ton of paper (Maximum). TOC- No Norms.

R.S Tamberay
AGM (LAB)

CC:

CGM (O) – I /c
AGM (ENV)
CM (ENV)
File - 95

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869

www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-30186/2023-24 & 04.11.2023**
Sample Number	**N-30186/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Effluent Water
Sample Description	**Treated Effluent Water**
Sampling Location	**Secondary Clarifier Outlet**
GPS Reading	**11°03'9.805"N & 77°59'59.05"E**
Sample Drawn on	26.10.2023
mple Received on	28.10.2023
Sampling Plan & Procedure	Grab Sample & CTL/QSP/09
Sample Quantity	2 Litres
Sample Condition	Good & Received in Plastic Container
Environmental Conditions	Temperature- 30.8°C and Humidity- 54.6%
Equipment used for Sampling	NA
Analysis Started on	28.10.2023
Analysis Completed on	04.11.2023

Test Results:

The above sample tested as received, and results are as follows:

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
1	pH @ 25°C	IS 3025 (Part 11)-1983 (RA.2017)	-	7.9	5.5 to 9.0
2	Colour	IS : 3025 (Part 4)- 2021	HU	10	-
3	Total Dissolved Solids	IS 3025 (Part 16)-1984 (RA.2017)	mg/l	2042	Max.2100
4	Total Suspended Solids	IS 3025 (Part 17) -1984 (RA.2021)	mg/l	12	Max.100
5	Biochemical Oxygen Demand (BOD) 3 days at 27°C	IS 3025 (Part 44) -1993 (RA.2019)	mg/l	24	Max.30
6	Chemical Oxygen Demand (COD)	IS 3025 (Part 58)-2006 (RA:2017)	mg/l	112	Max.250
7	Chloride as Cl	IS 3025 (Part 32)-1988 (RA.2019)	mg/l	466	Max.1000
8	Sulphate as SO_4	IS 3025 (Part 24/sec -1) - 2022	mg/l	271	Max.1000
9	Oil & Grease	IS 3025 (Part 39) - 2021	mg/l	< 2	Max.10
10	Ammonical Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	4.1	Max.50
11	Total Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	9.2	-
12	Total Kjeldahl Nitrogen as N	IS 3025 (Part 34)-1988 (RA.2019)	mg/l	6.6	Max.100
13	Phenolic Compounds as C_6H_5OH	IS 3025 (Part 43/sec 1) 2022	mg/l	BDL(DL:0.001)	-
14	Percent Sodium	CTL/SOP/WATER/60-2022	%	62.06	-
15	Sulphide as S	IS 3025 (Part 29)-1986 (RA.2019)	mg/l	BDL(DL:0.01)	Max.2.0

For Chennai Testing Laboratory Pvt ltd

V. Murthy
Verified by

A. Raj
Authorised Signatory

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu - India
Phone : +91-44-2250 1757 | E-mail : chennaitesting@[illegible]

A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined

CIN : U93000TN2000PTC043869

www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-30186/2023-24 & 04.11.2023

S. NO	PARAMETERS	METHOD	UNITS	RESULTS	LIMITS*
16	Total Organic Carbon (TOC)	5310-C-APHA 23rd Ed.2017	mg/l	38.0	-
17	AOX	EPA 1653,5021&8260	mg/l	2.8	-

BDL - Below Detection Limit; DL - Detection limit; Max. - Maximum.
*Limits as per TNPCB Norms for Trade Effluent

END OF REPORT

For Chennai Testing Laboratory Pvt ltd

Verified by

Authorised Signatory
A. RAJKUMAR
Head - Water & Soil Division
(CHEMICAL)

Pdn. - 1065.0508 POX = 0.07
Flow - 25640
TOC = 0.91

A - Super 19, T.V.K. Industrial Estate, Guindy, Chennai - 600 032, Tamil Nadu - India
Phone : +91-44-2250 1757 | E-mail : chennaitesting@chennaitestinglab.com

ANNEXURE VII

COMPREHENSIVE WATER MANAGEMENT PLAN

WATER AND WASTE WATER RECYCLING MANAGEMENT IN TNPL

TNPL has completed Mill Development Plan (MDP) in May'08 with a capital expenditure of Rs.612 crores and is successfully operating to achieve more environmental friendly operational performance of the mill by adopting *state of the art* Elemental Chlorine Free bleaching technique and simultaneously accomplished the objective of modernization of the process technology with a marginal increase in production capacity. Further, TNPL has implemented Mill Expansion Plan (MEP) by installing a third Paper Machine to enhance the production capacity from 245,000 tpa to 400,000 tpa and reduced specific water consumption.

The mill has implemented the following major water conservation (To reduce waste water generation) and waste water recycling (To reduce TDS in Waste water) projects to improve the overall environmental performance of the mill operations.

To reduce TDS in Waste water

- Recycling of around 1800M^3 EOP alkaline filtrate in post Oxygen washer in hardwood fiber line operations by close looping Extraction stage effluent from hardwood into the brown loop to reduce TDS in the waste water.
- Return of soft water back to soft water plant after usage in NIPCO hydraulic system to reduce soft water re-generation.
- Recycling any chemical Bagasse fibre line EOP filtration in the post oxygen press to close the brown loop to reduce TDS in Waste water.

To reduce waste water generation

- Polishing excess clear filtrate of PM#1 using Algas filter.
- Recycling of around 9000 M_3 Paper Machine Effluent after clarification in raw material preparation
- Recovery of steam condensate from chlorine vaporiser and pumping to cooling tower
- Use of excess hot water from hardwood fiber line for pulp washing in Chemical bagasse ECF bleach plant.
- Recovery of pump seal cooling water and pumping to cooling tower
- Re-circulation of chlorine di-oxide generator cooling process water to cooling tower
- Recovery of dilution air compressor water and pumping to cooling tower
- Re-circulation of New Hardwood fibreline Hydraulic cooling water to water treatment plant
- Replacing of freshwater with cooling water for Recovery Boiler-3 feed pump cooling system
- Re-circulation of the chlorine di-oxide plant transformer rectifier cooling water to cooling tower
- Reusing of white liquor clariant disc (WLCD) compressor sealing water and condenser cooling water
- Use of process condensate in brown stock washing in bagasse pulping line.
- Replacing of freshwater with cooling water for Recovery Boiler-3 spout cooling system
- Re-circulation of CB-ECF plant Hydraulic cooling water within the system

- Replacement of conventional drum washers with twin roll presses to reduce water consumption
- Adaptation of improved technologies to re-use super clear filtrate from Paper Machine #3 backwater to minimize the fresh water usage.
- Recycling of Pick-up Uhle Box Water to White water chest/seal water tank to minimize make up in Fresh water in PM#2
- Use of PM/c back water for cationic starch cooking instead of fresh water
- Diversion of Algas filter water to culvert pit make up to avoid fresh water make up in PM#1.
- Replacement of fresh water with EOP filtrate for Optimization of fresh water for scrubber dilution in HW street
- Replacement of hot water with EOP filtrate in Post Oxygen Washer (POW) 2 Press in Chemical Bagasse street.
- Replacement of fresh water with Machine backwater for wet lap #2 and #3 usage and reuse of Wetlap # 2 filtrate in De-inking plant (through Wetlap # 3)
- Replacement of fresh water / process condensate with Back Water Clarification System water in flushing box at digester in Chemical Bagasse street
- Buffering Wetlap 1 Filtrate / PM/c back water in Mechanical Bagasse Pulp tower and reuse at HW
- final tower stand pipe dilution Replacement of fresh water with Machine backwater for wet lap #1 usage
- Diversion of Algas filter water to culvert pit make up to avoid fresh water make up in PM#1.
- Recycling of Uhle Box Water to White water chest to minimize make up in Fresh water in PM#2
- Use of PM/c back water for cationic starch cooking instead of fresh water
- Online dilution for A-PAM and C-PAM (RDA) in Paper Machine
- Return of water after usage from Alfa-2 evaporator and RB#3 to water treatment plant
- Recycling of water after usage from Alfa-1 evaporator to chemical bagasse plant
- Usage of excess process condensate in causticizing pumps and Alfa 1 evaporator pumps
- Diversion of algas filter drain to WW-2 PM#1.
- Installation of Water collection tray for bottom press felt in PM#1
- Utilization of Machine backwater for floor cleaning inPM#1,2 &3
- Replacement of high pressure shower nozzle size (0.7 mm from 1.0 mm) of Bottom & Top press fabrics in PM#1
- Diversion of tertiary screen reject to WW2 by processing through vibrating screen in PM#1
- Collection and diversion of bottom press felt high pressure shower water to vacuum pump sever pit in PM#2
- Replacement of fresh water with machine back water for cationic starch preparation in PM#3 Replacement of fresh water with machine back water for online dilution of A-PAM & C-PAM in PM#3 Collection of filler unloading and dosing pump seal water and transfer to warm water tank at CCK (PM#3)

- Diversion of excess cloudy filtrate over flow water to clear chest in PM#3
- Replacement of fresh water with machine back water to dilute cationic starch slurry at CCK
- Replacement of existing 0.9 & 0.7 mm H.P shower nozzles size with 0.7 & 0.6 mm for forming and press fabric at PM#3
- Replacement of fresh water with machine back water for dispersing Machine discharge pump and line flushing at CCK
- Replacement of fresh water with machine back water for WPCC/WGCC slurry unloading pump and line flushing at CCK
- Replacement of fresh water with machine back for save- all cleaning in paper machine#3.
- The sulphide stripping plant is operating continuously and the strip-off gas is incinerated in lime kiln along with non – condensable gases. After removal of sulphide from the Evaporator Vacuum Pump seal water of 1000 KLD is recycled to process conserving an equivalent amount of fresh water.

In order to further reduce water consumption, a dedicated team of executives has been formed with members drawn from various departments. The team is identifying and implementing various water conservations schemes without affecting quality of product and treated effluent.

These steps have paved way to reduce

- Overall water consumption from 70,000 M3/day during 2007 to about 40,000M3/day during 2016-17 even after increasing the paper production from 205000 tpa to 400000 tpa and in house pulp production from 165000 tpa to 264000 tpa.
- Specific water consumption from 102 M3/Ton of machine production during 2007 to about 28 M^3/Ton of machine production during Apr'23 to Mar'24.

ANNEXURE VIII

COPIES OF FLY ASH DETAILS SUBMITTED TO O/O. JCEE, TNPCB, SALEM

TNPL

Tamil Nadu Newsprint and Papers Limited

(A Government of Tamil Nadu Enterprise)
Kagithapuram - 639 136, Pugalur Taluk, Karur Dist. Tamil Nadu, India.
Phone: (0091) 04324-277001 to 10 - (10 Lines) Cell : 94860 41341 to 41343

ENV/02/24
April 5, 2024

The Joint Chief Environmental Engineer (Monitoring),
No: 9, 4th cross street, Brindhavan road, Fairlands,
Tamilnadu Pollution Control Board (TNPCB),
Salem - 636016

Sir,

Sub: TNPL Captive Power Plant – Disposal of Fly Ash - Submission of Action Taken Report against the instruction issued- reg.

Ref: Letter No. JCEE (M)/TNPCB/F.67/KARUR/TNPL-CPP/2019 dated 06.11.2019.

We hereby acknowledge the receipt of the letter cited under reference.

It is submitted that the fly ash quantity generated from the TNPL Captive Power Plant are being utilized in the Cement Production at TNPL Mini Cement Plant (LSFM) unit details for the period between 01/01/2024 and 31/03/2024 is submitted hereunder for your kind information.

All values are in MT

Period	Fly ash opening Balance	Fly ash generation	Fly ash utilized for TNPL Cement Production	Fly ash disposed to outside agencies, if any	Fly ash Closing Balance
01/01/2024 to 31/01/2024	422.26	1869	1802	0	489.26
01/02/2024 to 29/02/2024	489.26	2658	2896	0	251.26
01/03/2024 to 31/03/2024	251.26	3769	3371	0	649.26

It is pertinent to note that the fly ash generated during last three months were utilized only for Cement Production in compliance to the directions issued vide reference cited above.

This is for your kind information and records.

Thanking you.

Yours faithfully,
for M/s Tamil Nadu Newsprint and Papers Limited,

S. M.

Chief Manager (Environment)

TNPL

Tamil Nadu Newsprint and Papers Limited

(A Government of Tamil Nadu Enterprise)
Kagithapuram - 639 136, Pugalur Taluk, Karur Dist. Tamil Nadu, India.
Phone: (0091) 04324-277001 to 10 - (10 Lines) Cell : 94860 41341 to 41343

ENV/02/23
January 9, 2024

The Joint Chief Environmental Engineer (Monitoring),
No: 9, 4th cross street, Brindhavan road, Fairlands,
Tamilnadu Pollution Control Board (TNPCB),
Salem - 636016

Sir,

Sub: TNPL Captive Power Plant – Disposal of Fly Ash - Submission of Action Taken Report against the instruction issued- reg.
Ref: Letter No. JCEE (M)/TNPCB/F.67/KARUR/TNPL-CPP/2019 dated 06.11.2019.

We hereby acknowledge the receipt of the letter cited under reference.

It is submitted that the fly ash quantity generated from the TNPL Captive Power Plant are being utilized in the Cement Production at TNPL Mini Cement Plant (LSFM) unit details for the period between 01/10/2023 and 31/12/2023 is submitted hereunder for your kind information.

All values are in MT

Period	Fly ash opening Balance	Fly ash generation	Fly ash utilized for TNPL Cement Production	Fly ash disposed to outside agencies, if any	Fly ash Closing Balance
01/10/2023 to 31/10/2023	358.26	3504	3598	0	264.26
01/11/2023 to 30/11/2023	264.26	2864	2507	0	621.26
01/12/2023 to 31/12/2023	621.26	2965	3164	0	422.26

It is pertinent to note that the fly ash generated during last three months were utilized only for Cement Production in compliance to the directions issued vide reference cited above.

This is for your kind information and records.

Thanking you.

Yours faithfully,
for M/s Tamil Nadu Newsprint and Papers Limited,

S. M.

Senior Manager (Environment)

ANNEXURE IX

GREEN BELT DETAILS

GREEN BELT DEVELOPMENT AT TNPL - 2023-24

ABSTRACT

SL. NO	LOCATION	TOTAL AREA. IN HA	AREA TO BE COVERED UNDER GREEN COVER (33%) IN HA	GREEN COVER DEVELOPED IN HA	NO. OF TREES DEVELOPED	% OF GREEN BELT VS TOTAL AREA
1	MAIN PLANT	83.56	27.57 (33%)	32.11	103304	38.42%
2	CAPTIVE POWER PLANT	38.16	12.59(33%)	16.17	45503	42.37%
	TOTAL	**121.72**	**40.16 (33%)**	**48.28**	**148807**	**40.39%**

MAIN PLANT

SL.NO	Name of the Tree	No.of Trees
1	Peltophorum ferrugineum(Copper pod tree)	3095
2	Bahinia purpurea (Orchid tree)	893
3	Casia siamea	65
4	Pongamia pinnata (Pungam)	3990
5	Porasus flabelifer (Palmyrah)	18
6	Caryota urens (Fish tail palm)	9
7	Tecoma stans	26
8	Samania saman (Rain tree)	208
9	Mangifera indica (Mango)	3
10	Cocos neusifera (Coconut)	116
11	Terminalia catapa (Badam)	100
12	Ficus religiosa (Peepal)	10
13	Lagerstroemia speciosa (Pride of India)	20
14	Azadirachta indica (Neem)	5600
15	Polyalthia longifolia (Ashoka)	300
16	Syzizium cumini (Naval)	25
17	Tabebuia argentea	34
18	Acacia auriculiformis(Australian wattle)	1000
19	Eucalyptus sps	25151
20	Leucaena leucocephala (Subabul)	2000
21	Tamarindus indica (Tamarind)	90
22	Spthodea companulata (African tulip tree)	20
23	Albizzia lebbek (Vagai)	300
24	Sterculia foetida	3
25	Delonix regia (Gulmohar)	300
26	Casuarina equisetifolia	48480
27	Bamboosa sps (Bamboo)	200
28	Dalbergia sissoo	9622
29	Ailanthus excelsa	102
30	Glaricidia maculata	129
31	Kaya	103
32	Melia dubia (Malai vembu)	500
33	Swietenia mahagoni	223
34	Tectona grandis (Teak)	48
35	Callophyllum innophyllum	32
36	Terminalia arjuna	60
37	Singapore cherry	316
38	Millingtonia hortensis (Tree jasmine)	60
39	Madhuca latifolia (Iluppai)	10
40	Ficus bengalensis (Banyan)	3
41	Mimosops elengi (Makilam)	10
42	Cassia fistula (Golden shower)	10
43	Achrus sapota (Sapota)	10
44	Phyllanthus emblica (Amla)	10
	Total	**103304**

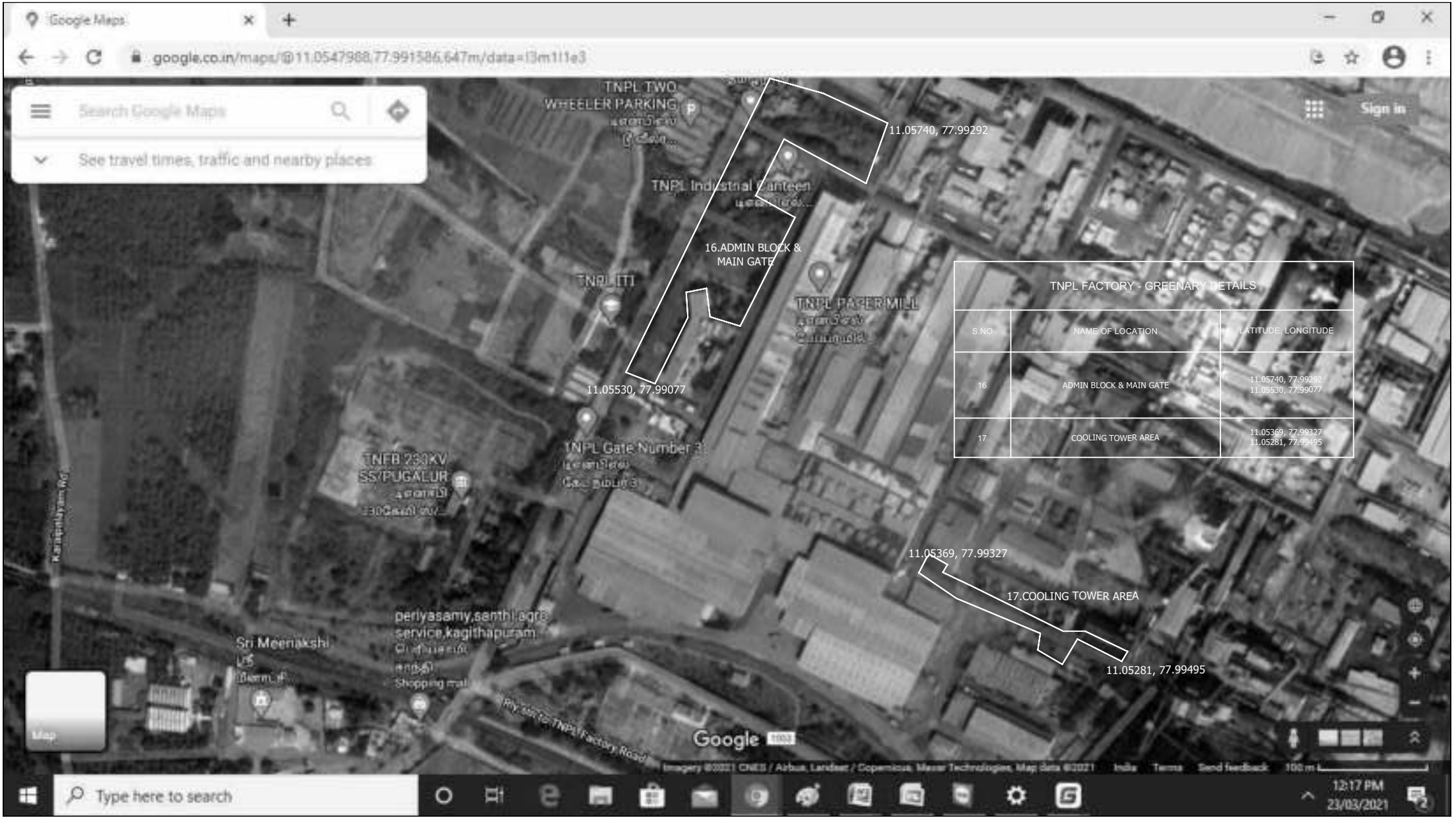
CAPTIVE POWER PLANT

SL.NO	Name of the Tree	No.of Trees
1	Peltophorum ferrugineum(Copper pod tree)	2200
2	Bahinia purpurea (Orchid tree)	264
3	Pongamia pinnata (Pungam)	1621
4	Samania saman (Rain tree)	100
5	Terminalia catapa (Badam)	60
6	Ficus religiosa (Peepal)	7
7	Azadirachta indica (Neem)	4828
8	Polyalthia longifolia (Ashoka)	24
9	Syzizium cumini (Naval)	15
10	Acacia auriculiformis(Australian wattle)	318
11	Eucalyptus sps	10100
12	Leucaena leucocephala (Subabul)	1164
13	Tamarindus indica (Tamarind)	30
14	Albizzia lebbek (Vagai)	164
15	Delonix regia (Gulmohar)	82
16	Casuarina equisetifolia	21080
17	Bamboosa sps (Bamboo)	106
18	Dalbergia sissoo	2696
19	Melia dubia (Malai vembu)	380
20	Singapore cherry	238
21	Millingtonia hortensis (Tree jasmine)	24
22	Ficus bengalensis (Banyan)	2
	Total	**45503**

