



Tamilnadu Petroproducts Limited

Ref: TPL – PO/ 2024/EC Comp/05

7th May- 2024

The Director (S)
Ministry of Environment, Forest & Climate Change
Integrated Regional Office
First Floor, Additional Office Block for GPOA
Shastri Bhawan, Haddows Road,
Nungambakkam,
Chennai – 600 006.

Dear Sir,

Sub: TPL – ECH – PO Plant – Environmental Clearance (EC) – Six Monthly Compliance Report – **Oct 2023 to Mar-2024 - reg.**

Ref: F.No. J-11011/280/2013-IA-II (I) dated 15.05.2015

This has reference to the Environmental Clearance obtained from MoEF, New Delhi for product mix change an existing ECH plant located at Manali, Chennai.

We herewith attach the EC compliance status report for the period from October 2023 to March 2024 for your kind reference.

Thanking you,

Yours faithfully,
For Tamilnadu Petroproducts Limited


N. Murugan
AVP – Operations



Regd. Office & Factory :
Post Box No. 9, Manali Express Highway, Manali,
Chennai - 600 068. India.
Tel. : (0091) - 44 - 25945500 to 09 Telefax : 044-2594 5588
Website : www.tnpetro.com CIN : L23200TN1984PLC010931
TPL GSTIN : 33AAACT1295M1Z6

Environmental Clearance Compliance Status Report
For the period from Oct 2023 to Mar 2024

Ref : No. J – 11011/280/2013 – IA.II(I) dated 15.05.2015

(A) Specific Condition:

	Conditions	Compliance
i	Caustic scrubber shall be provided to control Chlorine emissions. The scrubbed water should be sent to ETP for further treatment. Efficiency of scrubber shall be monitored regularly and maintained properly. Scrubber vent shall be provided with on-line detection and alarm system to indicate higher than permissible value of controlled parameters. At no time, the emission levels shall go beyond the prescribed standards. The system should be interlocked with the pollution control equipment so that in case of any increase in pollutants beyond permissible limits, plant should be automatically stopped.	<p>Complied</p> <p>Caustic scrubber is provided to control Chlorine emissions. The scrubbed water is sent to ETP for further treatment. Efficiency of scrubber is being monitored regularly and maintained properly by following measures.</p> <ul style="list-style-type: none"> • Measuring concentration of circulating caustic and vent gas emission level. • Caustic solution is replenished when there is a depletion of level. • It is also replaced, whenever the concentration goes below the limit. <p>Online Chlorine analyser is installed in the scrubber vent stack with alarm set at 1.5 ppm as high alarm value for continuous monitoring and real time online monitoring data is being transmitted to TNPCB and CPCB's servers.</p> <p>At no time the emission levels have gone beyond the prescribed standards. The emission levels are continuously monitored and real time monitoring data is being transmitted online to TNPCB and CPCB's servers.</p> <p>Interlocking system is provided with the pollution control equipment, to shut down the unit, in case of any increase in pollution load.</p>

ii	<p>Ambient air quality data shall be collected as per NAAQS standards notified by the ministry vide GSR No. 826 (E) dated 16.09.2009 the levels of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, Cl₂, VOC and HC (methane and non-methane) shall be monitored in the ambient air and emission from stacks and displayed at a convenient location near the main gate of the company and at important public places. The company shall upload the results of monitored data on its website and shall update the same periodically. It shall simultaneously be sent to the Regional office of MOEF, the respective Zonal office of CPCB and the Tamilnadu Pollution Control Board /TNPCB)</p>	<p>Complied</p> <ul style="list-style-type: none"> • Ambient Air Quality (AAQ) is monitored manually at 2 locations through accredited lab as per NAAQS standards notified by the ministry vide GSR No. 826 (E) dated 16.09.2009 for 12 parameters, once in 6 months basis. • Ambient Air Quality (AAQ) is being monitored at 2 locations for the parameters such as PM_{2.5}, PM₁₀, SO₂, CO, NO_x, Ammonia, Chlorine by internal lab once in a week. • Stack emissions are monitored through accredited lab, once in 6 months basis. • Online continuous Ambient Air Quality monitoring equipment as well as online continuous stack monitoring equipment are installed and the real time monitored data are being transmitted to TNPCB and CPCB's servers. • The real time data are also displayed near the main gate of the company. • The monitored data are uploaded on the company's website and also being updated periodically. • In addition to this the manually monitored data are being submitted to TNPCB on monthly basis and CPCB as well as the Regional office of MoEF once in six months.
iii	<p>In plant control measures for checking fugitive emissions from all the vulnerable sources shall be provided. Fugitive emissions shall be controlled by providing closed storage, closed handling and conveyance of chemical/materials, multi</p>	<p>Complied</p> <p>The following measures are taken to control the fugitive emission.</p> <ul style="list-style-type: none"> • HC and Chlorine detectors are provided with alarm system to monitor fugitive emission regularly