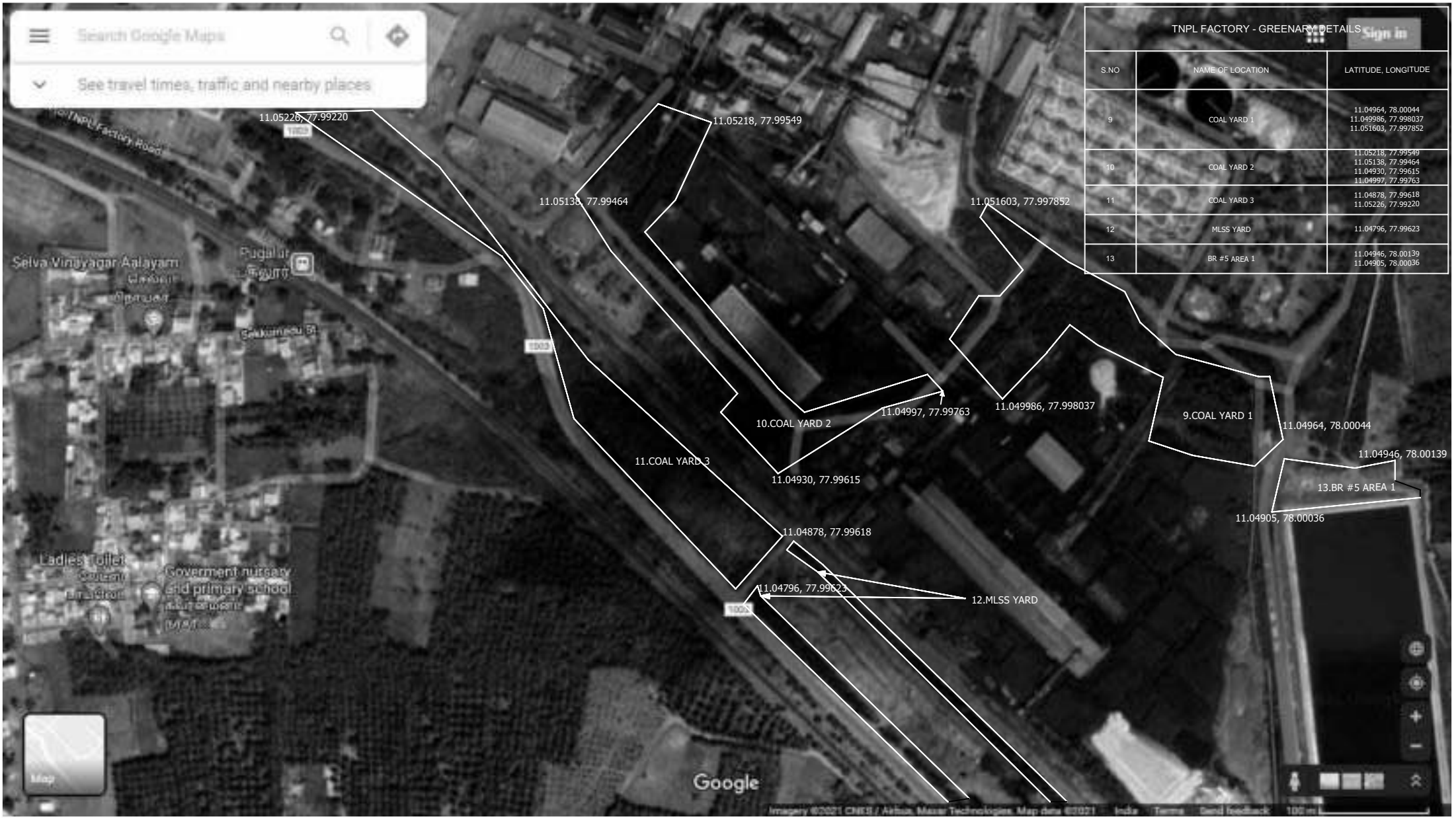

Kayal aquarium
TNPL
TOWNSHIP
TNPL
Kavikhapuram
Alagapuri
அழகாபுரி
Tamilnadu Newsprint
And Papers Limited
TNPL
TNEB 230KV
SS/PUGALUR
1003
Pugalur
Government nursary
and primary school
Bagavathiyamman
Temple
Sri Sakthi
Vinayagar Temple
Google

TNPL MINI CEMENT PLANT - GREENARY DETAILS

S.NO	NAME OF LOCATION	LATITUDE, LONGITUDE
18	CEMENT PLANT - ENTRANCE	11.03876, 78.00635 11.03716, 78.00701
19	CEMENT PLANT - COAL SHED AREA	11.03806, 78.00836 11.03650, 78.00915
20	CEMENT PLANT - RAMP	11.03834, 78.00851 11.03654, 78.00999
21	CEMENT PLANT - COMPOUND	11.03872, 78.00784 11.03858, 78.01030 11.03697, 78.01034

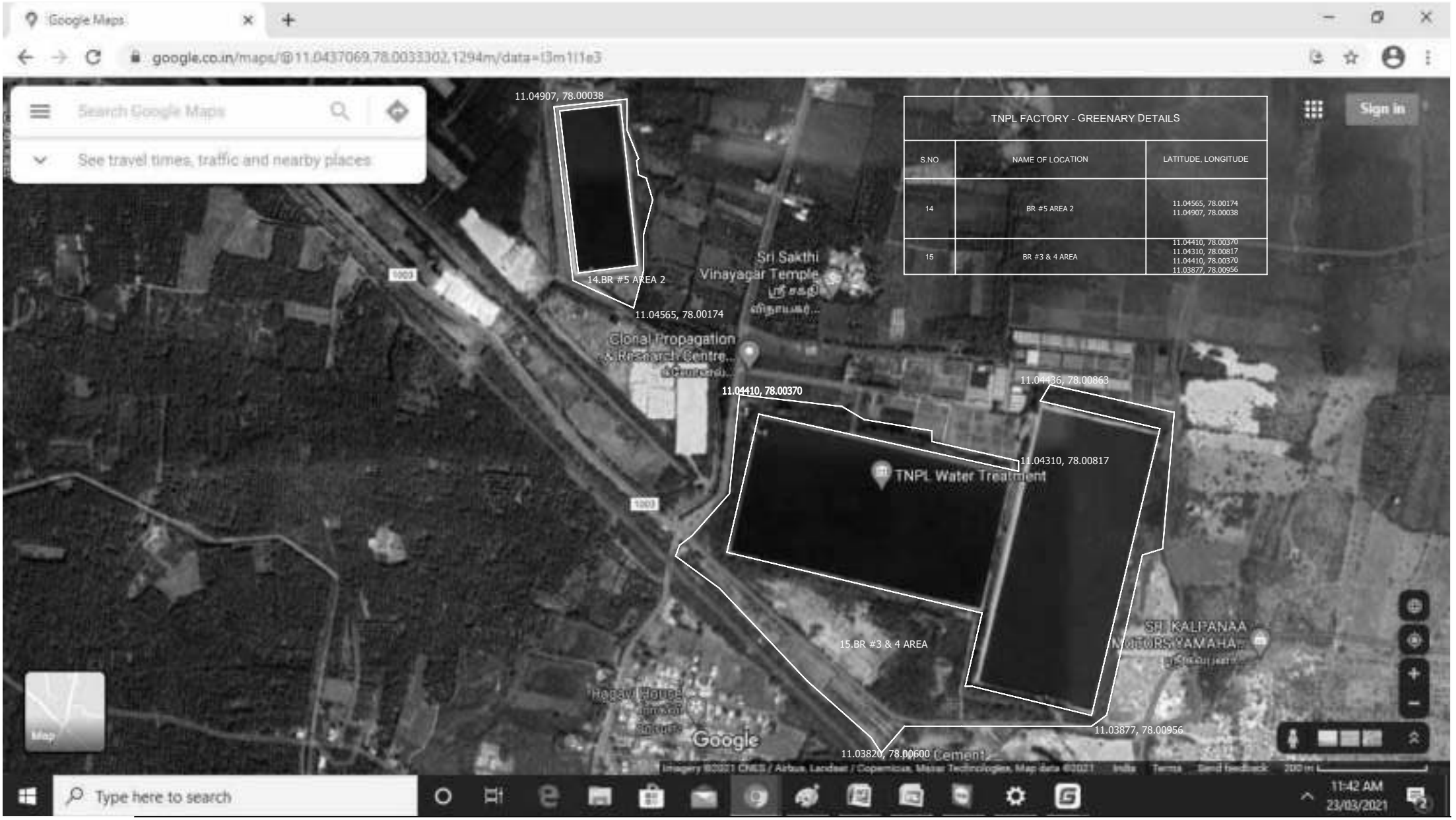


TNPL FACTORY - GREENARY DETAILS		
S.NO	NAME OF LOCATION	LATITUDE, LONGITUDE
16	ADMIN BLOCK & MAIN GATE	11.05740, 77.99292 11.05530, 77.99077
17	COOLING TOWER AREA	11.05369, 77.99327 11.05281, 77.99495



TNPL FACTORY - GREENARY DETAILS

S.NO	NAME OF LOCATION	LATITUDE, LONGITUDE
9	COAL YARD 1	11.04964, 78.00044 11.049986, 77.998037 11.051603, 77.997852
10	COAL YARD 2	11.05218, 77.99549 11.05138, 77.99464 11.04930, 77.99615 11.04997, 77.99763
11	COAL YARD 3	11.04878, 77.99618 11.05226, 77.99220
12	MLSS YARD	11.04796, 77.99623
13	BR #5 AREA 1	11.04946, 78.00139 11.04905, 78.00036



TNPL FACTORY - GREENARY DETAILS		
S.NO	NAME OF LOCATION	LATITUDE, LONGITUDE
14	BR #5 AREA 2	11.04565, 78.00174 11.04907, 78.00038
15	BR #3 & 4 AREA	11.04410, 78.00370 11.04310, 78.00817 11.04410, 78.00370 11.03877, 78.00956

TNPL FACTORY - GREENARY DETAILS		
S.NO	NAME OF LOCATION	LATITUDE, LONGITUDE
4	BR#2 - ETP AREA	11.056669, 78.001924 11.051862, 78.001927
5	ASL LAGOON - ETP AREA	11.051279, 78.001232 11.049440, 78.001060 11.052612, 77.997906
6	CLARIFIER - ETP AREA	11.052104, 78.001451 11.052462, 77.999145 11.051138, 77.999628
7	ANAEROBIC LAGOON	11.056921, 77.999947 11.054034, 77.998891
8	PRIMARY CLARIFIER #2 AREA	11.054268, 77.999256 11.053087, 77.999682 11.055362, 77.999030

ANNEXURE X

OCCUPATIONAL HEALTH AND SAFETY REPORT

OCCUPATIONAL HEALTH CENTRE

Tamil Nadu Newsprint and Papers Limited (TNPL) take great care of health of its employees and their dependants. Various schemes in vogue stand a testimony to the care and concern shown by the company towards the health of its employees and their dependants.

OCCUPATIONAL HEALTH CENTRE (OHC):-

TNPL has an Occupational Health Centre manned by qualified and experienced 5 Medical Officers, paramedical staff of 3 nurses, 2 pharmacists, one ANM, 2 male attenders, 3 female attenders and 10 Ambulance drivers.

The scope of the TNPL Occupational Health Centre includes Preventing occupational hazards at work, protecting workers against hazards at work, help in adapting work and the work environment to the capabilities of the worker, promoting the physical, mental and social well-being of workers and rehabilitation of accidental occupational injuries.

The main objective of the TNPL OHC are,

- To provide medical treatment and support in case of an emergency illness or accident.
- To monitor, manage and modify any adverse health effects which may occur at the workplace.
- To promote good health at the workplace.
- To plan and execute health education and awareness programmes for employees.

The major activities at TNPL are,

- Medical surveillance through measures such as periodical medical check-ups.
- Pre-employment medical check-ups.
- Medical treatment for illness and accidents.
- Conducting health education programmes.
- Providing first aid and other related training to the employees.
- Promoting health awareness and wellness measures among employees.

The OHC renders free Medical treatment and guidance to the employees and their family members. An Amount of Rs. 13.00 lakhs per annum is spent towards medicines. Apart from the above facility, Specialists from various hospitals visit OHC on Sundays. Ambulance facility is extended to the employees to provide emergency treatment. TNPL conducts medical camp every month to attend to the health needs of the neighborhood population. Special medical camps in various specialties are conducted once in 3 months.

MEDICAL EQUIPMENTS:

MEDICAL EQUIPMENTS:

Oxygenator:

Oxygenator is equipment which supplies pure oxygen from the normal atmospheric air. It works on 230v AC power. It is useful equipment for those patients suffering from Asthma, other Bronchial diseases. It's a good replacement for the oxygen cylinders. It need not be refilled and the same is maintained well.

T.N.P.L. Occupational Health Centre has an latest up to date model of Oxygenator, which is used for patients with Respiratory Difficulty.

Nebulizer:

Nebulizers are commonly used for treatment of cystic fibrosis, asthma, COPD and other respiratory diseases. Nebulizers use oxygen, compressed air or ultrasonic power to break up medical solutions and suspensions into small aerosol droplets that can be directly inhaled from the mouthpiece of the device.

T.N.P.L. Occupational Health centre has 2 latest versions of Nebulizers which render great service in treating Respiratory problems.

Suction Apparatus:

Suction Apparatus is a device for removing liquids or gases by suction, especially an instrument that uses suction to remove substances, such as mucus or serum, from a body cavity. It is used to create a partial vacuum. A suction machine helps to remove secretions and mucus from the airways. In addition, a suction machine may be needed when a patient has moist cough, or unable to effectively clear secretions from the throat, or are having difficulty in breathing or feel that they cannot get enough air.
The Occupational Health Centre is well equipped with 2 Suction Apparatus to handle any kind of emergencies.

Electro Cardiogram Machine:

ECG is used to measure the rate and regularity of heartbeats as well as the size and position of the chambers, the presence of any damage to the heart, and the effects of drugs or devices used to regulate the heart.

The Occupational Health Centre in T.N.P.L. has 2 latest model Electro Cardiogram Machines, which helps immensely in the early detection of Cardiac Diseases among the employees and their families.

Microscope:

A **microscope** is an instrument used to see objects that are too small for the naked eye. This is an optical instrument containing one or more lenses producing an enlarged image of a sample placed in the focal plane.
A latest model Microscope is used in the T.N.P.L. OHC, for various sample identifications.

Traction Apparatus:

Traction is applied to the cervical or lumber spine through harnesses fastened to the head or pelvic area. This widens the inter-vertebral spaces which relieves nerve root compression by the inter-vertebral discs. The compression of the nerve roots causes sensations of pain, burning, tingling in the neck, shoulders and arms, or in the back, buttocks, legs and feet. Traction force is determined by the patient's tolerance.

T.N.P.L. OHC has an Electronic Traction apparatus that is used to treat muscular

Ophthalmoscope:

Ophthalmoscopy (fundscopy or fundoscopy) is a test that allows a health professional to see inside the fundus of the eye and other structures using an ophthalmoscope (funduscope). It is done as part of an eye examination and this is used as a part of a routine physical examination It is crucial in determining the health of the retina and the vitreous humor.

The Occupational Health Centre has an Ophthalmoscope that is used in early detection of Diseases like Hypertension and Diabetes Mellitus.

Otoscope:

An Otoscope or auriscope is a medical device which is used to look into the ears. Health care provides use otoscopes to screen for illness during regular check-ups and also for investigating the symptoms involving the ears. With an otoscope, it is possible to see the outer ear and middle ear. The Otoscope in the Occupational Health Centre is used in ailments like, Foregin Body in Ear etc.

Automated External Defibrillator (AED):

A Defibrillator is a device that gives a high energy electric shock to the heart of the patient who is in Cardiac arrest. This high energy shock is called defibrillation and it's an essential part in trying to save the life of the patient, who is in Cardiac Arrest.

Ambulance:

TNPL Occupational Health Centre has 3 state of the art Ambulance vehicles which render yeoman service to the working community for transportation of sick and injured persons for treatment.

Cyclotron:

A Cyclotron is a type of particle accelerator. It is used in blood samples preparations.

TNPL Occupational Health Centre has to its credit a wide range of Drugs, Suture materials, emergency medicines (including anti-venom) for managing any kind Industrial Accidents, and other medicines for Clinical Emergencies and regular Outpatient Treatment.

Medicine Storage room:

The OHC has a well stocked Medicine Storage room.

A dedicated team of Doctors, staff nurses, pharmacists and paramedical staff, ensure the efficient and correct, timely health management and treatment is provided at the T.N.P.L. Occupational Health Centre, round the clock.

SPECIALIST DOCTORS VISIT TO TNPL OCCUPATIONAL HEALTH CENTRE:

For the benefit of TNPL Employees and their families, every Sunday forenoon a Specialist Doctor visits the Premise of Occupational Health Centre. The TNPL Employees and their families avail this opportunity to have their health examined. The names and their field of specialist are furnished below:

01. Dr. P. Ramesh, M.S.	-	Ophthalmic Surgeon
02. Dr. D.M.T. Saravanan, MBBS, MRCP (UK).	-	Cardiologist
03. Dr. R. Karuppaiah, M.S.	-	Orthopaedic Surgeon
04. Dr. K. Ramachandran, B.D.S.	-	Dental Surgeon
05. Dr. D. Gurusamy Nachimuthu, M.S.	-	Orthopaedic Surgeon
06. Dr. S. Kiruthika, MBBS, DDVL.	-	Dermatologist

07. Dr. V. Shankar, M.D.D.M. - Gastro Entero Logist

08. Dr. S. Shankar, M.S. - General Surgeon

09. Dr. G. Sathish, M.S. - Orthopaedic Surgeon

10. Dr. K.S. Murugesan, D.D. - Dermatologist

11. Dr. C. Balakrishnan, M.D. - General Physician

12. Dr. R. Hariprasad,M.D. - Pulmonologist

14.Dr.K.Madheswaran,M.Ch (Neuro) - Neuro Surgeon

Monthly Free Rural Medical Camps & Health Awareness:

The most important reason why the development of rural life in India is excessively slow is because of lack of education which further impacts every simple aspect of life. The medical know-how of the rural people is almost missing. **Medical awareness** is very important for the overall **development of the weaker and socially, educationally, and economically backward sections of the society.**

We in Tamilnadu Newsprint and Papers Limited are aware, that for a prosperous country, the villages must be kept healthy. Each one needs to be socially aware and educated to have knowledge of various kinds of diseases and that a doctor needs to be consulted whenever he undergoes any kind of health problem rather than practice anything else. The backward class people are not so affluent that they can afford doctors for every simple disease condition.

The significance of medical camps is felt here. Medical camps are instituted not only to provide free medical service and checkup to the rural population, but they also focus on issues related to hygienic conditions of rural living, awareness of mothers and children who the most vulnerable to diseases. Awareness is imparted on how to live smartly.

Diseases are categorized and explained to the village folk telling them more about the health conditions that can be treated at home the ways in which they can be treated, diseases that need Doctor's prescription, diseases that require Doctor's care for a longer period of time, and diseases that require hospitalization immediately. The rural population tends to get panicked about any health hazards because they are not aware of the pros and cons of those.

They get emotionally disturbed about it easily. India is known for its poverty and depression because of health problems which is essentially due to lack of medical awareness.

Keeping this in mind, for the past Twenty Four Years, Doctors from the T.N.P.L. Occupational Health Centre visit the nearby villages every month and conduct Free, comprehensive, Health Awareness & Treatment camps. The villages that are benefited are Onavakkalmedu,

Nalliyampalayam, Sottaiyur, Kandhasamipalayam, Nanaparappu, Moolimangalam, Pazhamapuram, Masagoundanpudur, Kurrukupalayam. So far 292 Free Rural Medical camps have been conducted by TNPL.

In Rural Camps, the deficiencies like Acid Peptic Disease, Impetigo, Low Back Ache, Myalgia, Upper Respiratory Infection, Worm Infection, AGE, Head Ache, Pyrexia unknown Origin, Migraine, Blood Pressure and General cases are treated and medicines at free of cost are also provided.

The approach towards health is now changing from cure to prevention. The engineering approach is to ensure safer processes, an integrated systems approach and better occupational environment, whereas the medical approach emphasizes identifying the health risks and their prevention of occupational diseases.

TNPL OHC is well equipped and updated with the latest medical technology in order to give efficient and comprehensive health care to the Working Community.

MASTER HEALTH CHECK-UP

Ever year, all the permanent employees who have completed 40 years, 45 years, 50 years, 55 years and 59 years of age are sponsored for a comprehensive Master Health check-up by the management. For this year 2023-24, we have arranged Master Health check-up at Royal Care Super Speciality Hospital, Coimbatore at the rate of Rs.3,500/- for male employee and Rs.5,000/- for female employee through tender processing. The employee attended details from **01.10.2023 to 31.03.2024** for Master Health check-up is detailed below:

Category of Age	No of employees attended	
	Male	Female
40 yrs	57	3
45 yrs	19	1
50 yrs	27	3
52 yrs	83	4
54 yrs	88	1
56 yrs	33	-
59 yrs	3	-
Total	**310**	**12**

EYE TEST:

Employees who are operating heavy vehicles viz., equipment operators and drivers have undergone eye test.

Distant Vision, near vision, color vision and fundal examination were performed. An amount of Rs.58,500/- was incurred towards Eye Test in the year, 2023 on 09.03.2023.

EYE TEST REPORT:

	Total No of Personnel tested	**Normal**	**Abnormal**
Regular employees and Contract Workmen	**234**	**234**	**-**

AUDIOMETRY TEST:

Audiometry test was done to employees, those who were exposed to high noise levels. An amount of Rs.35,750/- was incurred for Audiometry Test in the year, 2023 on 09.06.2023 .

The summary of expenditure incurred for the health care of the employees is given below:

PURE TONE AUDIOGRAM REPORT

No. of Employees Tested	Normal Audiogram	Abnormal Audiogram
143	143	NIL

All employees who are exposed to noise in the work environment are provided with good quality **ear muffs** to protect their hearing capacity.

PRE-EMPLOYMENT MEDICAL EXAMINATION:

The candidates, who are selected for jobs in TNPL, undergo Pre-Employment Medical Tests as advised by the Occupational Health Centre, TNPL.

They are advised to undergo the following Medical Tests in reputed laboratories.

1. Blood Tests – Urea, Creatinine, Blood Sugar, Cholesterol.
2. Urine Tests – Urine Routine, Specific Gravity, Urine Albumin, Urine Sugar.
3. Chest X-ray.
4. Electro Cardio Gram (ECG).
5. Pulmonary Function Test (PFT).
6. Pure Tone Audiogram.
7. Ophthalmic Evaluation.
8. E.N.T Surgeon's Opinion.
9. Ophthalmic Surgeon's Opinion.
10. General Physician's Opinion.

0INDUSTRIAL ACCIDENT:

When employees sustain injuries while on duty, Company bears the entire medical expenses. For the period, October, 2023 to March, 2024 an amount of Rs.7.38 lakhs was incurred towards entire medical expenses by the company.

MEDICAL ASSISTANCE UNDER SERIOUS AILMENTS SCHEME:

Company pays the entire hospitalization charges for employees, who suffer from the following Serious Ailments:

1. Heart Ailment
2. Cancer
3. Kidney Transplantation
4. Paralysis
5. Leprosy
6. Tuberculosis
7. Brain Surgery
8. Acute Pancreatitis
9. Liver disease

The company has a list of approved hospitals in major cities, where is employees can take treatment for the above 9 Serious Ailments.

180 days of Special Leave is sanctioned to those employees, who suffer from any one of the above Serious Ailments. The employees who have exhausted the Special Leave are sanctioned additional 180 days of Special Leave on case to case basis depending upon the severity of the ailments. The expense incurred towards the above medical facility for the period, October, 2023 to March, 2024 was Rs.55.78 lakhs.

SPECIAL MEDICAL ASSISTANCE SCHEME:

If the employee's medical expenditure is more than Rs.3,000/- and that there is a minimum period of 2 days of hospitalization, approximately 50% of the medical expenses are borne by the company for the medical expenses incurred for the employees and their dependants. The expenses incurred towards the above medical facility for the period October, 2023 to March, 2024 was Rs.120.22 lakhs.

ANNEXURE XI

FIRE PROTECTION FACILITIES

1. FIRE FIGHTING FACILITIES AVAILABLE IN TNPL MAIN SITE AS ON 31.03.2024

Sl. No.	PARTICULARS	CAPACITY
1	Fire Tender vehicles (FTV)	Two Numbers of Fire Tender Vehicles are available. FTV No.1 & 2 Tank Capacities are 4500 Ltrs and 5000 Ltrs respectively with foam making specialities.
2	Pumps (Effluent Treated Water)	3 Nos (All Rated 150kw/1500 rpm/720m^3/hr) Two pumps are in continouse operation for hydrant lines only.
3	Standby Diesel Operated Fire Water Pumps	3 Nos of Diesel Engines 1. No.503, 155 kw
		2. No.506, 113 kw / 410 m^3 / hr / Bhp 231 / rpm 1500
		3. No.507 113 kw / 410 m^3 / hr / Bhp 231 / rpm 1500
4	Standby Electrical Motor Operated Jockey Pumps	1 No. 37 kw / 240 m^3 / hr / rpm 2850
5	Diesel Driven Booster Pump	273m^3/hr @ 88 m/133 HP / 1800 rpm
6	Standby Electrical Motor Operated Pump No.1	273m^3/hr @ 88 m/120 HP / 90 kw / 2980 rpm
7	Standby Electrical Motor Operated Pump No.2	273m^3/hr @ 88 m/120 HP / 90 kw / 2980 rpm
8	Electrical Motor Operated Jockey Pump	273m^3/hr @ 88 m/ 11KW / 2900 rpm
9	Boilers 1 ,2 ,3 & 4 Booster Pump	273m^3/hr @ 88 m/ 15KW / 2900 rpm
10	Boiler No. 5 Booster Pump	273m^3/hr @ 88 m/ 11KW / 2900 rpm
11	Boilers 6 & 7 Booster Pump	273m^3/hr @ 88 m/ 22KW / 2955 rpm
12	Recovery Boiler area Booster Pump(Electrical Motor)	273m^3/hr @ 88 m/ 45 KW / 2900 rpm
13	Coal Yard Booster Pump	273m^3/hr @ 88 m/ 22KW / 2955 rpm
14	Electrical Driven Fire Pump at Cement Plant	273m^3/hr @ 88 m/ 45 KW / 2900 rpm
15	Total nos. of Fire Hydrants and Line pressure	674 NOS. and 4.8 Kg / cm^2 to 7 Kg/cm^2
16	Fire Extinguishers (Various types)	1670
17	Fire buckets and Stands	Fire Buckets Stand - 246 Buckets filled with sand and water - 1108
18	Water Avalability in the Tanks for Fire Fighting	Reservoir - I - 174000 M^3
		Reservoir - III - 650000 M^3
		Reservoir - IV - 650000 M^3
		Reservoir - V - 180000 M^3
		Calarifloculator - I - 8150 M^3
		Calarifloculator - II - 11400 M^3
19	Fire Fighting Crew	Fire Fighting Crew is Available Round the Clock
20	Reserve Personnel for Fire Fighting	Plant Personnel are Trained in Fire Fighting on Regular Basis

2. STATUS OF FIRE EQUIPMENTS AS ON 31.03.2024

(A) FIRST AID FIRE FIGHTING EQUIPMENTS

SLNO	EXTINGUSHER NAME	MAIN SITE	OFF SITE & WIND FARM	TOTAL	REMARKS
1	WATER CO_2 9 LTR	311	62	373	
2	FOAM (AFFF) 9 LTR	204	15	219	
3	FOAM 160 LTR (AFFF)	9	0	9	
4	DCP 6 KG	419	50	469	
5	DCP 9 KG	184	10	194	
6	CO_2 2 KG	17	0	17	
7	CO_2 4.5 KG	378	115	493	
8	CO_2 6 KG	2	0	2	
9	CO_2 6.5 KG	6	0	6	
10	CO_2 6.8 KG	8	0	8	
11	CO_2 9 KG	7	0	7	
12	CO_2 22.5 KG	25	0	25	
13	CLEAN AGENT - 1 KG	19	0	19	
14	CLEAN AGENT - 2 KG	66	0	66	
15	ABC 02 KG	15	0	15	
TOTAL		1670	252	1922	

(B) OTHER FIRE FIGHTING APPLIANCES

SLNO	EXTINGUSHER NAME	MAIN SITE	OFF SITE & WIND FARM	TOTAL	REMARKS
1	FIRE BUCKET STAND	246	24	270	
2	FIRE BUCKETS	1108	122	1230	
3	HOSE BOXES	213	8	221	
4	FIRE HOSE - 30 MTRS	82	25	107	
5	FIRE HOSE - 15 MTRS	172	18	190	
6	FIRE HOSE - 7.5 MTRS	83	10	93	
7	BRANCH PIPE /NOZZLE	206	16	222	
8	HYDRANT POINTS	674	0	674	
	SINGLE HYD. - 306+10+05+12=333				
	DOUBLE HYD. - 65				
	IS HYDRANTS - 50				
	FE HYDRANTS - 115				
	COAL SPRIN.+ SH - 4+4+8+63 = 79				
	MONITOR HYD. - 08+02+02= 12				
	CEMENT PLANT SH - 20				
TOTAL		2784	223	3007	

3. FIRE TENDER DETAILS AS ON 31.03.2024

Sl. No.	DESCRIPTION	FIRE TENDER NO 1	FIRE TENDER NO 2
1	AUTO SL.NO	405	442
2	REGN.NO.	TN47 D 8310	TN 47 AT 9389
3	MODEL	1996	2016
4	TYPE	SL54	1616 IL
5	MAKE	ASHOK LEYLAND / COMET	ASHOK LEYLAND
6	PUMP	SHRI GANESH FIRE EQUIPMENT (P) LTD., NEW DELHI. C.E MARK NO: CE 98/37.559.00, PRODUCT: FIRE PUMP EN-1028:1&2 SLNO. 475, MODEL NO. CNMHL-2230, YEAR 2013 PUMP CAPACITY:2250LPM, RPM:3000	FIRE FLY PUMP. CAPACITY 2250 LPM AT 7 KG/CM2 (NORMAL PRESSURE) AND 250 LPM AT 30 KG/CM2 (HIGH PRESSURE). TYPE - CENTERFUGAL HIGH PRESSURE AND LOW PRESSURE. MATERIAL - GUN METAL
7	BUILDER	SAKTHI FIRE EQUIPMENT , CHENNAI	M/S AAREL INDUSTRIES , NO:52 SECTOR "A" SANWER ROAD, INDORE.
8	DIESEL CAPACITY	200 LTRS	200 LTRS
9	TANK CAPACITY	4500 LTRS	5000 LTRS
10	FC DUE	31.03.2025	07.06.2024

4. FIRE CALLS ATTENDED

SL. NO	YEAR	TNPL CALLS			OUT SIDE CALLS			TOTAL CALLS ATTENDED
		MILL AREA	OUT SIDE MILL AREA	TOTAL	OUT SIDE CALLS	SPECIAL ASSISTANCE	TOTAL	
1	1996	34	5	39	7	0	7	46
2	1997	40	30	70	4	0	4	74
3	1998	29	19	48	5	1	6	54
4	1999	36	22	58	10	2	12	70
5	2000	13	1	14	14	2	16	30
6	2001	28	3	31	7	0	7	38
7	2002	23	-	23	11	2	13	36
8	2003	13	-	13	2	0	2	15
9	2004	12	2	14	2	0	2	16
10	2005	6	6	12	3	0	3	15
11	2006	16	-	16	6	1	7	23
12	2007	21	2	23	3	2	5	28
13	2008	23	-	23	5	0	5	28
14	2009	29	2	31	7	0	7	38
15	2010	21	-	21	5	0	5	26
16	2011	21	4	25	5	0	5	30
17	2012	51	1	52	12	0	12	64
18	2013	21	4	25	7	1	8	33
19	2014	30	4	34	6	0	6	40
20	2015	23	5	28	7	3	10	38
21	2016	39	3	42	5	1	6	48
22	2017	24	7	31	16	4	20	51
23	2018	27	2	29	4	0	4	33
24	2019	26	5	31	1	2	3	34
25	2020	19	7	26	2	0	2	28
26	2021	9	2	11	4	1	5	16
27	2022	14	2	16	5	3	8	24
28	2023	22	5	27	4	1	5	32
29	2024	3	1	4	3	0	3	7
		673	**144**	**817**	**172**	**26**	**198**	**1015**

5. MAIN SITE - PLANT WISE FIRE EXTINGUISHERS PLACEMENT DETAILS AS ON 31.03.2024

SL. NO	DEPARTMENTS	W/ CO_2	FOAM		DCP		CO_2							CLEAN AGENT		ABC 02 KG	TOTAL	FIRE BUCKETS		HOSE BOX	HOSES			Nozzle
		09 LTR	09 LTR	150 LTR	06 KG	09 KG	02 KG	4.5 KG	6 KG	6.5 KG	6.8 KG	09 KG	22.5 KG	01 KG	02 KG			STAND	NOS		30 MTR	15 MTR	7.5 MTR	
1	FIRE OFFICE / SECURITY OFFICE	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
2	ADMIN / IT BUILDINGS	9	0	0	9	0	0	12	0	1	0	0	1	8	11	0	51	2	9	2	2	1	1	2
3	CANTEEN / TELE EX/TIME OFFICE	1	3	0	6	1	0	7	0	0	0	0	0	0	2	0	20	2	8	0	0	0	0	0
4	WTP	0	5	0	9	6	1	8	0	0	0	1	0	0	0	0	30	3	12	4	0	6	2	4
5	WOOD YARD CHIPPER HOUSE SILO	8	3	0	12	1	0	6	0	0	0	0	0	0	1	0	31	0	0	11	1	17	3	11
6	MBP MILL	0	2	0	3	1	0	0	0	0	0	0	1	0	0	0	7	1	4	0	0	0	0	0
7	HARD WOOD PULP MILL	2	5	0	10	6	0	7	0	0	0	0	1	0	1	0	32	4	20	6	3	4	4	6
8	OLD WETLAB / PULP FEEDING	3	0	0	2	1	0	2	0	0	0	0	0	0	0	0	8	1	4	1	0	1	1	1
9	WORKS OFFICE / LAB	3	0	0	3	0	5	7	0	0	0	0	1	2	8	0	29	1	4	1	0	2	0	1
10	PAPER MACHINE III	24	23	1	38	15	0	38	0	0	0	0	3	0	9	0	151	18	85	28	14	19	7	28
11	PAPER MACHINE II	15	13	1	10	12	0	16	0	1	0	0	3	0	2	0	73	13	62	8	4	4	1	8
12	PAPER MACHINE I	29	19	2	11	16	0	19	1	1	4	0	1	0	3	0	106	15	75	12	12	9	3	8
13	CAP GODOWN I & II	2	0	0	2	0	0	3	0	0	0	0	0	0	1	0	8	0	0	4	0	4	4	4
14	PAPER GODOWN "A" & NEW F/H	24	0	0	7	0	0	4	0	0	0	0	0	0	0	0	35	3	12	4	1	4	1	4
15	OLD FIN. HOUSE / EMPL. CUTTER	11	0	0	1	1	1	3	0	0	0	0	0	0	0	0	17	3	14	3	1	2	1	3
16	WILE CUTTER & BIELOMATIC I & II	9	0	0	3	0	0	6	0	1	0	0	0	0	0	0	19	2	8	1	0	1	1	1
17	PASABAN CUTTER	2	1	0	5	0	0	4	0	0	0	0	0	0	0	0	12	0	0	2	0	2	2	2
18	ASRS GODOWN I & II / SHRINK	10	2	0	9	0	0	4	0	0	0	0	0	0	1	0	26	4	17	4	0	5	2	4
19	OLD REEL GODOWN I	14	0	0	7	0	0	4	0	0	0	0	0	0	0	0	25	8	39	10	5	15	2	10
20	NEW REEL GODOWN II	8	0	0	1	2	0	3	0	0	0	0	0	0	0	0	14	2	10	2	0	2	2	2
21	MARKETING / OS OFFICE	5	0	0	1	0	0	2	0	0	0	0	0	2	1	0	11	3	15	3	1	2	1	3
22	PROJECT GATE	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2	1	4	1	1	0	0	1
23	GENERAL STORES	13	4	0	6	2	0	9	0	0	0	0	0	1	2	0	37	2	9	1	1	0	0	1
24	KRAFT PAPER GODOWN I & II	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	8	1	1	0	0	1
25	CENTRAL / ELE WORK SHOP	2	2	0	4	1	1	2	0	0	0	0	0	0	0	0	12	2	9	0	0	0	0	0
26	SAFETY / CIVIL OFFICE	6	1	0	1	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0
27	BOILER I TO 4 & TG 1 TO 3	1	24	1	26	22	0	20	0	0	1	0	3	1	0	0	99	23	113	10	2	6	8	10
28	BOILER 5 / TG 4 & 5	0	7	0	16	5	0	9	0	0	0	0	3	0	1	0	41	9	29	4	2	2	0	4
29	BOILER VI & VII / TG VI	4	11	1	17	11	0	19	0	0	2	0	2	0	0	0	67	5	22	11	5	4	0	9
30	NEW SRP III	1	12	1	4	14	0	9	0	0	0	0	1	1	3	0	46	6	27	8	1	6	6	8
31	LIME KILN 1 & 2 / FURNACE OIL	0	4	1	4	2	0	4	0	0	0	0	0	0	0	0	15	3	13	2	0	2	0	2
32	O2 GENERATION PLANT	0	0	0	16	1	1	4	0	0	0	0	0	0	0	0	22	6	24	1	1	0	0	1
33	AUTO SECTION	1	3	0	5	1	0	3	0	0	0	0	0	0	1	0	14	4	18	0	0	0	0	0
34	DIESEL BUNK	0	2	1	0	3	0	0	0	0	0	0	1	0	0	0	7	2	8	1	1	0	0	1
35	ETP / MULTI PURPOSE GODOWN	1	3	0	11	5	1	8	0	0	0	0	0	0	0	0	29	4	17	2	0	4	0	2
36	SCRAP YARD	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	4	4	30	3	0	3	1	3
37	COAL YARD WEIGH BRIDGE	1	1	0	8	1	0	6	0	0	0	1	0	0	0	0	18	1	4	4	1	3	4	4
38	WASTE PAPER GODOWN / S/GATE	11	1	0	5	2	0	5	0	0	0	0	0	0	0	0	24	6	28	5	4	1	4	5
39	SRP I & II - CAUSTICIZER PLANT	0	5	0	12	7	2	11	0	0	0	1	1	0	0	0	39	8	35	1	1	0	0	1
40	OLD PULP MILL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	5	1	1	0	0	1
41	CBP II	1	5	0	7	6	0	6	0	0	1	0	1	0	0	0	27	2	8	2	1	1	1	2
42	CBP III / ECF	0	5	0	13	7	0	11	1	0	0	1	1	0	1	0	40	4	17	6	1	5	3	6
43	CLO2 PLANT	0	3	0	9	4	0	7	0	0	0	1	0	0	1	0	25	4	17	4	0	4	0	4
44	WET LAP II & III	5	0	0	1	2	0	3	0	0	0	1	0	0	0	0	12	0	0	1	1	0	0	1
45	DE INKING PLANT	3	6	0	9	5	0	8	0	2	0	0	1	0	1	0	35	3	15	6	0	6	6	6
46	DIP SLUDGE SCREW PRESS	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
47	DIP PULPER GODOWN	10	0	0	2	1	0	2	0	0	0	0	0	0	0	0	15	1	5	5	1	4	2	5
48	BACK WATER PLANT	1	1	0	5	1	0	5	0	0	0	1	0	0	0	0	14	1	5	0	0	0	0	0
49	BAGGASE YARD OLD / NEW	20	4	0	6	9	0	9	0	0	0	0	0	0	0	0	48	3	12	13	8	9	5	13
50	BIO GAS PLANT / WEIGH BRIDGE	0	0	0	6	0	0	3	0	0	0	0	0	0	1	0	10	1	5	0	0	0	0	0
51	BAGASSE GATE	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2	1	5	0	0	0	0	0
TOTAL		**269**	**182**	**9**	**346**	**175**	**12**	**318**	**2**	**6**	**8**	**7**	**25**	**16**	**52**	**0**	**1427**	**194**	**890**	**199**	**78**	**160**	**78**	**193**

6. COLONY AREA / OUT POST FIRE EXTINGUISHERS PLACEMENT DETAILS AS ON 31.03.2024

SL. NO	DEPARTMENTS	W/ CO_2	FOAM		DCP		CO_2							CLEAN AGENT		ABC 02 KG	TOTAL	FIRE BUCKETS		Hose Box	HOSES			Nozzle
		09 LTR	09 LTR	160L TR	06KG	09 KG	02 KG	4.5 KG	06 KG	6.5 KG	6.8 KG	09 KG	22.5 KG	01 KG	02 KG			Stand	Buckets		30 MTR	15 MTR	7.5 MTR	
	COLONY AREA																							
	BROUGHT FORWARD	269	182	9	346	175	12	318	2	6	8	7	25	16	52	0	1427	194	890	199	78	160	78	193
1	TNPL MATRIC SCHOOL / BUS	4	0	0	4	0	0	4	0	0	0	0	0	0	4	15	31	2	8	0	0	0	0	0
2	TNPL PUBLIC SCHOOL	3	0	0	2	0	0	3	0	0	0	0	0	1	1	0	10	2	8	0	0	0	0	0
3	TNPL PRIMARY SCHOOL	3	0	0	1	0	0	2	0	0	0	0	0	0	3	0	9	1	4	0	0	0	0	0
4	STADIUM / SHOOTING RANGE	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2	2	8	0	0	0	0	0
5	COLONY MAINTENANCE	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0
6	FAMC	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	1	4	0	0	0	0	0
7	CAR SHED	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	2	8	0	0	0	0	0
8	RECREATION	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	1	4	0	0	0	0	0
9	STAFF CLUBS	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	2	8	0	0	0	0	0
10	COLONY GATE / TEMPLE	2	0	0	1	0	0	1	0	0	0	0	0	0	0	0	4	1	5	0	0	0	0	0
11	COMMUNITY HALL	2	1	0	2	0	0	2	0	0	0	0	0	0	0	0	7	2	8	0	0	0	0	0
12	HRD HALL / HORTICULTURE	2	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	2	8	0	0	0	0	0
13	CO-OP- STORE/ GAS GODOWN	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	4	2	8	0	0	0	0	0
14	MICRO LAB	2	0	0	1	0	3	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
15	GUEST HOUSE	0	1	0	1	1	0	2	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
16	INDUSTRIAL TRAINING INSTITUTE	6	2	0	6	1	0	6	0	0	0	0	0	0	2	0	23	8	32	0	0	0	0	0
	TOTAL	299	187	9	373	180	16	346	2	6	8	7	25	17	62	15	1552	223	1007	199	78	160	78	193
	OUT POST																							
1	BR #3 (NEW RESERVOIR)	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	4	2	8	0	0	0	0	0
2	CPRC	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	3	3	13	0	0	0	0	0
3	INTAKE WELL	0	2	0	7	0	0	5	0	0	0	0	0	0	0	0	14	4	20	0	0	0	0	0
4	TEWLIS PUMP HOUSE	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	4	1	4	0	0	0	0	0
5	CEMENT PLANT	11	13	0	36	2	0	25	0	0	0	0	0	2	4	0	93	13	56	14	4	12	5	13
6	BLS GODOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	12	17	0	46	4	1	32	0	0	0	0	0	2	4	0	118	23	101	14	4	12	5	13