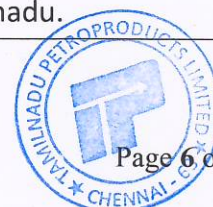
	<p>cyclone separator and water sprinkler system. Dust suppression system including water sprinkler system shall be provided at loading and unloading areas to control dust emissions. Fugitive emission in the work zone environment. Product, Raw materials storage area, etc., shall be regularly monitored. All necessary steps should be taken for monitoring of Chlorine as well as VOC in the proposed plant.</p>	<p>in the work zone environment, Product, raw materials and storage area.</p> <ul style="list-style-type: none"> • Raw material Propylene is stored in bullets with sensors/detectors. • Chlorine is received through pipeline from the adjacent Heavy Chemicals Division of the same company, thereby avoiding any potential emissions while handling Cylinders • Propylene Oxide (PO) and Chlorinated Organics are stored in closed tanks with sensors/detectors and handled in closed pipelines. • Lime (bags) is stored in a closed shed. • Water sprinkling is being carried out at lime Loading and unloading area for dust suppression. • Ambient Air Quality (AAQ) is monitored for Chlorine and VOC manually at 2 locations through accredited lab. • Chlorine in the Ambient Air is monitored at 2 locations by internal lab once in a week. • Online analysers for Chlorine and VOC are installed for continuous monitoring and the real time monitored data are being transmitted to TNPCB and CPCB's servers
iv	<p>The gaseous emissions from DG set shall be disposed through adequate stack height as per CPCB standards. Acoustic enclosure shall be provided to the DG sets to mitigate the noise pollution.</p>	<p>Complied.</p> <p>Adequate stack height in DG set is provided, as per the CPCB standard to dispose gaseous emission from DG set. Stack height is 31.5m.</p> <p>Presently DG set is not in operation and decommissioned.</p>



		Ambient Noise level is monitored manually by internal lab once in a month.
v	Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. Proper maintenance of mechanical seals of pumps and valves shall be given. A preventive maintenance schedule for each unit shall be prepared and adhered to. Fugitive emissions of HC from product storage tank yards etc., must be regularly monitored. Sensors for detecting HC leakage shall be provided at strategic locations. Company shall protect their equipment from aging.	<p>Complied</p> <ul style="list-style-type: none"> • Leak Detection And Repair (LDAR) programme is prepared and is being implemented to control HC/VOC emissions. • LDAR survey is being carried out through accredited laboratory once in a year. • LDAR survey has been conducted through M/s. Hubert Enviro Care System (P) Ltd, Chennai in April-2024. • Preventive maintenance for Pumps are carried out once in six months. • Preventive maintenance for Valves and pipelines are carried out once in a year • Proper maintenance and preventive checks for mechanical seals of pumps and valves are carried out once in six months by internal team. • VOC detectors are installed at Product Storage Yard (Propylene Oxide and Propylene Storage tanks area) to monitor fugitive emission continuously. • VOC detectors/sensors are provided in the work zone environment, Product, Raw materials storage area for continuous monitoring. • Proper maintenance program is developed & implemented to protect equipment from ageing.

vi	Alarm for chlorine leakage if any in the liquid chlorine storage area is provided along with automatic start of the scrubbing system.	<p>Complied</p> <p>Chlorine is not stored in tanks & is received by pipelines from the adjacent unit of Heavy Chemicals Division of the same company</p> <p>Chlorine sensors are provided with alarm, to monitor continuously for chlorine leakage. Chlorine scrubber is being operated continuously.</p>
vii	Total water requirement from CMWSSB water supply shall not exceed 1650 m ³ /day and prior permission should be obtained from competent authority.	<p>Complied.</p> <p>The total water requirement from CMWSSB water supply (tertiary treated sewage) is consumed based on prior permission & has not exceeded 1650 m³/day and obtained prior permission.</p>
viii	As proposed, industrial effluent shall be treated in ETP. Treated effluent from ETP shall be discharged to sea after conforming to the standards prescribed for the effluents discharge and obtaining permission from the TNPCB. Domestic sewage should be treated in STP.	<p>Complied</p> <p>Effluent generated from PO plant is treated in the Effluent Treatment plant. Treated effluent from ETP is discharged to sea after conforming to the prescribed standards as stipulated by TNPCB.</p> <p>Obtained permission (CTO) from TNPCB for disposal of treated effluent into sea. Domestic sewage is treated in the common Sewage Treatment Plant (STP).</p>
ix	Treated effluent should be passed through guard pond. Monitoring (24*7) through online pH meter, flow meter and TOC analyser should be installed. The data to be made available to the respective SPCB and in the company's website.	<p>Complied</p> <p>Collection Pit is provided and treated effluent is pumped to sea through Collection pit.</p> <p>Online continuous analyser is provided to monitor for pH, TOC (BOD / COD), TSS and Flow meters etc., and the real time monitored data are being transmitted to TNPCB and CPCB's servers.</p> <p>The manually monitored data are being submitted to TNPCB on monthly basis and uploaded on the company's website periodically.</p>

x	<p>The company shall obtain Authorisation for collection, storage and disposal of hazardous waste under the Hazardous waste (MH and TB) Rules 2008 and amended as on date for management of Hazardous wastes and prior permission from TNPCB shall be obtained for disposal of solid / hazardous waste in the TSDF.</p> <p>Measures shall be taken for firefighting facilities in case of emergency</p>	<p>Complied</p> <p>Authorisation for collection, storage and disposal of Hazardous waste under hazardous waste (MH and TB) Rules 2016 has been obtained from TNPCB.</p> <p>Solid waste (lime sludge) is disposed to downstream industries such as brick manufacturers.</p> <p>Also, permission is obtained for disposal of hazardous waste to TSDF vide Authorisation No: 21HFC20874189 dated 28.12.2021. Validity up to 31.03.2026</p> <p>Firefighting facilities are provided & Onsite emergency plan is maintained to mitigate, in case of any emergency.</p>
xi	<p>The company shall strictly comply with the rules & guidelines under Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules 1989 as amended time to time. All transportation of Hazardous Chemicals shall be as per the Motor Vehicle Act (MVA) 1989</p>	<p>Complied</p> <p>Hazardous chemicals are being handled as per the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules 1989 and rules and guidelines are strictly being followed.</p> <p>Material Safety data sheets are available for handling chemicals.</p> <p>Hazardous Chemicals are transported as per the Motor Vehicle Act (MVA) 1989.</p>
xii	<p>The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Firefighting system shall be as per the norms. Fire hydrant system shall be provided along with fire monitor and flame detection system in the process as well as storage areas.</p>	<p>Complied</p> <p>Arrangements such as firefighting facilities, portable fire extinguisher, fire monitors, fire hydrants, sprinkler system, etc., are provided for protection of possible fire hazards during manufacturing process in material handling.</p> <p>Firefighting system is provided as per the norms and obtained Fire license from Tamilnadu Fire & Rescue services, Govt. of Tamilnadu.</p>