ANNEXURE XII

COMPLIANCE TO CREP RECOMMENDATIONS

STATUS OF IMPLEMENTATION OF CREP ACTION POINTS AS EVOLVED BY CPCB

<table>
<tr><th>RESPONSIBILITY</th><th>IMPLEMENTATION SCHEDULE</th><th>STATUS OF COMPLIANCE</th></tr>
<tr><td>1.DISCHARGE OF AOX kg/tonne of paper</td><td>AOX 1.5 Kg/tonne of paper within 2 years
AOX 1.0 Kg/tonne of paper within 5 years</td><td>The unit is maintaining AOx level in the treated effluent is maintaining below 0.1kg/T of product during the review period.
<table>
<tr><th colspan="4">AOX LEVEL – Oct’23 to Mar’24</th></tr>
<tr><th rowspan="2">S.NO</th><th rowspan="2">MONTH</th><th colspan="2">AOX</th></tr>
<tr><th>PPM</th><th>KG/T</th></tr>
<tr><td>1</td><td>Oct-23</td><td>2.8</td><td>0.07</td></tr>
<tr><td>2</td><td>Nov-23</td><td>2.1</td><td>0.04</td></tr>
<tr><td>3</td><td>Dec-23</td><td>3.4</td><td>0.11</td></tr>
<tr><td>4</td><td>Jan-24</td><td>3.2</td><td>0.08</td></tr>
<tr><td>5</td><td>Feb-24</td><td>4.1</td><td>0.1</td></tr>
<tr><td>6</td><td>Mar-24</td><td>4.5</td><td>0.09</td></tr>
<tr><td colspan="2">AVERAGE</td><td>3.35</td><td>0.08</td></tr>
</table></td></tr>
<tr><td>2. Installation of lime kiln</td><td>Within 4 years</td><td>The unit has already installed lime kiln with Lime sludge reburning in 1996. Installation of additional limekiln was completed during 2008 as part of Mill Development Plant now both lime kilns are under operation.</td></tr>
<tr><td>3. Waste water discharge cu. M / tonne of paper</td><td>Less than 140 Cu. M / tonne of paper within 2 years.
Less than 120 Cu. M / tonne in 4 years for units installed before 1992.
Less than 100 Cu. M / tonne of paper per units installed after 1992.</td><td>The average waste water discharge per ton of paper production is maintained around 21 M^3/Mt of paper produced for the period Apr’2023 to Mar’2024</td></tr>
<tr><td>4. Odour control by burning the reduced sulfur emissions in the boiler/lime-kiln</td><td>Installation of odour control system within 4 years.</td><td>The unit has installed following systems to control odour:
Non Condensable Gas (NCG) which is the source for odour is collected from hot black liqour accumulator tank and evaporators & incinerated in lime kilns.
NCG collection and incineration system provided in both lime kilns.</td></tr>
<tr><td>5. Utilization of treated effluent for irrigation</td><td>Utilization of treated effluent for irrigation wherever possible</td><td>The entire treated effluent discharge from the TNPL unit is fully utilized to irrigate lands, covered under TEWLIS, Captive plantation and addition to Greenery development in and around mill premises.</td></tr>
<tr><td>6. Color removal from the effluent</td><td>Indian Paper Manufacturers Association to take up project with Central Pulp & Paper Research Institute</td><td>Indian Paper Manufacturers Association has taken up this project with Central Pulp and Paper Research Institute. The unit has implemented tertiary treatment to reduce colour in the treated effluent by Ozonation at a capital outlay of Rs.400 lakhs (Rs.200 for Ozonization and Rs.200 of Oxygen feed plant). The unit was commissioned on 06th August 2010 and is in service. The operating expenditure will be about Rs. 70 lakh per annum @ Rs.20,000 per day. In addition to colour reduction in the final treated effluent, the ozonation further improves dissolved oxygen level in the treated effluent.</td></tr>
</table>

ANNEXURE XIII

COMMITMENTS MADE DURING PUBLIC HEARING

ACTION TAKEN ON PUBLIC HEARING MEETING /CONSULTATION MEETING COMMITMENTS

Public Hearing meeting was conducted for the De-inking Plant and Upgradation of Captive Co-generation plant on 18/05/2012. Public demanded various welfare measures such as provision of drinking water, dust control measures, infrastructure development, sanitation facilities. Subsequent to Public Hearing meeting, all the requests received from the eight Panchayats located around mill premises were prioritized based on the discussion with respective Panchayat President /Chairman and site inspection carried out by TNPL Officials during the Month of June '12.

Based on the above, necessary works were carried out as detailed below:

1. Drinking water supply:

SL NO	Name of Panchayat	Nature of Request	Details of work undertaken	Value of work in Lakh ₹	Current Status of work
01	Tamil Nadu Kagitha Aalai Panchayat	Provision of additional drinking water taps	11 Numbers of additional drinking water taps provided	2.10	Work completed
02	Punjai Pugalur Town Panchayat Area	Provision of drinking water pipelines	Laying of PVC pipelines for a length of 2.2 KMs	7.50	Work completed.
03	-do-	Overhead tank of drinking water supply	One Lakh Lt capacity drinking water tank has been constructed	17.00	Work completed.
04	-do-	GLR for drinking water supply from TNPL	Tank has been constructed	10.00	Work completed.
05	Athur Poolampalayam Village Panchayat	Provision of drinking water to Thanasi goundanpudur, Thundu perumalpalayam & Ambethkar Colony	Laying of separate lines to existing three Overhead tanks located in the respective areas	20.00	Work completed.
06	Thirukaduthurai Panchayat	Replacement of damaged drinking water pipelines for a distance of 0.5 Kms & Provision of drinking water storage tank	A 5000 Lt Sintex tank has been provided and pipelines were replaced	2.5	Work completed.

SL NO	Name of Panchayat	Nature of Request	Details of work undertaken	Value of work in Lakh ₹	Current Status of work
07	Kombupalayam Panchayat	Repairing of OHT at Noyyal Village & replacement of Sintex tank at Nathamedupalayayam	OHT repaired and sintex tank was replaced.	0.80	Work completed.
08	-do-	Repairing of drinking water tank at Panchayat Primary School, Noyyal	Repairing work completed.	0.10	Work completed.
09	Punnam Panchayat Area	Provision of RCC OHT at Punnam Adidravidar School	20,000 litres capacity tank was constructed.	5.00	Work completed.

2. Sanitation Arrangement:

SL NO	Name of Panchayat	Nature of Request	Details of work undertaken	Value of work in Lakh ₹	Current Status of work
01	Thottakuruchi Town Panchayat	Provision of Public Toilet at Thalavapalayam	Toilet constructed.	3.50	Work completed.
02	-do-	Provision of Public Toilet at Fishermen street at East Thavittupalayam	Toilet constructed.	3.50	Toilet constructed.
03	Kombupalayam Panchayat	Repairing of toilet at Panchayat Primary School, Noyyal	Toilet provided with new septic tank and pipelines	0.50	Work completed.
04	Nanjai Pugalur Panchayat Area	Provision of Public Toilet at Modhu Kaadu	Toilet constructed.	3.50	Toilet constructed.

3. Infrastructure and Drainage Development:

SL NO	Name of Panchayat	Nature of Request	Details of work undertaken	Value of work in Lakh ₹	Current Status of work
01	Tamil Nadu Kagitha Aalai Panchayat	Class room building for Panchayat union Elementary School, Pudu Kurukku palayam	Construction of three class rooms	8.00	Work completed.
02	Thirukaduthurai Panchayat	Front shed for Ration shop	Front shed for ration shop has been provided	0.5	Work completed.
03	Punnam Panchayat Area	Construction of Ration shop at Punnam chatram	Ration shop constructed.	5.0	Work completed.
04	-do-	Provision of drainage between Palamapuram & Ponniyagoundanpudur	Drainage provided	14.25	Work completed.
05	-do-	Provision of drainages and retaining walls at Moolimangalam and Thathampalayam	Drainage provided	22.50	Work completed.
06	Kombupalayam Panchayat	Construction of compound wall at Panchayat Primary School, Noyyal	Compound wall provided	1.9	Work completed.
07	-do-	Creation of burial ground and civil amenities at Muninathapuram	Work is being taken up	1.5	Work completed.

Total cost spent towards implementation of above schemes = Rs.144.82 lakhs.

ANNEXURE XIV

CSR ACTIVITES

STATUS OF CSR ACTIVITIES CARRIED OUT DURING OCTOBER - 2023 TO APRIL - 2024

Sl.No	CSR Activities Carried Out During Oct'2023 to Apr'2024	Cost incurred. Rs. in Lakhs
1	Every year, TNPL adopts 5 children to provide free education at TNPL Matriculation Higher Secondary School from Onavakkalmedu village students are studying between LKG to 12th standard.	12.92
2	Industrial Training Institute in affiliation with National Council Vocational Training (NCVT) and the Quality Council of India (QCI) is being run through TNPL Arakkodai Trust, covering four trades Viz. Instrument Mechanic, Fitter, Electrician and Welder.	36.48
3	Sponsorship for conducting sports tournaments, Sports training, State level sports tournament, will be carried out in order to promote sports activities.	1.36
4	Special Coaching Classes for X, XI & XII Students of School Situated around TNPL Unit-I.	0.66
5	TNPL organizes Special Medical Camps, Cancer screening Camps in association with leading Medical hospitals, organizing Monthly mobile camps for the benefit of the rural people in surrounding villages. Organizing Blood donation camps in association with Blood Bank Karur. Developing infrastructure facilities in the surrounding Government Hospitals. Providing Aids Appliances to the differently abled persons through District Disabled Rehabilitation and Welfare Officer (DDRWO) Karur.	7.22
6	Computer, Typewriting and Tailoring training centres have been set up to provide Career development training to unemployed youth in the neighbouring villages for enhancing employability skills / entrepreneurship skills.	3.09
7	Providing Physical Training at TNPL sports ground to the unemployed youth to take part in the Police Selection for the post of Constable and Sub-Inspector. Tiffin, Lunch, snacks, etc will be provided. Expert coaching classes are being provided during the training classes. Providing skill development Training for rural youth in association with TNPL I.T.I and Indian Overseas Bank/ Rural Self Employment Training Institute, Karur and other institutions. Sponsorship and Stipend will be provided to candidates to attend vocational training programmes and skill development programmes and Dual Training scheme at TNPL.	3.44
8	Infrastructure development works in the surrounding Municipality, Town Panchayat and Panchayat areas viz. , Pugalur Municipality, Punjai Thottakurichi, and Nanjai Pugalur, Kombupalayam, Punnam, Thirukkaduthurai, Vettamangalam Panchayats.	51.45
9	Distributing Drinking water to the surrounding villages viz. 1) Palamapuram, 2) Pandipalayam, 3) Tadhampalayam, 4) Moolimangalam, 5) Ponniagoundanpudur, 6) Narippalli Thottam, 7) Kariyampatti,	37.72

Sl.No	CSR Activities Carried Out During Oct'2023 to Apr'2024	Cost incurred. Rs. in Lakhs
	8) Kandasamypalayam, 9) Velliyampalayam, 10) Sullikaradu, and Chattram road. 11) Nanaparappu 12) Thannasigoundanputhur 13) Thunduperumal Palayam. and TEWLIS Ayacut areas etc., and community development activities etc.,	
10	Providing Street light in P.Thottakurichi Town panchayat areas.	19.00
11	Construction of new library building at Thirukkaduthurai Village.	8.40
12	Construction of RCC Pipe Culvert at Nadu Nanaparappu village.	4.98
13	Providing LED Street lights to Pugalur Municipality areas.	7.70
14	Fire rescue equipment to Fire Service department, Karur.	3.50
15	Repairing and Renovation, painting works at Koolagoundanur primary school.	1.05
16	Construct Compound wall at Asta Tasa Puja Durgadevi Temple at Thavittupalayam.	6.00
17	Dismantling the existing boys urinal, reconstruction the same and providing water line to girls urinal at Periyar E.V.R School, Noyyal.	3.31
18	Construction of bath ghats at Raja vaikkal, Thirukkaduthurai colony.	2.62
2	Providing pipe culvert and re routing the earthen drain at Ammapatti village.	1.10
19	Construction of pipe culvert (Bridge-2 Nos) for Kannimar & Rakkayee Thottam at Moorthipalayam.	6.23
20	Construct of Tile Roofing shed for Veeranarayanaperumal Temple at Kodumudi.	10.70
21	Production and Supply of Tree Saplings and planting saplings in the surrounding villages.	4.51
22	Watering of Tree saplings planted around the factory.	0.67
23	Developing greenbelt and garden in the surrounding areas and Karur Railway station. Promotion of organic manures, Developing Solid Waste Management projects in the surrounding villages.	4.64
24	Providing JCB for desiliting the cannel and cleaning bushed at Moorthipalayam to Thalavapalayam.	1.29
25	Infrastructure works to preserve Heritage Buildings including Place of worship in Karur District.	3.25
	GRAND TOTAL (Rs in lakhs)	**243.28**

Table No. 1

Enterprise Social Commitment

Sector	2013 -14	2014 -15	2015 -16	2016 -17	2017 -18	2018 -19	2019 -20	2020-21	2021-22	2022-23	2023-24
Education	69	47	120	110	92	88	103	17	68	81	52
Health Care and Medical Service	10	22	67	89	33	37	136	32	139	7	7
Infrastructure Development	94	-	-	-	54	84	44	49	5	22	52
Social Development	-	193	101	230	-	70	43	75	131	145	119
Livelihood / Economic Development	109	-	-	-	25	62	10	16	3	-	-
Environment & Sanitation	26	93	66	51	33	33	14	6	2	5	11
Culture & Heritage	20	18	16	26	19	21	35	16	0.4	2	3
Soil and Water Conservation	-	-	-	-	-	10	14	8	-	-	-
Total (Rs. in Lakhs)	327	373	369	505	255	406	399	219	349	262	243
Total (Rs. in Crores)	**37.06**										

Table No. 2

Cost Towards Pollution Control Facilities

Parameter	Capital cost (Rs. Lakhs since 2013 EC)	Operating Cost Rs. Lakhs/year
Air pollution control systems (ESP and Chimney for the power boiler#7 under capital)	800	325
DIP Sludge dewatering system and handling	1000	195
Water conservation and recycling for DIP	700	-
Cost incurred on Water conservation measures (118 projects)	157	-
Online monitoring and control equipment and instruments	123	10
Dust suppression system for coal handling area	130	23
Air cooled condenser for conservation of water	1000	193
Greenbelt and green cover development	64	125
Safety systems installations	100	
Safety and environmental staff costs		350
Total	**4074**	**1221**

Table No. 3

Status of Environment Protection Measures Proposed During MDP

Description	Investment (Rs In Crores)	Status
White liquor oxidation plant	4.0	Implementation completed as part of Mill Development Plan Commissioned in May 2008
Oxygen generation plant	11.0	
Bleach plant for chemical bagasse pulping lines	60.0	
Chlorine di oxide generation plant	47.6	
Lime mud reburning kiln	21.5	
Improvements in waste water treatment plant	4.9	
Electrostatic precipitators including online stack monitoring	10.0	
Total	**159.0**	

Table No. 4

Status of Environment Protection Measures Proposed During MEP

Description	Investment (Rs In Crores)	Status
Electrostatic Precipitator for proposed coal fired boiler	3	Commissioned in Jan 2011 as part of Mill Expansion Plan
Augmentation of wastewater treatment plant (WWTP)	3	Ozone treatment plant commissioned in May 2010
Oxygen delignification	36	Commissioned in Jan 2011 as part of Mill Expansion Plan
New brown stock washing	86	
Total	**128**	

ANNEXURE XV

TNPCB REPORT – AMBIENT AIR QUALITY MONITORING

Report No.DEL/DGL/61

TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Dindigul.
AMBIENT AIR QUALITY SURVEY - Report of Analysis.

Report No. F.No.70/TNPCB/DEL/DGL/AAQS/2023-2024, Dated:20.03.2024

1. Name of the Industry : M/s. Tamilnadu Newsprint and Papers Ltd.,
2. Address of the Industry : Pulp Plant & Paper Division,
   Kagithapuram - 639 136,
   Karur District.
3. Date of Survey : 14.02.2024 & 15.02.2024
4. Duration of Survey : 24 Hrs
5. Category : Red - Large.
6. Land use classification : Industrial
7. Type of Industry : Pulp Plant & Paper

Meteorological Conditions

Ambient Temperature (°C)	Min	Max	Relative Humidity (%)	Min	Max
	23 °C	34°C		61%	83%
Weather Condition	Clear Sky		Rain Fall (mm)	---	
Predominant Wind Direction	NE → SW		Mean Wind Speed (Km/hr)	8.3 Km/hr.	

Ambient Air Quality Survey Average Results (24 Hrs)

Sl. No	Location	Direction *	Distance (m) *	Height from GL (m)	Pollutants Concentration (µg/m³)					
					$PM_{2.5}$	PM_{10}	SO_2	NO_2	Cl_2 *	H_2S *
1	On top of the Decant House Tewlis Pump House.	NE	400	5	26	54	12	17	<1.0	<0.2
2	On top of Thiru.Muthusamy House No.34, Nallipalayam.	E	1000	5	-	63	14	18	<1.0	<0.2
3	On top of Thiru.Ramasamy House No.16, Sottaiyur.	ESE	1500	6	-	69	16	21	<1.0	<0.2
4	On top of the scaffolding near TNPL Reservoir, R.C.-3.	SE	500	4	-	74	17	23	<1.0	<0.2
5	On top of Thiru. Gopal House, Door No.20/4, Kurukkupalayam.	S	1000	5	-	78	18	24	<1.0	<0.2
6	On top of Thiru. R.Chidambaram House, Door No.3, Kongu Nagar.	SSW	750	5	-	81	22	26	<1.0	<0.2
7	On top of EB Quarters 'Q' Block- IV.	SW	400	7	37	85	23	28	<1.0	<0.2
8	On top of Units Biotech Laboratory Building.	W	400	6	-	76	21	27	<1.0	<0.2
9	On top of Bio- Methanation Building near TNPL Guest House.	NW	700	6	-	70	20	25	<1.0	<0.2
	Ambient Air- Quality Results for fugitive Emission.									
10	On top of the scaffolding near ETP area.	SW	05	2	-	160	27	36	<1.0	<0.2
11	On top of the scaffolding near Coal- Storage yard.	SE	20	2	-	134	24	33	<1.0	<0.2

Note: All the values are restricted to the sampling period of 08 Hours Average of 24 Hours.

*Indicate Minimum Detectable Limit

End of the report

20/03/2024
Jr. Environmental Scientist

Deputy Chief Scientific Officer
DEL, TNPCB, Dindigul.

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB– AMBIENT AIR QUALITY MONITORING TEST REPORT

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38293/2023-24 & 03.04.2024**
Sample Number	**N-38293/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**TNPL Colony Bio Lab**
GPS Reading	**11°03'30.839''N & 77°59'28.551''E**
Sample Drawn on	24.03.2024 & 08.20 to 25.03.2024 & 08.20
Sample Received on	29.03.2024
Sampling Plan & Procedure	RDS Sampler S.No:2021-DTD-2016
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2613-DTI-2019
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024
Environmental Condition	
Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	26.0	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	58.3	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	13.5	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	29.0	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	40.5	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	30.6	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

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TEST REPORT

Test Report No & Date	CTL/CH/N-38293/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	µg/m^3	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38294/2023-24 & 03.04.2024**
Sample Number	**N-38294/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**TNPL Guest House**
GPS Reading	**11°03'45.383''N & 77°59'36.304''E**
Sample Drawn on	24.03.2024 & 08.35 to 25.03.2024 & 08.35
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2610-DTI-2019
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024
Environmental Condition	
Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	22.0	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	53.6	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	10.7	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	23.5	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	30.1	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	16.5	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38294/2023-24 & 03.04.2024**

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.
BDL - Below Detection Limit(D.L - Detection Limit)

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38295/2023-24 & 03.04.2024**
Sample Number	**N-38295/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**TNPL Balancing Reservoir -3**
GPS Reading	**11°02'36.943''N & 78°00'14.084''E**
Sample Drawn on	24.03.2024 & 08.50 to 25.03.2024 & 08.50
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2611-DTI-2019
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Environmental Condition

Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	23.7	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	54.0	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	12.5	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	24.8	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	34.6	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	26.0	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

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TEST REPORT

Test Report No & Date	CTL/CH/N-38295/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38296/2023-24 & 03.04.2024**
Sample Number	**N-38296/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**230 KVA TNEB Station**
GPS Reading	**11°03'11.314''N & 77°59'22.186''E**
Sample Drawn on	24.03.2024 & 09.10 to 25.03.2024 & 09.10
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2025-DTD-2016
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024
Environmental Condition	
Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	25.1	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	56.5	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	16.5	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	28.0	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	45.1	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	27.0	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38296/2023-24 & 03.04.2024**

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd

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TEST REPORT

Test Report No & Date	**CTL/CH/N-38297/2023-24 & 03.04.2024**
Sample Number	**N-38297/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**Mr. Chidambaram House, Kongu Nagar**
GPS Reading	**11°02'54.806''N & 77°59'15.73''E**
Sample Drawn on	24.03.2024 & 09.30 to 25.03.2024 & 09.30
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2023-DTD-2016
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Environmental Condition

Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	23.0	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	51.0	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	7.7	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	15.1	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	19.5	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	9.6	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

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TEST REPORT

Test Report No & Date	CTL/CH/N-38297/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38298/2023-24 & 03.04.2024**
Sample Number	**N-38298/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**Mr. Gopal House, New Kurukkupalayam**
GPS Reading	**11°02'53.686''N & 77°59'30.174''E**
Sample Drawn on	24.03.2024 & 09.50 to 25.03.2024 & 09.50
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2228-DTK-2017
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024
Environmental Condition	
Relative Humidity	57%
Ambient Temperature	35°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	20.1	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	47.0	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	6.4	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	14.2	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	BDL(DL:5.0)	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	BDL(DL:5.0)	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

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(CHEMICAL)

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CHENNAI TESTING LABORATORY PRIVATE LIMITED
Testing redefined
www.ctllabs.in
CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	CTL/CH/N-38298/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

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CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38299/2023-24 & 03.04.2024**
Sample Number	**N-38299/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**Depither area (on the Terrace of BM Plant)**
GPS Reading	**11°03'22.665''N & 77°59'54.758''E**
Sample Drawn on	25.03.2024 & 09.00 to 26.03.2024 & 09.00
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2613-DTI-2019
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024
Environmental Condition	
Relative Humidity	60%
Ambient Temperature	34°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	24.5	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	55.0	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	17.8	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	30.0	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	53.2	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	44.6	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

TEST REPORT

Test Report No & Date	CTL/CH/N-38299/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

CHENNAI TESTING LABORATORY PRIVATE LIMITED

www.ctllabs.in

CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38300/2023-24 & 03.04.2024**
Sample Number	**N-38300/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Ambient Air
Sample Description	**Ambient Air Quality**
Sampling Location	**TEWLIS BUILDING**
GPS Reading	**11°03'17.07''N & 78°00'19.584''E**
Sample Drawn on	25.03.2024 & 08.30 to 26.03.2024 & 08.30
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 5182 (Part V) and (Part XIV)
Sample Quantity	1 No
Equipment used for Sampling	RDS Sampler S.No:2245-DTK-2017
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Environmental Condition

Relative Humidity	60%
Ambient Temperature	34°C
Wind Direction	SE
Weather Condition	Clear Sky

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
1	PARTICULATE MATTER ($PM_{2.5}$)	IS 5182 Part 24 - 2019	$\mu g/m^3$	29.2	60
2	PARTICULATE MATTER (PM_{10})	IS 5182 Part 23 - 2006 (R.2017)	$\mu g/m^3$	57.3	100
3	SULPHUR DIOXIDE (SO_2)	IS 5182 Part 2 - 2001 (R.2017)	$\mu g/m^3$	15.0	80
4	OXIDES OF NITROGEN (NO_2)	IS 5182 Part 6 - 2006 (R.2017)	$\mu g/m^3$	28.5	80
5	OZONE (O_3)	CTL/SOP/AIR/08 - 2016	$\mu g/m^3$	37.6	180
6	LEAD (Pb)	IS 5182 PART 22 - 2004 (R.2019)	$\mu g/m^3$	BDL(DL:0.1)	1
7	CARBON MONOXIDE (CO)	CTL/SOP/AIR/23 – 2016	mg/m^3	BDL(DL:1.15)	4
8	AMMONIA (NH_3)	IS 5182 Part 25 - 2018	$\mu g/m^3$	21.6	400
9	ARSENIC (As)	CTL/SOP/AIR/06 – 2016	ng/m^3	BDL(DL:1.0)	6
10	NICKEL (Ni)	IS 5182 Part 26 - 2020	ng/m^3	BDL(DL:5.0)	20
11	BENZENE (C_6H_6)	IS 5182 PART 11 - 2006 (R.2017)	$\mu g/m^3$	BDL(DL:1.0)	5
12	BENZO(a)PYRENE	IS 5182 PART 12 - 2004 (R.2019)	ng/m^3	BDL(DL:0.5)	1
13	HYDROGEN SULPHIDE(H_2S)	IS 5182 PART 07 - 2021	$\mu g/m^3$	BDL(DL:6.0)	-

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

CHENNAI
TESTING LABORATORY PRIVATE LIMITED
Testing redefined
CIN: U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	CTL/CH/N-38300/2023-24 & 03.04.2024

SL.NO	PARAMETERS	METHODS	UNITS	RESULTS	NAAQS*
14	MERCURY (Hg)	CTL/SOP/AIR/25-2016	$\mu g/m^3$	BDL(DL:0.01)	-

*National Ambient Air Quality Standards prescribed by Ministry of Environment and Forests, Government of India vide Gazette Notification G.S.R. 826(E) dated 18.11.2009.

BDL - Below Detection Limit(D.L - Detection Limit)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

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ANNEXURE XVI

TNPCB REPORT – NOISE MONITORING

Report No.DEI/DGI/61

TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Dindigul.

AMBIENT /SOURCE NOISE LEVEL SURVEY – Report of Analysis

Report No.TNPCB/DEL/DGI/F.No.70/NLS/2023-2024, Dated:20.03.2024

1.	Name of the Industry	M/s.Tamilnadu Newsprint and Papers Ltd.,	
2.	Address of the Industry	Pulp Plant Division, Kagithapuram – 639 136, Karur District.	
3.	Date of Survey	15.02.2024	
4.	Consent Order No.	No. 2405250861727/ Dt:01.02.2024	
Category	Red – Large.	Land use classification	Industrial
Type of Survey	Ambient/Noise	Time of Survey	Day
Meteorological conditions		Clear Sky	

Logging Parameters

Instrument Used	CESVA	Serial No.	T243080
Logging Interval	...Minutes each point	Measuring Range	40-120
Weighting "A"	Peak Weighting "C"	Time Weighting	A
Sound Incidence	Random / Frontal	Time in hrs	14.30 Hrs – 16.00 Hrs

Report of Noise Level Monitoring

Sl. No	Location	Duration (min)	Distance (m)	Direction	Sound Level dB(A)		
					L_{eq}	L_{min}	L_{max}
	I.Boundary Line.						
1.	Near Community Hall Premises.	0.30	750	N	47.9	41.2	59.3
2.	Near Tewlis Pump House.	0.30	400	NE	42.4	40.6	61.3
3.	Near Sludge Gate Premises.	0.30	760	S	49.4	42.3	60.2
4.	Open Field Near Railway Station.	0.30	750	SW	51.9	47.1	59.2
5.	Behind TNPL Temple Premises.	0.30	750	W	54.6	53.1	61.4
	AT SOURCE:						
6.	Near Paper Machine Area	0.30	-	-	73.3	72.5	75.4
7.	Near Power Boiler -VI	0.30	-	-	76.1	75.6	79.2

End of the report

20/03/2024

Jr. Environmental Scientist

Deputy Chief Scientific Officer
DEL, TNPCB, Dindigul.

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB – NOISE MONITORING TEST REPORT

CHENNAI TESTING LABORATORY PRIVATE LIMITED
Testing redefined
www.ctllabs.in
CIN: U93000TN2000PTC043869

TEST REPORT

Test Report No & Date	**CTL/CH/N-38334/2023-24 & 03.04.2024**
Sample Number	**N-38334/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	NOISE
Sample Description	**AMBIENT NOISE**
Sample Drawn on	26.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 9989
Equipment used for Sampling	Sound Level Meter S.NO:554062

Test Results:
The above sample tested as received, and results are as follows:

SL.NO	LOCATION	GPS READING	NOISE LEVEL dB (A)Leq	LIMITS*	NOISE LEVEL dB (A) Leq	LIMITS*
			Day Noise		Night Noise	
1	Near Community Hall Premises	11°03'46.02''N & 77°59'47.418''E	41.7	75	34.8	70
2	Near TEWLIS Pump House	11°03'19.494''N & 78°00'24.214''E	43.7		35.0	
3	Near Kandasamy Palayam Baggase Road	11°03'6.109''N & 78°00'19.585''E	48.4		35.9	
4	Infront of Reservoir BR-3	11°02'37.785''N & 78°00'14.529''E	55.0		42.6	
5	Near Sludge Gate Premises	11°03'14.019''N & 78°00'20.738''E	57.0		46.9	
6	Open Field Near Railway Station	11°03'3.738''N & 77°59'32.198''E	59.2		52.7	
7	Behind TNPL Temple Premises	11°03'33.738''N & 77°59'30.33''E	44.4		35.9	
8	TNPL Staff Quarters (Staff Club Area)	11°03'48.42''N & 77°59'28.68''E	49.3		39.6	

* CPCB Limits (Day &Night Time)

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory

G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

TEST REPORT

Test Report No & Date	**CTL/CH/N-38335/2023-24 & 03.04.2024**
Sample Number	**N-38335/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	NOISE
Sample Description	**WORKZONE NOISE**
Sample Drawn on	26.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & IS 9989
Equipment used for Sampling	Sound Level Meter - S.No:554062

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	LOCATION	GPS READING	NOISE LEVEL dB (A)	LIMITS*
1	Lime Kiln Plant -2 Near Tier -3	11°03'17.232''N & 77°59'44.394''E	75.2	85 dB (A)
2	Chemical Baggase -3 Area Near Filtrate Tank -2 [21523-105-010]	11°03'20.909''N & 77°59'48.504''E	82.8	
3	Paper Machine -3 Area Near Master Reel 7mts Level	11°03'21.262''N & 77°59'31.848''E	84.6	
4	Power Boiler -V [Near Bottom Ash Collecting Area]	11°03'17.76''N & 77°59'45.018''E	82.9	

* As Per Factory Act Limit

*****END OF REPORT*****

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | Chennai - 600 032 | Tamil Nadu | India
E-mail : chennaitestinglab@gmail.com
Telefax : +91-44-2250 1757

NOISE CONTROL MEASURES

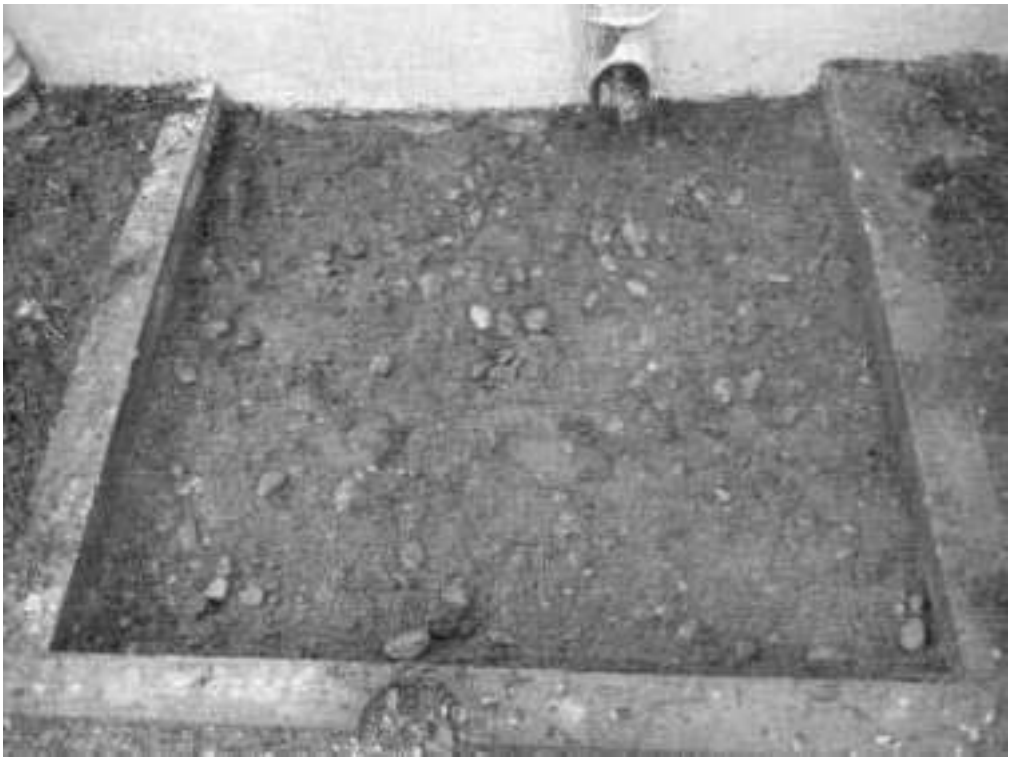
MEASURES TAKEN TO CONTROL NOISE POLLUTION

- High noise generating Vapour Compression System has been replaced with low noise Vapour Absorption Machine in chilling plant operations.
- Reciprocating compressors are replaced with comparatively less noise generating centrifugal compressors
- Boiler start-up vent lines, Boiler safety valves, Steam line safety valves etc are provided with silencers to reduce noise pollution
- In order to minimise the exposure of high noise in compressor house, a separate room has been provided for the working personnel.
- Periodical maintenance and condition monitoring of equipments to minimize noise generation.
- Operators are not exposed near the machine for more period.
- Use of PPEs like Ear muffs and ear plugs by the working personnel in high noise zone is ensured.
- Awareness Boards on Noise Pollution have been displayed in all high noise zones.

ANNEXURE XVII

RAIN WATER HARVESTING FACILITIES AT TNPL

RAIN WATER HARVESTING STRUCTURES AT COLONY AREA



RAIN WATER COLLECTION POND AT COLONY

RAIN WATER HARVESTING AT BOREWELL POINTS

RAIN WATER HARVESTING STRUCTURES AT MILL

Water Reservoirs No : 1 & 2 in TNPL Colony

Substitution of process fresh water with harvested rain water from BR 5

RAIN WATER HARVESTING STRUCTURES AT ADMINSTRATIVE BUILDINGS

Rain water harvesting facilities at TNPL

Sl. No	Description	Roof Area	RWH pits	Collection	Effective area available for recharging
		(Sq.M)	(Nos)	%	(Sq.M)
	Plant Area				
1	Admin Buliding	1,200.00	4	100%	1,200.00
2	Industrial Canteen	1,100.00	6	100%	1,100.00
3	Security Office	430.00	3	100%	430.00
4	Time Office	130.00	5	100%	130.00
5	Telephone Exchange	70.00	2	100%	70.00
6	Civil Office	216.00	4	100%	216.00
7	Safety & Instrumentation	276.00	3	100%	276.00
8	Paper Machine III	11,595.58	24	60%	6,957.35
9	A -Godown	4,900.94	8	50%	2,450.47
10	New Reel Storage Godown	7,181.88	12	50%	3,590.94
11	Multi prupose godown (old compressor house)	738.39	5	100%	738.39
12	Energy Maintance Office	233.20	1	100%	233.20
13	110 KV YARD - MCC	161.60	2	100%	161.60
14	TG # 6	834.15	5	60%	500.49
15	Boiler # 6 Control room	137.32	3	100%	137.32
16	Boiler # 6 - MCC	237.25	2	100%	237.25
17	Boiler # 7 - MCC	81.25	2	100%	81.25
18	RB # 3 Office/ MCC / I/O rack..	808.20	6	100%	808.20
19	Deinking Plant - Type	3,796.00	5	40%	1,518.40
20	Pulper Building	4,551.00	14	80%	3,640.80
21	DIP waste paper Godown	2,135.00	7	75%	1,601.25
	Cement Plant				
22	Admin Buliding	324.82	3	100%	324.82
23	Canteen and Time Office	15.60	3	100%	15.60
24	Marketing Office	100.00	3	100%	100.00
25	Weigh Bridge	14.61	1	100%	14.61
26	CCR Building	358.09	5	100%	358.09
	Housing Colony				
27	Director Bungalow	162.64	2	100%	162.64
28	G.M Bungalow	177.97	4	100%	177.97
29	T.A- Type	514.87	4	100%	514.87
30	A - Type	1,313.01	8	100%	1,313.01
31	B - Type	1,692.94	12	100%	1,692.94
32	C - Type	4,595.72	46	100%	4,595.72

33	D - Type	4,111.52	56	100%	4,111.52
34	E - Type	3,557.62	66	100%	3,557.62
35	F - Type	8,840.15	164	100%	8,840.15
36	Guest House Rooms	194.33	3	100%	194.33
37	Guest House Suits	269.89	3	100%	269.89
38	Officer's Hostel	325.28	2	100%	325.28
39	Guest house Dinning/Kitchen	348.51	4	100%	348.51
40	A - Hostel	548.33	6	100%	548.33
41	B - Hostel	548.33	6	100%	548.33
42	A,B Hostel Dining	443.03	2	100%	443.03
43	Co-operative store	401.02	1	100%	401.02
44	Staff club	627.32	2	100%	627.32
45	Recreation club	318.31	1	100%	318.31
46	Colony maintenance office	103.72	2	100%	103.72
47	Dispensary	168.96	1	100%	168.96
48	OAT	121.75	1	100%	121.75
49	Post office	47.40	1	100%	47.40
50	Post master - Residence	47.86	1	100%	47.86
51	Matriculation School MAIN BLO C	1,486.99	30	100%	1,486.99
52	Matriculation School PRIMARY B	1,208.18	28	100%	1,208.18
53	CBSE School	1,951.67	10	100%	1,951.67
54	ITI Building	690.52	12	100%	690.52
55	Bio-Tech Lab	290.06	2	100%	290.06
	Balancing Reservoir Area				
1	Balancing Reservoir Area # 1	32,000.00	1	100%	32,000.00
2	Balancing Reservoir Area # 2	95,000.00	1	100%	95,000.00
3	Balancing Reservoir Area # 3	100,000.00	1	100%	100,000.00
4	Balancing Reservoir Area # 4	112,500.00	1	100%	112,500.00
5	Balancing Reservoir Area # 5	30,000.00	1	100%	30,000.00
6	Rainwater collection bond # 6	5,000.00	1	100%	5,000.00
7	Rainwater collection bond # 7	5,000.00	1	100%	5,000.00
8	Rainwater collection bond # 8	7,450.00	1	100%	7,450.00
9	Rainwater collection bond # 9	2,850.00	1	100%	2,850.00
	Total	**466,534.78**	**627**		**451,799.93**

ANNEXURE XVIII

EC LETTER SUBMITTED TO TOWN PANCHAYAT

TNPL

TAMIL NADU NEWSPRINT AND PAPERS LIMITED

EMS/112/13
March 21, 2013

The Executive Officer,
Kagithapuram Town Panchayat,
Kagithapuram,
Karur Dist.

Sir,

Sub: Implementation of De-inking plant and up-gradation of Captive Co-generation plant by TNPL- Intimation on receipt of Environmental Clearance- Reg.

Ref: F.No.J-11011/710/2007-IA-II(I) dated 11th February 2013.

With reference to subject matter, it is hereby informed that Ministry of Environment and Forests, New Delhi has accorded "Environmental Clearance" for installation of 300 TPD Deinked Pulp Line and up-gradation of Captive Co-generation plant by TNPL vide reference cited above.

A copy of Environmental Clearance letter is enclosed for your information.

Thanking you,

Yours faithfully,
for TAMIL NADU NEWSPRINT AND PAPERS LIMITED,

(R. MANI)
DIRECTOR (OPERATIONS)

Name-Stamp of office of posting

Date-Stamp

Sender's Address : DIRECTOR (OPERATIONS)

Tamil Nadu Newsprint and Papers Ltd.,
KAGITHAPURAM
Karur Dist. Tamil Nadu.

PIN. 6 3 9 1 3 6

EMS/112/13

ACKNOWLEDGEMENT RECEIPT

No.

Received a ~~Registered~~ / Insured Letter / Post Card / Packet / Parcel

Addressed to (Name) The Executive Officer
Tamil Nadu Kagithapuri Arulagi
Town Panchayat,
Kagithapuram, Karur Dist.
639 136

Insured for Rupees
Date of Delivery.....20
Score out the matter not required
For Insured articles only.

Tamil Nadu Kagithapuri Arulagi
Special Grade Town Panchayat
Kagithapuram, Pugalur 639136

Signature of addressee

ANNEXURE XIX

SUBMISSION OF SIX MONTHLY REPORT DETAILS

SUBMITTING DETAILS OF SIX MONTHLY COMPLIANCE REPORT

Sl No	Description	Submitted on
01	First Report	17/04/2013
02	Second Report	30/11/2013
03	Third Report	29/05/2014
04	Fourth Report	10/12/2014
05	Fifth Report	19/06/2015
06	Sixth Report	26/11/2015
07	Seventh Report	25/06/2016
08	Eighth Report	27/10/2016
09	Ninth Report	27/04/2017
10	Tenth Report	13/11/2017
11	Eleventh Report	12/05/2018
12	Twelth Report	24/11/2018
13	Thirteen Report	08/05/2019
14	Fourteen Report	11/12/2019
15	Fifteenth Report	29/05/2020
16	Sixteenth Report	25/11/2020
17	Seventeenth Report	14/05/2021
18	Eighteenth Report	29/11/2021
19	Nineteenth Report	30/05/2022
20	Twentieth Report	29/11/2022
21	Twenty First Report	13/05/2023
22	Twenty Second Report	22/11/2023
23	Twenty Third Report	**Current Report**

ANNEXURE XX

ENVIRONMENTAL STATEMENT (FORM V)

TNPL

Tamilnadu Newsprint and Papers Limited

(A Government of Tamilnadu Enterprise)

ICSI
NATIONAL AWARD
FOR EXCELLENCE IN
CORPORATE GOVERNANCE

Kagithapuram - 639 136, Karur Dist. Tamilnadu, India.
Phone : (0091) 04324 - 277001 to 277010 (10 Lines)
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HR : 04324 - 277273 Cell : 94860 41341 to 41343

TUV NORD
ISO 9001 / ISO 14001

ENV/15/23
16 September 2023

The District Environmental Engineer,
Tamil Nadu Pollution Control Board,
S.F.No. 654 Part, 655 Part – L.N.S Village,
L.G.B Nagar, Arivuthirukkovil Road,
Karur – 639 002.

Dear Sir,

Sub: **Furnishing of Environmental Statement (Form V) - TNPL Main Plant (Pulp and Paper & Power Plant) - reg.**

We are enclosing the environmental statement pertaining to both TNPL Main Plant (Pulp and Paper Manufacturing Unit) and TNPL Captive Power Plant for the financial year ending 31st March 2023, in Form V duly filled in with all relevant details as per Environment (Protection) Act, 1986 and Rules 1986.

This is for your kind information and records.

Thanking you,

Yours truly,
For TAMIL NADU NEWSPRINT AND PAPERS LIMITED,

16/9/23
Executive Director (Operations) – F A C

CC:

The Joint Chief Environmental Engineer,
Tamil Nadu Pollution Control Board,
No.9, 4th Street, Brindhavan Road,
Fairlands,
Salem- 636 016

19 SEP 2023

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

FORM - V
(See Rule: 14)

Environmental Audit Report for the financial year ending the 31st March 2023.

PART - A

(i)	Name and address of the owner/occupier of the Industry, operation or process	:	TAMIL NADU NEWSPRINT AND PAPERS LIMITED
(ii)	Industry category Primary:- (STC code) Secondary:- (SIC code)	:	RED
(iii)	Production capacity - Units		
	Newsprint & Printing and Writing Papers	:	4,80,000 MT/Annum
	Power Generation Capacity	:	103.62 MW
(iv)	Year of establishment	:	1979
(v)	Date of the last environmental Statement submitted	:	26/09/2022

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART - B

Water and Raw material consumption

Sl No	Description	UOM	Quantity
01	**Overall Water Consumption**	**KL/day**	**36342**
02	**Process Water Consumption**		
02 a)	Pulp Mill	KL/day	9417
02 b)	Paper Machine, DIP & CAP	KL/day	10936
02 c)	Soda Recovery Plant	KL/day	1495
02 d)	Soft water for process	KL/day	1764
02 e)	Others	KL/day	2539
	Total Quantity for Process use	**KL/day**	**26151**
03	**Cooling Water consumption**		
03 a)	Water used for boiler feed	KL/day	3003
03 b)	Water used for Cooling purpose	KL/day	3808
	Total quantity for cooling purpose	**KL/day**	**6811**
04	**Domestic Water**	**KL/day**	**3379**

Name of products	Process Water consumption (except Domestic) Per unit (MT) of products	
	During the Previous financial year (2021-2022)	During the current financial year (2022-2023)
	(1)	(2)
Writing and Printing papers	35 M^3/t	29 M3 /t

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

(ii) RAW MATERIAL CONSUMPTION FOR PAPER PRODUCTION

SL NO	Name of the raw material	Name of Products	Consumption of raw material per unit of output	
			During the previous Financial year (2021-2022)	During the current Financial year (2022-2023)
Unit of measurement			ADMT/MT of Paper Produced	
01	Bagasse	Newsprint	-	-
02	Wood		-	-
01	Bagasse(Depithed)	Writing and Printing papers	1.99	1.83
02	Wood		1.00	1.03
03	Waste Paper		0.178	0.205
04	Imported Pulp		0.051	0.030

PRODUCTS MANUFACTURED

Writing and Printing papers	:	420793	MT
News Print	:	Nil	MT
Overall daily average Power production	:	59.93	MW
Equivalent Paper Production/Day	:	1153	MT

RAW MATERIAL CONSUMPTION

Bagasse (Depithed)	:	768484	MT
Wood	:	433034	MT
Waste Paper	:	86112	MT
Imported Pulp	:	12754	ADMT

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART – C

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT
(Parameter as specified in the consent issued)

(a) WATER

(i)	Pollutants	Quantity of pollutants discharged (MTs/day)	Quantity of pollutants discharged in (Kgs/T of paper)	Concentration of pollutants discharged in (mg/l) except % sodium**	Percentage variation from prescribed in discharges standards with reasons
Water	TSS	1.34	1.16	61	Nil
	TDS at 180°c	31.13	27.00	1420	Nil
	COD	4.70	4.08	215	Nil
	BOD	0.58	0.50	26	Nil
	Chloride	8.43	7.31	385	Nil
	Sulphates	5.96	5.17	272	Nil
	Na (%)	-	-	43	Nil

**** As per TNPCB lab results**

Section wise average Effluent Water Quantity generation

Sl No	Description	UOM	Quantity
01	Pulp Mill	KL/day	25393
02	Paper Machine	KL/day	11078
03	Deinking pulp Plant	KL/day	1800
04	Soda Recovery Plant	KL/day	2400
05	Others (Energy, WTP, Sewage, canteen, ETP etc.)	KL/day	4500
Avg. Effluent quantity generated		KL/day	**45171**
Avg. treated effluent quantity discharged for irrigation		KL/day	**25918**

(b) AIR

Main Plant (Pulp and Paper manufacturing facility)

Name of pollutant : SPM (mg/NM^3)
Prescribed norms : 150 mg/NM^3

Stack No.	Stack attached to	Average Quantity of pollutants emitted (Kgs per day)	Average Quantity of pollutants emitted in (Kg per ton of paper)	Average Concentration of pollutants emitted in mg/NM^3 **	Percentage variation from prescribed in discharges standards with reasons
3	SRP-LIME KILN I	38.35	0.03	73.5	NIL
35	SRP- Boiler 3	380.86	0.33	68.5	NIL
36	SRP-LIME KILN II	29.03	0.03	68.0	NIL

**** As per TNPCB lab results**

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

Name of pollutant : H_2S (mg/NM^3)
Prescribed norms : 10 mg/NM^3

Stack No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in Kg per ton of paper	Concentration of pollutants emitted in mg/NM^3 **	Percentage variation from prescribed in discharges standards with reasons
3	SRP-LIME KILN I	0.110	0.0001	0.204	NIL
35	SRP- Boiler 3	1.181	0.0010	0.210	NIL
36	SRP-LIME KILN II	0.089	0.0001	0.210	NIL

**** As per TNPCB lab results**

Name of pollutant : SO_2 (mg/NM^3)
Prescribed norms : 400 mg/NM^3

Stack No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in Kg per ton of paper	Concentration of pollutants emitted in mg/NM^3 **	Percentage variation from prescribed in discharges standards with reasons
3	SRP-LIME KILN I	23.74	0.020	45.5	NIL
35	SRP- Boiler 3	256.08	0.222	45.5	NIL
36	SRP-LIME KILN II	16.86	0.014	39.5	NIL

**** As per TNPCB lab results**

Name of pollutant : NO_x (mg/NM^3)
Prescribed norms : 500 mg/NM^3

Stack No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in Kg per ton of paper	Concentration of pollutants emitted in mg/NM^3 **	Percentage variation from prescribed in discharges standards with reasons
3	SRP-LIME KILN I	20.09	0.017	38.5	NIL
35	SRP- Boiler 3	211.01	0.183	37.5	NIL
36	SRP-LIME KILN II	13.871	0.012	32.5	NIL

**** As per TNPCB lab results**

RECOVERY BOILERS:

No of Boilers — One

Type of Fuel — Black Liquor Dry Solids & Furnace Oil

Type of firing — Spray thro' nozzles

Average Quantity of Fuel Fired in boilers

Description	Type of fuel used	
	Black Liquor Dry Solids	Furnace Oil
UOM	MT/hr	KL/hr
Recovery Boiler 3	51.05	0.10

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

LIME KILN:

No of units — Two

Type of Fuel — Furnace Oil & Bio Gas

Type of firing — Spray thro' nozzles

Average Quantity of Fuel Fired in Lime Kiln

Description	Type of fuel used	
	Furnace Oil	Bio Gas
UOM	KL/hr	M^3/hr
Lime Kiln 1	0.79	616.78
Lime Kiln 2	0.77	470.12

CAPTIVE POWER PLANT

Name of pollutant : **SPM (mg/NM^3)**

Prescribed norms : Power Boiler 4 &5 -100mg/NM^3

Power Boiler 6 &7 - 50mg/NM^3

Serial No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in (Kg per ton of paper)	Concentration of pollutants emitted in mg/NM3 **	Percentage variation from prescribed in discharges standards with reasons
1	Power Boiler 4	115.66	0.10	30.0	NIL
2	Power Boiler 5	77.42	0.07	28.5	NIL
3	Power Boiler 6	156.39	0.14	27.5	NIL
4	Power Boiler 7	85.23	0.04	26.0	NIL

**** As per TNPCB lab results**

Name of pollutant : **SO_2 (mg/NM^3)**

Prescribed norms : Power Boiler 4 to 7 -600mg/NM3

Serial No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in (Kg per ton of paper)	Concentration of pollutants emitted in mg/NM3 **	Percentage variation from prescribed in discharges standards with reasons
1	Power Boiler 4	246.75	0.214	64.0	NIL
2	Power Boiler 5	160.29	0.139	59.0	NIL
3	Power Boiler 6	301.49	0.261	53.0	NIL
4	Power Boiler 7	157.35	0.068	48.0	NIL

**** As per TNPCB lab results**

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

Name of pollutant : **NOx (mg/NM^3)**

Prescribed norms : Power Boiler 4 &5 -600 mg/NM^3

Power Boiler 6 &7 -450 mg/NM^3 (As per MoEF Notification dated 19.10.2020)

Serial No.	Stack attached to	Quantity of pollutants emitted (Kgs per day)	Quantity of pollutants emitted in (Kg per ton of paper)	Concentration of pollutants emitted in mg/NM3 **	Percentage variation from prescribed in discharges standards with reasons
1	Power Boiler 4	223.61	0.193	58.0	NIL
2	Power Boiler 5	123.67	0.107	45.5	NIL
3	Power Boiler 6	264.48	0.229	46.5	NIL
4	Power Boiler 7	127.85	0.055	39.0	NIL

**** As per TNPCB lab results**

POWER BOILERS:

No of Boilers — 4 operating + 3 standby (from 26/12/2013)

Type of fuel — Multifuel

Type of firing — Fluidised bed

Average Quantity of Fuel Fired in boilers

Description	Indigenous Coal	Imported Coal	Raw Lignite	Bagasse Pith	Wood Dust
UOM	Kg/hr	Kg/hr	Kg/hr	Kg/hr	Kg/hr
Boiler 4	436	9478	405	0	0
Boiler 5	550	12309	811	6288	50
Boiler 6	804	14690	928	9074	0
Boiler 7	801	15354	1307	8475	0

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART - D

Hazardous Wastes

(in accordance with Hazardous Wastes (Management and Transboundary Movement) Rules,2016

		TOTAL QUANTITY in MT	
	Unit of measurement	During the previous financial year 2021-2022	During the current financial year 2022-2023
(1) From Process section			
(a) Spent chemical - Lime sludge (Moisture:45-50%)	MT	265204	123100
(b) Spent chemical - Lime Grits (Moisture:20-25%)	MT	3906.64	3894.58
(2) From Pollution Control Facilities			
(a) ETP Primary Sludge (Moisture:75-80%)	MT	48716.97	37727.71
(3) From Maintenance section			
(a) Condemned lead acid Batteries generated during replacement at Automobile and Electrical departments	MT	6.95	5.53
(b) Waste containing copper and copper alloys	MT	7.25	8.26
(c) Discarded asbestos generated during demolition of redundant buildings and structures	MT	0	0
(d) Used Glass wool generated during steam line insulation replacement	MT	17.56	8.89
(e) Spent ion exchange resins generated in Water Treatment Plant	MT	0	0
(f) Used oil/spent oil generated from Industrial operations as lubricant in hydraulic systems or other operations	MT	62.53	71.31
(g) Exhausted Lithium Molecular Sieves generated from Oxygen Plant	MT	0	2.98

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART – E

Solid Wastes Generation Quantity

	During the previous financial year 2021-2022	During the current financial year 2022-2023
(a) From Process		
DEINKING PLANT		
Plastic generated from Waste Paper Process (Moisture: 30%)	2904.76	3819.33
Sludge generation from Deinking Plant	35608.44	34006.62
PULP MILL		
Wood bark / dust from wood handling (Moisture: 45-50%)	11963.01	14258.94
Pith from Pulp Mill (Moisture: 45-50%)	141496	155077
Hardwood Screen fine rejects (Moisture: 60-65%)	1425.00	1342.48
(b) From Pollution Control facility		
EFFLUENT TREATMENT PLANT		
MLSS – ETP secondary sludge (on dry basis)	3530	3935
POWER BOILER		
Wet ash generated	2083	3674.64
Fly ash generated	33809.00	33756.08

Solid Wastes Recycle/Sold/ Disposal/ Quantity

(c).(1).Solid waste recycled or re-utilized		
Wood bark / dust (Moisture:25-30%) as fuel in Power Boilers	0	0
Wood bark / dust (Moisture:25-30%) as fuel in TNPL Mini Cement Plant	11815	11451
Pith from Pulp Mill (Moisture:45-50%) as fuel in Power Boilers	169267	169663
Fly ash used for TNPL Cement production.	32325.64	33756.08
Wet ash used for TNPL Cement production.	940.07	714.67
Sludge from Deinking Plant used in TNPL Cement for production. (Moisture: 45-50%)	5563.70	1570.69
(c).(2).Solid Waste Sold		
Pith (Moisture: 45-50%)	4039.28	15.63
Fly ash	2166.85	0
Bottom ash	263.03	0
Wet Fly ash	0	10546.66
Wood bark	1347.07	1844.85
Hardwood Screen fine rejects (Moisture: 60-65%)	1530.63	933.77
(c).(3).Solid Waste Disposed		
Sludge from Deinking Plant (Moisture: 45-50%)	30044.74	32435.93
Plastic generated from Waste Paper Process (Moisture: 30%)	2904.76	3819.33

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART – F

The characteristics of solid as well as Hazardous wastes and disposal practice adopted are given below.

HAZARDOUS WASTES

SL No	Description	Major Constituents	Mode of disposal
From Process section			
01	Spent chemical - Lime sludge (Moisture: 45 to 50%)	Acid insolubles:6-7% Silica as SiO2: 6% Mixed Oxides (R2O3): 1.6% Calcium as CaCO3: 87.8% Magnesium as MgCO3:1.54% Free CaO: 0.76% Sodium as Na2O: 1.67%	FY 2022-23 disposal details: Reused in TNPL Cement Plant- 121500 MT
02	Spent chemical - Lime grits (Moisture: 20 to 25%)	Acid insolubles:10% Silica as SiO2: 10% Mixed Oxides (R2O3): 3.1% Calcium as CaCO3: 81.2% Magnesium as MgCO3:2.76% Free CaO: 2.04% Sodium as Na2O: 1.09%	Lime Grit is being consumed as raw material in TNPL Cement Mill.
(2) From Pollution Control Facilities			
03	ETP Primary Sludge (Moisture:75-80%)	Gross Calorific value: 2300-2700 Kcal/kg (OD basis) Organics:60-70% Inorganics:30-40%	Entire quantity sold as raw material to small cardboard industries.
(3) From Maintenance section			
04	Condemned lead acid Batteries	Wastes mainly contains Lead	Disposed to PCB authorized recyclers.
05	Waste containing copper and copper alloys	Wastes mainly contains copper and its alloy such as brass, bronze etc.	Disposed to PCB authorized recyclers.
06	Discarded asbestos	Lead (Total): 53.7mg/Kg Chromium (Total): 28.64mg/kg Nickel (Total): 90.87mg/Kg Zinc (Total): 21.28mg/Kg Copper (Total): 60.3 mg/Kg	No disposal during FY 2022-23.
07	Used Glass wool	Lead (Total): 43.29mg/Kg Chromium (Total): 41.07mg/kg Nickel (Total): 32.81mg/Kg Zinc (Total): 20.05mg/Kg Copper (Total): 49.89 mg/Kg	Disposed to M/s. Re sustainability IWM solutions limited, Virudhunagar for direct land filling.
08	Spent ion exchange resins	Calorific Value: 5777 Cal/g Lead (Total): 65.49mg/Kg Chromium (Total): 20.62mg/kg Nickel (Total): 33.58mg/Kg Zinc (Total): 24.64mg/Kg Copper (Total): 30.32 mg/Kg	No disposal during FY 2022-23.
09	Waste Oil	Chromium: 0.15ppm Total Halogens: 3805 ppm Lead: 3.85 ppm Nickel: 0.18 ppm	Disposed to PCB authorized recyclers

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

SL No	Description	Major Constituents	Mode of disposal
10	Exhausted Lithium Molecular Sieves	Lead (Total): 171.51mg/Kg Chromium (Total): 6.3mg/kg Nickel (Total): 29.31mg/Kg Zinc (Total): 25.88mg/Kg Copper (Total): 9.2 mg/Kg	No disposal during FY 2022-23.

SOLID WASTE

SL No	Description	Major constituents: (all values are on OD basis)	Mode of disposal
01	Wood bark/ dust from Chipper house (Moisture:25-30%)	Ash:2.4% Volatile matter:71.5% Fixed carbon:18.9% Gross calorific value:4000-4600 Kcal/kg	Wood dust is used as fuel in Power Boiler. Wood bark is sold as fuel to agencies generating power through bio mass.
02	Wet Ash	Ash : 90-95 % LOI : 3 to 5%	Used as raw material for TNPL Cement mill and disposed to brick manufacturing units.
03	Fly Ash	Ash: 88 to 92% LOI: 8 to 12%	Used as raw material for TNPL Cement mill and other cement mills. Balance disposed for brick manufacturing units and traders possessing TNPCB consent orders.
04	MLSS - ETP secondary sludge	Absorbable Organic Halide-BDL	Composted and Used as manure
05	Pith (Moisture:45-50%)	Ash: 9% Volatile matter:72% Fixed carbon:13% Gross calorific value:4000 -4200 Kcal/kg	Used as fuel in power boilers. A small quantity is disposed to cardboard manufactures as raw material.
06	Dip Sludge (Moisture @ 40-50 %)	Gross Calorific value: 1400-1700 Kcal/kg (OD basis) Organics :30% Inorganics: 70%	Part of waste is being used as raw material in TNPL Mini Cement Plant and balance disposed to small cardboard industries.
07	Plastic Generated from waste paper	Received various types of plastic wastes along with waste paper consignment	Disposed to Cement Plant for co – Processing.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART - G

Impact of the Pollution Control Measures on conservation of natural resources and its consequence on the cost of production.

- The bio-gas generated in Bio-methanation plant using high COD bagasse wash effluent is being used in the lime kilns to replace furnace oil leading to reduce Carbon footprint. During 2022-23, TNPL utilized 84.81 Lakh m3 of biogas in Lime Kiln and 2.43 Lakh m3 of biogas in Power Boilers resulted in savings of 5088.90 KL of Furnace oil and 432 MT of imported coal respectively. Further, by utilizing about 170083 MT of internally generated agro fuels such as Pith, Wood dust as fuel in Power Boilers has resulted in conservation of about 52902 MT of Imported coal.

- TNPL is playing a significant role in the non-conventional energy. The company has generated 394.59 lakh units of wind power during FY 2022-23 through wind turbines thereby reducing 36737 tCO_2 GHG emissions.

- TNPL has implemented various water conservation projects and has attained overall water consumption of about 29 KL Per ton of paper during FY 2022-23 which is one of the lowest in paper industry.

- To improve the pulpwood availability, TNPL has developed two plantation schemes, viz., Farm Forestry and Captive Plantation during 2004-05 with a view to develop the vacant and degraded lands belonging to farmers and Government sources respectively. During FY 2022-23, plantations were raised in 22495 acres of barren lands involving 5359 farmers in various parts of Tamil Nadu under Farm Forestry scheme. So far, pulp wood has been raised in 233774 acres involving 45738 farmers under Farm Forestry Scheme. This scheme helps the dry land farmers to improve their livelihood. Further, the efforts put in by TNPL for raising pulpwood plantation started yielding benefits from FY 2009-10.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

- During FY 2022-2023, TNPL has procured 533320 MT of pulpwood from the plantation sources in which about 515322 MT from Farm forestry and balance 17998 MT from Captive Plantation sources. Further, so far, 26.39 lakhs MT of pulpwood have been procured from the above plantation sources during last Fourteen years.

- TNPL has established a state of the art clonal production centre with a capacity to produce 55 million plants per annum to supply quality clones to farmers at subsidized rates. TNPL has produced 464 Lakh plants and supplied 463 lakh plants to the farmers field at subsidized rates during FY 2022-2023 to cover an extent of 22495 acres under plantation activity.

- TNPL has established a Biodiversity park by assembling more than 176 species of trees/shrubs comprising of flowering, fruit bearing, medicinal, ornamental, timber etc. in about 6.07 hectares of land at TNPL Housing colony area under the concept of biodiversity enrichment to sustain the green environment. The ecosystem maintained in the Biodiversity Park is assessed periodically for effective monitoring of flora and fauna in the park. As the trees are started flowering/fruiting, resulted in attracting fauna which includes butterflies, birds, reptiles, insects which are being evidenced at site. This facilitates the improvement of Biodiversity by introduction of new species by pollination, seeds transfer through migratory birds. In future, it is planned to undertake a detailed study on the flora and fauna in the Biodiversity Park.

BIODIVERSITY PARK

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

- About 30% of the pulpwood used in the process is certified by FSC which guarantees that the pulp wood plantations are managed in a socially and environmentally responsible way.

- TNPL has been awarded Forest Stewardship Council (FSC) certification for Forest Management and Chain of Custody. This certificate confirms the linkage between forest and end user, ensuring that products with FSC label uphold principle and criteria which bring the highest social and environmental benefits. Further, FSC label will ensure the customers that the input material has been produced from scientifically managed, environmentally responsible forest plantation.

- Post consumer reclaimed material and pre consumer reclaimed material (Waste fibre consumed in De-inking plant) is also included in the scope of Forest Stewardship Council certification from the year 2014.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

Recognition for Environmental Protection:

- TNPL has been declared as **"Winner"** of 1st **Sustainable Industrial Practice Award** for the year 2023 conducted by M/s Federation of Indian Chambers of Commerce and Industry, New Delhi

- TNPL has been honored as **"CHAMPION"** in the **"Water Stewardship Award"** category during India Corporate Governance and Sustainability Vision Summit 2023 conducted by Indian Chamber of Commerce, Kolkata in Mar'2023.

- TNPL has been declared as **"WINNER"** under **EHS Best practices category"** for the year 2023 conducted by M/s Greentech Foundation (GF), New Delhi

- TNPL won **"Green Champion Award"** for the financial year 2022-23 conducted by Tamil Nadu Pollution Control Board.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART – H

Additional measures / Investment proposals for Environmental Protection including Abatement of Pollution, Prevention of Pollution

- During the Past, TNPL implemented various expansion/modernization programmes mainly focusing on the Environmental benefits as explained below:

Sl No	Name of the Project	Completion Period and investment	Environmental Benefit	Improvement on Production
01	Mill Development Plan (MDP)	May '08 & Rs.612 Crores	Switching over from conventional bleaching to Elemental Chlorine Free bleaching (ClO2) in both Hardwood and Chemical baggase bleaching section.	Paper Production from 2.05Lakh to 2.45Lakh per annum Pulp increased from 530TPD to 800 TPD
02	Mill Expansion Plan (MEP)	Jan '2011 & Rs.230 Crores	introduced Environment friendly technologies such as Oxygen delignification and twin roll washers & Hot stock screening technologies in the chemical bagasse pulping line along with a new paper Machine	Paper Production from 2.45Lakh to 4.0 Lakh per annum. Further, Total pulp production increased to 880 TPD.
03	Deinked Pulp (DIP) plant & Upgradation of Power Plant	Nov'2013 & Rs.310 Crores	Implemented 300TPD Deinked pulp plant by utilizing waste paper as raw material to replace high cost imported pulp possessing environment friendly operations and no bleaching chemicals such as ClO2 is utilized.	No increase in paper production. With 300TPD of DIP, Total Pulp Production increased to 1180TPD. Power generation increased from 81.12 to 103.62MW.

- Towards manufacture of Deinked pulp, mostly imported Sorted Office Waste Paper were used. This waste paper is made up of soft wood fibre which is having higher fibre length. This high quality is having superior strength properties (tear factor) when compared with home made Hard wood and Chemical Bagasse Pulp. This property of soft wood fibre helps to improve the machine runnability and pave way to reduce paper breaks on the machine.
- The principle of Paper Making is formation of fiber mat (Pulp) and filling the gaps with chemicals (filler materials). Based on the R&D studies and subsequent implementation of strategy in production activities in the past, it was inferred that the enhancement of filler in paper results in increase the weight of the paper without pulp requirement.
- During FY 2022-23, the average ash content in paper was varying from 14.00 to 19.00 % subject to quality of Paper Production, the higher percentage of Ash in Paper resulted in increasing the Paper Production at lower cost.
- During FY 2022-2023, TNPL utilized about 12754 MT of purchased pulp. Usage of purchased pulp for production have not contribute to pollution load of the mill.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

PART - I

Other particulars for improving quality of Environment

- The effluent treatment plant is operated with activated sludge process to maintain the quality of treated effluent within the norms prescribed by Tamil Nadu Pollution Control Board.
- The following process modifications were carried out as part of fresh water conservation and subsequently achived 29 KL/MT of Paper produced, the lowest water consumption unit in India.
  - Polishing excess clear filtrate of PM#1 using Algas filter.
  - Recycling of around 9000 M3/day Paper Machine Effluent after clarification in raw material preparation
  - Recycling of around 1800 M3/day EOP alkaline filtrate in post Oxygen washer in hardwood fiber line operations by close looping Extraction stage effluent from hardwood into the brown loop
  - Return of pump seal water and hydraulic oil cooling water in Hardwood Street to water treatment plant.
  - Replacement of fresh water with Machine backwater for wet lap usage
  - Collection of all plug screw feeders gear box cooling water and all seal water outlet and pump to LC tank for process usage in Chemical Bagasse street.
  - Return of hydraulic oil pump cooling water to WTP in Chemical Bagasse street.
  - Diversion of SRP Foul condensate water to hot water system in Chemical Bagasse street.
  - Replacement of fresh water in Mud filter vacuum pump with process condensate.
  - Return of ID, FD cooler water and feed pump cooler water of RB#2 to water treatment plant.
  - Return of lime kiln support roller bearing cooler water to water treatment plant.
  - Plugging of all water pumps sealing outlet.
  - Replacement of fresh water with backwater for cleaning.
  - Providing On-off value in Deculator vacuum pump to avoid overflow in PM#1 Deculator seal pit.
  - Diversion of vacuum pump gear box cooling water in PM#1 to warm water tank.
  - Diversion of excess cooling water collection tank to sweat dryer tank.
  - Diversion of steam and condensate pump sealing water of PM#2 to warm water tank from culver pit.
  - Replacement of fresh water with clear water for acceleration dilution of filler/starch in PM#3.
  - Diversion of Deculator seal pit tank over flow to cooling back water tank in PM#3.
  - Recovery of Metso refiner heat exchanger cooling water.
  - Recovery of refiners, screen and pumps seal water in PM#3.
  - Recycling and uses of press Felt Uhle box water through Algas filter in PM #1

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

MEASURES TAKEN TOWARDS TDS REDUCTION

- Oxygen delignification and twin roll presses were introduced in both Hardwood and Bagasse pulping street. The twin roll presses are more efficient in washing, and COD carryover in pulp into bleach plant is reduced and so also the TDS. The O2 delignification reduces the lignin carryover to bleach plant by 30-40%, resulting in corresponding reduction in bleach chemicals and thus equivalent reduction in TDS into effluent from bleach plant.
- Paper machine effluent is being segregated and clarified separately to remove the suspended solids and the clarified water is being used in backwater clarifications replacing treated effluent as a measure to reduce TDS in the treated effluent.
- Recycling of EOP alkaline filtrate in post Oxygen washer in both Hardwood & Chemical Bagasse Pulping operations. Introduction of organic peroxide stabilizer in Deinking Pulp bleaching operation resulted in 50% Sodium silicate reduction to achieve equivalent reduction of TDS in the respective effluent stream.
- Usage of ferrous chloride has been stopped for the treatment of anaerobic effluent in ETP.
- The soft water supplied to Chlorine Di Oxide plant and VAM has been replaced with R.O. water. Similarly, Soft water has been replaced with process water in cooling towers and pulp mills. Further, Filtered water is being used in place of soft water for NIPCO hydraulic system. This resulted in stoppage of soft water generation and thus paved way for reduction of TDS from the WTP effluent stream.

A report on the "World Environment Day" celebrations carried out by TNPL during 2023 is enclosed herewith as Annexure I.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

ANNEXURE I

REPORT ON WORLD ENVIRONMENT DAY- 2023 CELEBRATIONS CONDUCTED AT TNPL

- On behalf of Tamilnadu Newsprint and papers limited, on Monday 5th of June, Environment Day was celebrated at Paper Manufacturing industry and Cement Manufacturing industry, Kagithapuram, Pugalur. Banners were also displayed near the plant entrances and time office to create awareness on various environmental issues including the environmental theme of the year 2023, "Beat Plastic Pollution".

- This year's environment theme is "Beat Plastic Pollution "and to emphasize environment friendly lifestyle as proposed by Tamilnadu Pollution Control Board, the officers, Staffs, workmen, contract workmen and Apprentice in the Paper plant premises and cement plant premises have taken environmental pledge.

- As part of these celebrations, an environmental awareness Green Run (Greenathon) was flagged off by Mr. Bandi Gangadhar, Chief vigilance Officer, Tamilnadu Newsprint and Paper Limited, in which both genders above the age of fifteen participated in Greenathon and took part in covering a distance of about five kilo meters.

- All 500 people who pre-registered for above green run were given a free eco-friendly T-shirt made by recyclable plastic materials on behalf of TNPL. Prizes worth Rs.10,000, Rs.7,500, and Rs.5,000 were awarded to the first, second, and third winners of Greenathon in each category (men and women).

- Dr.R.Seenivasan Chief General Manager (Plantation, R&D and SO), TNPL welcomed the participants in the prize distribution ceremony of Greenathon. The award ceremony was presided over by Mr. Bandi Gangadhar, Chief vigilance Officer, TNPL in the presence of Mr. S.V.R. Krishnan, ED (Operation). Mr. Gunasekaran, Chairman, Pugalur Municipality and Mr. Jayakumar, Assistant Environmental Engineer, TNPCB, Karur were invited has the guest of honor for the ceremony.

- Mr. Sundaravathanam, Superintendent of Police, Karur, who delivered a special speech and distributed the prizes to the winners and participants of the competition. He released TNPL's Environment Friendly Lifestyle Pocket Guide, which was received by Mr. Jayakumar, Assistant Environmental Engineer, TNPCB, Karur.

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR 2022-2023

- Subsequently, in order to protect the environment, the special representatives who participated in the ceremony and the officials of TNPL planted 4000 saplings in the residential premises of TNPL. Around 500 employees including contract workmen participated in the celebrations. The celebration was well organized by Environment and Plantation Department.

ANNEXURE XXI

DIP- ENVIRONMENTAL CLEARANCE - NEWSPAPER ADVERTISEMENT

TNPL/27/301 March 4. 2013

The Chief Conservator of Forests (Central),
Ministry of Environment & Forests
Regional office (South Zone),
4th Floor E & F Wings,
Kendriya Sadan,
II Block, Koramangala,
Bangalore -34

Dear Sir:

Sub: Installation of 300 TPD Delnked Pulp Line (DPL) and up-gradation of Captive Cogeneration Plant (CCP) at Kagithapuram, District Karur in Tamil Nadu by M/s Tamil Nadu Newsprint and Papers Limited

Ref: Environmental Clearance vide F.No.J-11011/710/2007-IA-II (I) dated 11th February 2013

We would like to acknowledge with thanks the receipt of the Environment Clearance for the subject project, vide the orders referred above.

As stipulated in the Clause # xiv of General Conditions of the Order, we have issued a Public Notice on 27th February 2013, in two local newspapers, one in English and the other in Tamil.

A copy of the advertisement is attached for your kind reference and records.

Thanking you,

Yours faithfully
for **TAMIL NADU NEWSPRINT AND PAPERS LIMITED**

ASST. GENERAL MANAGER (PROJECTS)

End: a.a

தினமணி 27 பிப்ரவரி, 2013

TNPL

தமிழ்நாடு செய்தித்தாள் மற்றும் காகித நிறுவனம்

காகிதபுரம் - 639 136, கரூர் மாவட்டம், தமிழ்நாடு, இந்தியா
தொலைபேசி : 04324 - 277 001 ; நகலி : 04324-277 027
மின் அஞ்சல் : pmd@tnpl.co.in

பொது அறிவிப்பு

தமிழ்நாடு செய்தித்தாள் காகித நிறுவனத்தில் நாளொன்றுக்கு 300டன் மைநீக்கிய காகிதக்கூழ் பிரிவு மற்றும் மின் உற்பத்தி மேம்படுத்தும் திட்டம் ஆகியவற்றைச் செயல்படுத்துவதற்கு மத்திய அரசின் சுற்றுச்சூழல் மற்றும் வன அமைச்சகம், புதுடெல்லி தனது 11 பிப்ரவரி 2013 தேதியிட்ட ஆணையின் மூலம் சுற்றுச்சூழல் அனுமதி வழங்கியுள்ளது என இதன் மூலம் அறிவிக்கப்படுகிறது.

மேற்படி அனுமதி நகலை தமிழ்நாடு மாசுக்கட்டுப்பாட்டு வாரிய அலுவலகத்திலும் மற்றும் சுற்றுச்சூழல் மற்றும் வன அமைச்சகத்தின் இணையதளமான http://www.envfor.nic.in -லும் பார்த்து தெரிந்து கொள்ளலாம்.

முதன்மை பொது மேலாளர் (இயக்கம்)

செ.ம.தொ.இ/214/வரைகலை/2013

THE NEW INDIAN EXPRESS
CHENNAI WEDNESDAY 27 FEBRUARY 2013

TNPL

TAMILNADU NEWSPRINT AND PAPERS LIMITED

KAGITHAPURAM - 639 136, KARUR DIST., TAMIL NADU, INDIA
PHONE: 04324-277001 ; FAX: 04324 - 277027
Mail : pmd@tnpl.co.in

PUBLIC NOTICE

This is to inform that Ministry of Environment & Forests, New Delhi has accorded Environmental clearance for implementation of the projects for Installation of 300 tpd Deinked Pulp line and upgradation of Captive Co-generation Plant (CCP) of Tamil Nadu Newsprint and Papers Limited, vide its Order dated 11th February 2013.

Copies of the clearance letter are available with the Tamil Nadu State Pollution Control Board and may also be seen at the Website of the Ministry of Environment and Forests at http://www.envfor.nic.in/

CHIEF GENERAL MANAGER (OPERATIONS)

DIPR/214/Display/2013

TNPL - Maker of bagasse based eco-friendly Papr.

ANNEXURE XXII

LATEST NABL ACCREDITED & MoEF&CC RECOGNIZED THIRD PARTY LAB - H_2S AND MERCAPTANS REPORT

TEST REPORT

Test Report No & Date	**CTL/CH/N-38332/2023-24 & 03.04.2024**
Sample Number	**N-38332/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Indoor Air Quality
Sample Description	**Non Condensable Gas Emission**
Sampling Location	**Paper Machine**
GPS Reading	**11°03'37.409''N & 77°59'37.216''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & CTL/SOP/AIR/024
Sample Quantity	1 No
Equipment used for Sampling	Handy Sampler 897 -DTI-2018
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETER	METHOD	UNIT	RESULT	LIMIT
1	HYDROGEN SULPHIDE	IS 5182 PART 07 - 2021	mg/m^3	BDL(DL:0.006)	Max. 14*
2	MERCAPTANS#	Jamesh P.Lodge Method No.118	$\mu g/m^3$	BDL(DL:4.0)	-

*As per Factory Act 1948, #Not in NABL Scope

BDL - Below Detection Limit(D.L - Detection Limit), Max.-Maximum

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

CHENNAI TESTING LABORATORY PRIVATE LIMITED
Testing redefined
CIN: U93000TN2000PTC043869
www.ctllabs.in

TEST REPORT

Test Report No & Date	**CTL/CH/N-38330/2023-24 & 03.04.2024**
Sample Number	**N-38330/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Indoor Air Quality
Sample Description	**Non Condensable Gas Emission**
Sampling Location	**Hardwood**
GPS Reading	**11°03'25.626''N & 77°59'35.871''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & CTL/SOP/AIR/024
Sample Quantity	1 No
Equipment used for Sampling	Handy Sampler 826 -DTL-2016
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETER	METHOD	UNIT	RESULT	LIMIT
1	HYDROGEN SULPHIDE	IS 5182 PART 07 - 2021	mg/m^3	BDL(DL:0.006)	Max. 14*
2	MERCAPTANS#	Jamesh P.Lodge Method No.118	$\mu g/m^3$	BDL(DL:4.0)	-

*As per Factory Act 1948, #Not in NABL Scope
BDL - Below Detection Limit(D.L - Detection Limit), Max.-Maximum

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | E-mail : chennaitestinglab@gmail.com
Chennai - 600 032 | Tamil Nadu | India | Telefax : +91-44-2250 1757

TEST REPORT

Test Report No & Date	**CTL/CH/N-38331/2023-24 & 03.04.2024**
Sample Number	**N-38331/23-24**
Name of the Customer	**M/S. TAMIL NADU NEWSPRINT AND PAPERS LIMITED [MAIN PLANT],**
Address	Kagithapuram - 639 136, Karur District, Tamil Nadu.
Sample Drawn by	Laboratory
Sample Name	Indoor Air Quality
Sample Description	**Non Condensable Gas Emission**
Sampling Location	**Soda Recovery Plant**
GPS Reading	**11°03'16.558''N & 77°59'45.078''E**
Sample Drawn on	26.03.2024
Sample Received on	29.03.2024
Sampling Plan & Procedure	CTL/QSP/F-89 & CTL/SOP/AIR/024
Sample Quantity	1 No
Equipment used for Sampling	Handy Sampler 890 -DTD-2018
Analysis Started on	29.03.2024
Analysis Completed on	03.04.2024

Test Results:

The above sample tested as received, and results are as follows:

SL.NO	PARAMETER	METHOD	UNIT	RESULT	LIMIT
1	HYDROGEN SULPHIDE	IS 5182 PART 07 - 2021	mg/m^3	1.11	Max. 14*
2	MERCAPTANS[#]	Jamesh P.Lodge Method No.118	$\mu g/m^3$	BDL(DL:4.0)	-

*As per Factory Act 1948, [#]Not in NABL Scope
BDL - Below Detection Limit(D.L - Detection Limit), Max.-Maximum

END OF REPORT

For Chennai Testing Laboratory Pvt Ltd

Verified by

Authorised Signatory
G. MANIKANDAN
Head - Environment Division
(CHEMICAL)

A - Super 19 | T.V.K. Industrial Estate | Guindy | Chennai - 600 032 | Tamil Nadu | India
E-mail : chennaitestinglab@gmail.com
Telefax : +91-44-2250 1757

ANNEXURE XXIII

MEASURES TAKEN TOWARDS REDUCE TDS

MEASURES TAKEN TOWARDS TDS REDUCTION

- Oxygen delignification and twin roll presses were introduced in both Hardwood and Bagasse pulping street. The twin roll presses are more efficient in washing, and COD carryover in pulp into bleach plant is reduced and so also the TDS. The O_2 delignification reduces the lignin carryover to bleach plant by 30-40%, resulting in corresponding reduction in bleach chemicals and thus equivalent reduction in TDS into effluent from bleach plant.
- Paper machine effluent is being segregated and clarified separately to remove the suspended solids and the clarified water is being used in backwater clarifications replacing treated effluent as a measure to reduce TDS in the treated effluent.
- Recycling of EOP alkaline filtrate in post Oxygen washer in both Hardwood & Chemical Bagasse Pulping operations.
- Introduction of organic peroxide stabilizer in Deinking Pulp bleaching operation resulted in 50% Sodium silicate reduction to achieve equivalent reduction of TDS in the respective effluent stream.
- Usage of ferrous chloride has been stopped for the treatment of anaerobic effluent in ETP.
- The soft water supplied to Chlorine Di Oxide plant and VAM has been replaced with R.O. water. Similarly, Soft water has been replaced with process water in cooling towers and pulp mills. Further, Filtered water is being used in place of soft water for NIPCO hydraulic system. This has resulted in reduction of soft water generation and regeneration cycle thus paved way for reduction of TDS from the WTP effluent stream.

ANNEXURE XXIV

WATER DRAWAL PERMISSION FROM PWD

For information pl. [signature] 29/11/2001

D.F.

C.M.D.

ABSTRACT

Drawal of Water - Karur District - To reduce the drawal of water from 24 Mgd to 20 Mgd with effect from 1.4.97 and 20 Mgd to 16 Mgd with effect from 1.4.99 from River Cauvery by Tamil Nadu Newsprint and Papers Limited - Orders - issued.

PUBLIC WORKS (N2)DEPARTMENT

G.O.(MS) No.455 DATED: 29.10.2001.

READ:

1. G.O.Ms.No.600, PWD, dated 21.10.98
2. G.O.Ms.No.328, PWD, dated 6.7.2001.
3. From the Chairman and Managing Director, Tamil Nadu Newsprint and Papers Ltd., D.O. Lr.No. Water Royalty/00-01, dated 27.7.2001.
4. From the Chief Engineer, W.R.O., Trichy Region Lr. No. B3/11445/99, dated 3.9.2001.

****

ORDER:

In supersession of the orders issued in the G.O. first and second read above, the Government direct that the drawal of water limit of the Tamil Nadu Newsprint and Papers Limited from the River Cauvery be reduced from 24 Mgd. to 20 Mgd. with effect from 1.4.97; and from 20 Mgd. to 16 Mgd. with effect from 1.4.99.

2. The Government also direct that all the penalty claims for not paying higher demand charges for the enhanced quantity which was not drawn by Tamil Nadu Newsprint and Papers Limited with effect from 1.4.97 and 1.4.99 be dropped, as a special case.

..2.

3. The Government also direct that the above order should not be quoted as precedent in similar cases.

(BY ORDER OF THE GOVERNOR)

M. KUTRALINGAM
SECRETARY TO GOVERNMENT

To

The Chairman and Managing Director, Tamil Nadu Newsprint and Papers Limited, Guindy, Chennai-32.
The Chief Engineer, Water Resources Organisation, Public Works Department, Trichy Region, Trichy-20.
The District Collector, Karur District.

Copy to:
The Finance Department, Chennai-9.
The Industries Department, Chennai-9.

/Forwarded/By Order/

SECTION OFFICER

18

ANNEXURE XXV

COMPLIANCE TO MEP PUBLIC HEARING

PUBLIC HEARING UPDATE (HELD ON 10TH JULY 2008)

The environmental public hearing meeting was held on 10-07-2008 at meeting hall, District Collectors Office, Karur, in connection with the Mill expansion Plan of M/s. Tamil Nadu Newsprint And Papers Limited for increasing the production of printing and writing paper. An updated of the Public hearing and compliance to the Public consultation is furnished below:

Compliance to Public Consultation

The representations made by the public can be classified into the following groups:

i. Airborne Emissions

ii. Climate Change

iii. Community Welfare

iv. Drinking Water Supply

v. Dust Emission

vi. Employment in TNPL for Land givers

vii. Free Project Work for Students

viii. Groundwater Quality

ix. Soil Sampling to be taken in land owner's presence

x. Road Improvements

xi. Discharge of seepage water into Pugalur Canal

xii. Land of 2.5 Acres in Moorthipalayam

xiii. Effluent Sludge Incineration

xiv. Compliance of Swamy Committee Recommendations

The following explanation addresses these representations.

1 Airborne Emissions

In the EIA, model simulations have been carried using the hourly Joint Frequency data viz. stability, wind speed, mixing height and temperature. For the short-term simulations, the Ground Level Concentrations (GLCs) were estimated

around 1200 receptors to obtain an optimum description of variations in GLCs over the site within 10-km radius covering 16 directions.

The GLCs due to the emission from the proposed stacks have been estimated through dispersion modelling by using the seasonal meteorological data monitored at site. The concentrations for SPM, SO_2 and NOx thus obtained are presented in Table 1. For each time scale, i.e. for 24 hr (short term), the model computes the highest concentrations observed during the period over all the measurement points.

TABLE 1
PREDICTED 24-HOURLY SHORT TERM CONCENTRATIONS

Scenario of Operation	Net Incremental concentrations ($\mu g/m^3$)			Distance (km)	Direction
	SPM	SO_2	NOx		
Scenario-1 (Post MDP)	(-) 0.9	4.0	(-)1.4	2.8	NW
Scenario-2 (Post MEP)	0.9	11.0	3.2	1.4	NW

Comments on Predicted Concentrations

A perusal of Table 1 reveals that the maximum short-term 24 hourly ground level incremental concentrations for SPM, SO_2 and NOx are observed as 0.9 $\mu g/m^3$, 11.0 $\mu g/m^3$ and 3.2 $\mu g/m^3$ occurring at a distance of about 1.4 km in the NW direction due to implementation of MEP Project.

Resultant Concentrations after Implementation of the Project

The maximum net incremental GLCs due to the MEP for SO_2 and SPM are superimposed on the baseline SO_2 and SPM concentrations recorded during the study to arrive at the realistic baseline concentrations for the proposed MEP project. The modelling predictions are tabulated below in Table 2.

TABLE 2
RESULTANT CONCENTRATIONS DUE TO INCREMENTAL GLC's –
PROPOSED MEP

Pollutant	Realistic baseline concentrations ($\mu g/m^3$)	Net incremental concentrations due to MEP ($\mu g/m^3$)	Final Resultant Concentrations ($\mu g/m^3$)
Industrial Zone			
SPM	189.9	0.9	190.8
SO_2	30.8	11.0	41.8
NOx	27.7	3.2	30.9
Residential Zone			
SPM	179.2	0.3	179.5
SO_2	25.8	3.1	28.7
NOx	26.4	0.7	31.0

A perusal of the above table clearly reveals that SPM, SO_2 and NOx are expected to be within the prescribed limits specified by CPCB for industrial zone and residential zone.

2 Climate Change

Concerns expressed about climate changes (rise in temperature and decrease in rainfall) are not related to the operations of TNPL.

3 Community Welfare

The company has been implementing several community welfare measures for the benefit of the people in the neighbourhood. Community welfare measures implemented include:

- Setting up a Centre for Career Development,
- Establishing training centres for imparting training in Typewriting, Computers and Tailoring to unemployed educated youth in the neighbourhood,
- Providing infrastructure facilities in the government schools in the neighbouring villages,
- Providing infrastructure facilities in the surrounding Primary Health Canters, Government Hospital and Constructing Community Hall, Library, Toilet, etc.,
- Distributing books, note books including providing financial assistance for poor children pursuing studies,
- Organizing monthly medical camps and special medical camps financial assistance for developing roads,
- Providing drinking water facilities and streetlights in the near by villages, conducting veterinary camps, etc.

The company is committed to provide welfare measures to the local community under its Corporate Social Responsibility programme. The community welfare measures will continue to be carried out in tune with the emerging, and genuine, needs of the community.

4 Drinking Water Supply

TNPL is regularly supplying the drinking water to the surrounding villages to the tune of 2000KLD. TNPL has so far provided about 200 common taps in the nearby villages for drinking water. The number will be increased further depending on the actual requirement. Protected water is supplied from the factory through pipelines to the respective overhead tanks. Further, 16 water

tubs are provided for feeding cattles. Pumping of drinking water is done twice a day.

Further, based on the requirement by the nearby hamlets, drinking water is also being supplied through water tankers during festivals etc. in addition to the regular water supply.

5 Dust Emission

In order to control dust emission, wind barriers were provided for a length of 2254 meters along the compound wall of Main Plant including recently installed wind barriers adjacent to compound wall on southern side of the mill for a length of 100 meters to avoid emanation of dust from lime storage. Further, wind barricades for a total length of 1260 meters were already embedded along the compound wall of Cement plant.

6 Employment in TNPL for Land givers

During 1982-83, TNPL acquired 786 acres of land from 362 families for setting up the plant. The company evolved the following criteria for considering the requests received for employment under Land Given Category:

- The land should have been the only or major source of sustenance on the date of passing the Award.
- One employment for one family. Patta in the name of husband and wife to be considered as one family and only one employment to be given to the family.
- Minimum land acquired to be not less than 20 cents.
- Eligible persons will be owner of the land (husband / wife), son daughter, legally adopted son prior to the issue of 4(1) Notification, grandson, grand daughter, son-in-law / grand son-in-law, if there are no male issues.
- Age Limit: 18 to 35 years; Age limit will be relaxed by 5 years for SC/ST candidates.
- Educational Qualification: Minimum 10th Standard / SSLC Pass

Till 2008, the company had provided employment to 193 persons. Conditions 5 & 6 above were relaxed during 2009 and employment was provided to 25 persons including 6 persons relaxing the condition on age and educational qualifications.

With this, 218 persons had been provided employment under land given category.

The Board resolved to close the scheme on 30/11/2009.

However, there are continuous representations to consider employment for the legal heirs of the land owners. In the Public Hearing Meeting, the issue of providing employment under land given category was raised. Hence, it was

decided to provide employment to eligible persons from the applications received from the legal heirs of land owners.

Based on their requests, it was proposed to relax the minimum requirement of 20 cents to 10 cents and to provide employment for daughters-in-laws / grand daughters-in-laws subject to the condition that no one from the family has been provided employment so far in the respective families.

The subject was placed before the Board of Directors of the company in the 220th Meeting held on 29th May 2012. The Board approved the proposal for providing employment to the eligible legal heirs and it was also resolved to close the scheme forthwith.

Out of the representations, 29 persons were found eligible to be provided employment and after conducting interviews, 19 persons have been provided employment. Few persons have declined the proposal of accepting the offer and few persons are yet to produce relevant documents in respect of land acquired, educational qualifications, no objection certificates from other legal heirs etc. Once the compliance is fulfilled, interview process in respect of the remaining persons will be completed shortly and those persons will be inducted.

The above action also fulfils the representation of Mr K Murugan, Velayuthampalayam, during the Public hearing. As requested by Mr Murugan, his legal heir (son), a qualified engineer has been inducted in TNPL service from August 2009.

So far, the total employment given for land given category is summarized below:

Sl No	Description	Total Nos. of employment given
1	Employment given in Unit - I	240
2	Employment given in Unit - II (as on 23.11.2019)	98
Total		**338**

7 Free Project Work for Students

The system of charging a nominal fee was introduced, to regulate the number of students doing the project work within the factory complex and ensure safe factory operations. However, in response to the public hearing, project work is being allocated to students on free of cost. The details of the in plant training/ Project work undertaken by the students in TNPL between Apr'19 and Sep'19 is given below:

INPLANT TRAINING / PROJECT WORK DETAILS
FOR THE PERIOD FROM APRIL 2019 TO NOVEMBER 2019

Sl. No.	Subject Field	In-plant Training	Internship / Project Work	Total Students benefited
1	MBA	12	35	47
2	Electrical and Electronics Engineering	64	46	110
3	Electronics and Instrumentation Engineering	34	40	74
4	Mechanical Engineering	70	150	220
5	Information Tech./ Computer Science and Engg.	9	0	9
6	Chemical Engineering	20	16	36
7	Electronics and Communication Engineering	10	35	45
8	Civil Engg.	7	0	7
9	Chemistry	28	16	44
10	Others	13	21	34
Total		**267**	**359**	**626**

8 Ground Water Quality

Most of the villages in the project area have bore wells and tube wells for agricultural purposes.

The results of the water analysis, from three randomly selected bore wells, indicate that the pH and fluorides are well within the permissible limits. The bacterial studies also confirm that, no coliform bacteria have been present in the samples. The heavy metal is, either very low or, below detectable limits.

With the implementation of MDP and MEP, the treated wastewater quality has improved in terms of TDS, AOx, sodium and chlorides due to implementation of systems such as oxygen delignification, elemental chlorine free bleaching etc. and also tighter spillage control.

9 Soil Sampling to be taken in land owner's presence

Tamil Nadu Agricultural University is carrying out periodical sampling in twenty benchmark sites. This sampling is carried out once in six months by an Assistant Professor and research associates from Department of Environmental Science of Tamil Nadu Agricultural University, Coimbatore (TNAU), in the presence of concerned land owners.

10 Road Improvements

Against the demand for the widening of Moolimangalam Road during public hear for easy movement of trucks carrying Baggasse , TNPL had completed the work with the support of Highways department. Now the road has sufficient width for free movement vehicles.

11 Discharge of Seepage-water into Pugalur Canal

Presently, treated effluent is used for irrigating an area of 1600 Acres of land through M/s TNPL Effluent Water Lift Irrigation Society (TEWLIS), formed and run by the farmers. The seepage water quantity has been reduced to minimum level, consequent to reduction in the waste water being discharged and utilised for irrigation. In the recent Public hearing for the DIP project also, there was no point raised by the Public, on the seepage water.

12 Land of 2.5 Acres in Moorthipalayam

With reference to Point 17 of the Public hearing, as of date, TNPL has cleared the site and planted Eucalyptus trees during 2009-10, after preparation of the surface and filling with earth. This matter was communicated to the District Collector by TNPL, vide letter dated 5th April 2010.

13 Compliance to Justice Swamy Committee Recommendations

The latest status of compliance to the recommendations is follows:

STATUS OF COMPLIANCE AGAINST THE JUSTICE SWAMY COMMITTEE RECOMMENDATIONS

Sl.No	RECOMMENDATION	STATUS OF COMPLIANCE
1	By adopting Biomethanation technology in place of anaerobic lagoon, not only the parameters of the polluted contents are reduced substantially but also the bioenergy produced will repay the cost of Biomethanation plant in a course of 5 to 6 years. Therefore, the Committee strongly recommends the adoption of the Biomethanation technology within a period of two years for high BOD stream.	TNPL has commissioned the Bio Methanation Plant for high BOD/COD stream of Effluent Treatment Plant at a cost of Rs.430 lakh during June 2003 and is successfully operating the plant. The biogas produced is utilized in lime kiln regularly since June 2003. The Bio Plants installed generates a about 25000 CU.M/day of Bio gas resulting in 15000 Liters/day saving of furnace oil consumption in Lime Kilns.
2	Colour is one parameter of major concern. The Committee recommends the following measures for reduction of colour in the effluent which are to be adopted and implemented within a period of six (6) months: (a) Chemical precipitation technique using Alum. (b) Introduction of peroxide in extraction stage of bleaching process for chemical pulp. (c) Improvement in efficiency of the pulp washing system reduces colour, sodium and dissolved solids in the effluent. TNPL must assess the techno-economic feasibility of the new generation of pulp washing systems discussed in Chapter-VI for washing of bagasse pulps.	The unit has implemented tertiary treatment to reduce colour in the treated effluent by Ozonization at a capital outlay of Rs.400 lakhs (Rs.200 for Ozonization and Rs. 200 of Oxygen feed plant). The unit was commissioned on 06 th August 2010 and is in service. The operating expenditure of ozonation plant is about Rs.70 lakh per annum. In addition to colour reduction in the final treated effluent, the ozonation will further improve dissolved oxygen in the treated effluent. Peroxide is used on a regular basis in extraction stage of bleaching process for chemical pulp. Under MDP, this hardwood pulping line has been replaced by a new ECF hardwood pulp mill, which includes modern twin roll press for efficient washing. In Chemical Bagasse Pulp Line, the brown stock washers were replaced with 'ripple deck washers' which gives improved consistency and efficient washing. This Chemical Bagasse Washing line was also replaced by a modern twin roll press for efficient washing with oxygen delignification Mill Expansion Plan.
3	The Committee directed TNPL to install a Pilot Plant for removal of colour by employing Membrane Filtration Technology. The results of the Membrane Filtration Pilot Plant installed on lease from the Central Pulp &	TNPL has carried out trials with membrane filtration technology in June 2000 for effluent stream like Decker filter, Extraction Filtrates & Foul condensate. It was found that the technology is not viable for Paper and Pulp

Sl.No	RECOMMENDATION	STATUS OF COMPLIANCE
	Paper Research Institute, Saharanpur (U.P.) being encouraging, the Committee recommends that the feasibility of this technology on a commercial scale should established within a period of one year. Based on such assessment further steps should be taken for adoption or otherwise of the Membrane Filtration Plant as a time bound programme.	industry and there was no guarantee for the life of membrane from the supplier. TNPL has installed Oxygen Delignification and ECF bleaching for hardwood pulping line and ECF bleaching for Chemical Bagasse pulping line to reduce the colour level at source. The unit has implemented tertiary treatment to reduce colour in the treated effluent by Ozonation at a capital outlay of Rs.400 lakhs (Rs.200 for Ozonization and Rs.200 of Oxygen feed plant). The unit was commissioned on 06th August 2010 and is in service. The operating expenditure is about Rs.70lakh per annum. In addition to colour reduction in the final treated effluent, the ozonation will further improve dissolved oxygen in the treated effluent.
4	Present fresh water consumption is 125 cubic meter per tonne of paper. There is a scope for further reduction by 10% in the intake of present quantity of the fresh water.	TNPL has implemented various conservation measures, as a continuous process, to reduce water consumption. The present average fresh water consumption is 28 m^3/tonne of paper production for the period Apr'23 to Mar'24.
5	There is an urgent need to take all the measures to stop the leakage of Oil & Grease from the process equipments and to prevent entering into effluent streams. Steps in this regard should be taken within a period of six months.	The average Oil & grease concentration in TNPL's final treated effluent outlet is below 2.0 mg/l as against 10 mg/l prescribed by TNPCB. TNPL has installed a separate treatment plant for separation of oil & grease in the automobiles servicing section.
6	Effluent quality should be improved to such an extent that it is not only suitable for irrigation but also for any non-process application. Attempts should be made to reduce the level of sodium and dissolved solids particularly the inorganic chlorides. This should be taken up on priority basis as one of the R&D programmes.	TNPL is treating its effluent through Activated sludge process for effective reduction of pollutants. The total operating cost of treatment of effluent including power and chemicals is about Rs.900 lakh per annum. The present average fresh water consumption is 28 m^3/tonne of finished paper production for the period Apr'23 to Mar'24. Average TDS(Inorganic): 2040 mg/l.
7	The modern trend in bleaching of chemical pulp in Pulp & Paper Industry is towards Elemental Chlorine Free Bleaching (ECF) and Total Chlorine Free Bleaching (TCF). However	Under the Mill Development Plan, TNPL has commissioned a 300 tpd ECF chemical hard wood pulp line and a 500 tpd ECF chemical bagasse bleach plant by May 2008. The

Sl.No	RECOMMENDATION	STATUS OF COMPLIANCE
	since company had adopted CEHH bleaching while expanding the plant capacity fully only in 1996, as far as the adoption of ECF technology is concerned, the Committee recommends that it should be adopted by the year 2010. The Committee also would like to add that an ideal situation would be, adoption of TCF bleaching, even though, it is costlier compared to ECF. But in the course of 10 to 11 years, if TCF technology or any other technology becomes viable and is better than ECF, the same should be adopted.	company has complied with this recommendation, two years ahead of the target date of March 2010 in replacement of the chlorine based bleach plants. ECF is recognized as Best Available Technology worldwide.
8	One of the major consequences of land application of the effluent is seepage and contamination of sub soil water. One possible solution is by way of more efficient transport of the effluent through channel or pipelines and pumping off water from water logged areas. TNPL should have a separate establishment to take care of the same.	TNPL treated effluent water is transported to the irrigated lands through pipelines. The seepage water from the TEWLIS ayacut is also collected into a separate channel and the same is diverted to the existing TEWLIS sump and used for irrigation along with treated effluent. The operation of TEWLIS system is being monitored by CGM (Operations – I/c) assisted by a team of operational and maintenance Engineers.
9	One more problem connected with the land application of treated effluent is the supply of drinking water. TNPL at present supplies drinking water to the surrounding areas. The supply of drinking water should be augmented within a period of six months so as to adequately meet the requirement of the residents in the neighborhood of the paper mill.	TNPL has increased the drinking water supply to the surrounding villages from 2000 m^3/day. TNPL has provided common taps in the nearby villages for drinking water and steadily increased to 235 nos as on date. Number of taps will be increased further depending on the actual requirement. Further, protected water is supplied from the factory through pipelines to the overhead tanks of the nearby villages.
10	Discharging of treated effluent water and seepage water into Pugalur Canal should be stopped at any rate within a period of two years. Steps taken for enlarging TEWLIS area and development of additional area for utilization of treated effluent and seepage water should be accomplished within a year.	Discharge of treated effluent water and seepage water into Pugalur Canal has been stopped completely. The quality of treated effluent is within the norms prescribed by the TNPC Board.
11	TNPL should have a continuing programme to modernize the operations and to remove obsolescence and adopt the best available technology.	TNPL has taken steps to implement the following measures: 1) There are three No of Biogas plant are under operations which are generated about 25000 CU.M/day resulting in 15000 Liters saving of furnace oil consumption in Lime Kilns.

Sl.No	RECOMMENDATION	STATUS OF COMPLIANCE
		2) Fresh water reduction by recycling treated effluent water. 3) Best available technology for both Hardwood Pulp line and Chemical Bagasse Pulp Bleaching has been adopted for energy efficient and environmental friendly operations. 4) In order to control odour, the unit has installed Non Condensable Gas (NCG) collection and incineration system in the lime-kiln at a cost of Rs.500 Lakhs.
12	Research and Development Programmes: TNPL should have an exclusive Research and Development (R&D) Wing with upgraded Laboratory facilities to enable the mill to develop, assess and adopt state-of art technology. The R&D wing should also evaluate and recommend for adoption of any readymade technologies available in Research institutions. The standard analytical procedures for analysis and measurement of pollution parameters as recommended by competent agencies such as BIS to be followed.	TNPL has an exclusive R&D Wing and also has a well equipped Laboratory facility. Based on the R&D trials, TNPL has installed bio-methanation plant, Oxygen delignification, ECF bleaching, Alkaline sizing, use of environmental friendly pigment dyes etc. TNPL maintains association with Research Institutes like CPPRI, CLRI etc and utilizes their resources, whenever necessary. Standard analytical procedures as per BIS for pollution parameters are adopted and international standards like TAPPI ISO Scan etc are used for pulp and paper properties.
13	It is necessary to have periodic environmental impact assessment (EIA) atleast once in five years and the same should be got done by expert body like NEERI or any other such Institution. The findings should be given due publicity. In the first half of the year 2001, EIA should be got done by NEERI.	EIA study was carried out by NEERI during 2001-02. SPB-PC carried out EIA during 2004-05 as part of MDP. The study has been updated during January 2008 as part of MEP and further updated during October '2008 after public hearing. Further, EIA has been carried out during Jan'12 towards implementation DIP and augmentation of CCP through SPB-PC. Further, as part of Cement plant expansion, EIA study was carried out during 2015. The plant is being operated with less than the design capacity. In view of the above, the EIA study was not taken up since the study report would not reflect the actual environment impact as the plant is being operating with under capacity. Now, TNPCB, have accorded CTO towards enhancement of production from

Sl.No	RECOMMENDATION	STATUS OF COMPLIANCE
		4.0 LakhMTPA to 4.8 Lakh MTPA under No Increase Pollution Load Scenario. Hence, it is proposed to conduct EIA study on achieving of enhanced production as per the latest CTO to evaluate incremental Environmental impacts, if any even after enhancement of production.
14	It is also necessary to direct Tamil Nadu Agricultural University (TNAU) to continue to monitor the impact of treated effluent on land and crops. Monitoring must be done once in two years. Steps necessary in accordance with findings recorded by TNAU should be taken up by TNPL.	TNAU is monitoring the TEWLIS area and soil samples are analysed with the help of Agricultural Department. Various steps like application of Gypsum and cultivation of green manure being taken by TNPL as per TNAU's findings. Gypsum was supplied by the company at free of cost to the concerned farmers. Further, Study of land use pattern and agricultural activities including collection of data are being collected. The recommendation of TNAU is being implemented in the treated effluent irrigated area.

ANNEXURE XXVI

ENVIRONMENTAL MANAGEMENT CELL

TNPL

Tamilnadu Newsprint and Papers Limited.

May 17, 2024

ENVIRONMENTAL MANAGEMENT CELL

SL.NO	NAME OF THE EXECUTIVE	DESIGNATION	QUALIFICATION	RESPONSIBILITY
01	Mr. Nagarajan. S	Chief General Manager-(Operations – I/C)	AMIE	Responsible for over all mill wide operations and coordinator for Environment Compliance.
02	Mr. Rajalingam.R	General Manager (Electrical & Instrumentation)	B.Tech., MBA.,	Responsible for over all Mill wide Electrical & Instrumentation and Online Pollution Control Monitoring Stack Instruments.
03	Mr. Shamim Ahmed	Deputy General Manager (R&D)	M.Tech	Responsible for R&D, Quality Control and Environment Compliance.
04	Mr. N. Navaneedhakrishnan	Assistant General Manager (Water Management)	M.Sc.,	Responsible for operation of WTP, ETP, Biogas Plant and TNPL Effluent Water Lift Irrigation Society. (TEWLIS)
05	Mr. Sundaram. S.M.	Chief Manager (Environment)	M.Sc.,	Evaluation of Environmental Compliance and Coordination with PCB officials and coordinator of ISO 14001.
PLANTATION ACTIVITES				
06	Dr. K. Jayakumar	Deputy General Manager (Forestry)	Doctorate in Agronomy	Responsible for overall pulpwood raw material procurement and Plantation establishment activities.
07	Dr. P. Chezhian	Chief Manager (Plantation)	Doctorate in tree building and forest genetics	Development of new superior clones in exotic and indigenous pulp wood species for captive and farm forestry of TNPL.
08	Dr. V. Prasath	Manager (Plantation)	Doctorate in soil science and agricultural chemistry	Monitoring of ground water & soil in TEWLIS in association with TNAU scientists.

Chief General Manager-(Operations – I/C)

ANNEXURE XXVII

MEP – ENVIRONMENTAL CLEARANCE – NEWSPAPER ADVERTISEMENT

THE FINANCIAL EXPRESS

Chennai, Wednesday, December 31, 2008

global meltdown

s sector, particularly those
endent on foreign institu-
al investment have fared
nally. Non-availability of fi-
ce for preparing locally rel-
ir, viable and business-
ined content are specifical-
ited as reasons for under
formance in the IT and ITeS
or that registered a poor

performance of 15% growth as against 33% in the concerned period last year.

The feedback gathered from industry shows that during the first half of current fiscal, that is (April-Sept 2008), there was a deterioration in the growth of several segments of the service industry.

தினமணி, புதுக்கோட்டை, 31 டிசம்பர், 2008