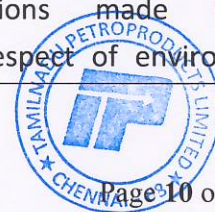
		<p>Fire hydrant system along with fire monitors, Portable extinguisher and flame detectors are provided in the process as well as storage areas.</p> <p>Additionally, Medium velocity sprinkler system is also provided in the Propylene, Dichloropropane and Propylene oxide storage tanks.</p>
xiii	All the recommendations made in the risk assessment report should be satisfactorily implemented.	<p>Complied</p> <p>Recommendations given in the risk assessment report are implemented and being maintained.</p> <p>Salient recommendations are as follows;</p> <ul style="list-style-type: none"> • Nitrogen gas padding is provided in propylene oxide storage and during transfer to prevent air entering the system and forming explosive mixture. • Remote operated shut off valve is provided at inlet of reactor feed line to cut off chlorine, in case of emergency. • Manual isolation at Heavy Chemicals Division and automatic shutoff valve at PO plant are provided in the chlorine pipelines. • Medium velocity sprinkler system is provided to propylene oxide and propylene storage bullets. • Dyke is provided in the storage area to contain spill. • Fencing is provided with security, to the entire storage area. • Entry is restricted to 50 m from the storage area and being ensured. • The area around the storage is free of ignition sources and other hazards.

		<ul style="list-style-type: none"> • Sensors with alarm systems are provided in the storage bullets • Fire hydrant system is provided throughout the storage area. • Regular mock drill is being conducted. • Onsite emergency plan is available and recommendations are being implemented.
xiv	Occupational health surveillance of the workers shall be done on a regular basis and records maintained as per the factories Act	<p>Complied</p> <p>Occupational health surveillances are being conducted for employees periodically, as per the Factories Act. Health records are available and being maintained as per the Factories Act.</p>
xv	As proposed, greenbelt should be developed at least 48561 m2 area in and around the plant premises to mitigate the effects of fugitive emissions all around the plant as per the CPCB guidelines in consultation with DFO. Selection of plant species should be as per the CPCB guidelines.	<p>Complied</p> <p>Green belt is developed in 48561 m² (4.8562 Hectare) area in and around the factory premises to mitigate the effects of fugitive emissions all around the factory.</p> <p>Plant species are selected as per the CPCB guidelines.</p>
xvi	Provision shall be made for the housing for the construction labour within the site with all necessary infrastructure and facilities such as fuel for cooking, mobile toilets, safe drinking water, medical health care, crèche etc., the housing may be in the form of temporary structure to be removed after the completion of the project. All the construction wastes shall be managed so that there is no impact on the surrounding environment.	<p>Complied</p> <p>Contract workers were engaged for construction activity from nearby location and hence housing facility was not provided during the construction time. However other facilities such as toilet, safe drinking water, medical facilities were provided to the construction workers during the construction time.</p> <p>Construction wastes were disposed within the premises as landfill without affecting the surrounding environment.</p>



	General Conditions	
i	The project authorities shall strictly adhere to the stipulations made by the State Government and TN Pollution Control Board.	Complied All the stipulations made by the State Government and TN Pollution Control Board are being adhered regularly.
ii	No further expansion or modification 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.	Complied. No further expansion or modification in the plant will be carried out, without prior approval of the Ministry of Environment and Forests. Fresh reference were not made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required as there were no deviations or alterations in the project proposal.
iii	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentration are anticipated.	Complied Locations of ambient air quality monitoring stations are selected to monitor ambient air quality as per given guidelines & in consultation with TNPCB. One mobile monitoring station in the upwind and one mobile monitoring station in the downwind direction are provided for ambient air quality monitoring, which includes where maximum ground level concentration is anticipated.
iv	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc., on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment	Complied Acoustic hoods, silencers, enclosures, etc., are provided at DG sets to keep the noise level within the prescribed standards. Ambient noise levels at five locations are being monitored manually during day and night time by internal lab once in a month.

	(Protection) Act 1989 viz 75 dBA (day time) and 70 dBA (night time)	The ambient noise levels are within the prescribed standards of 75 dBA (day time) and 70 dBA (night time).
v	The company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water and use the same water for the process activities of the project to conserve fresh water.	<p>Complied</p> <p>Rain water harvesting facility is provided at the following buildings to collect roof top rain water and it is let into freshwater reservoir.</p> <ul style="list-style-type: none"> • Mechanical workshop • Fire water pump house • Raw Water Pump house <p>Area covered is 5000 m².</p> <p>The harvested water is utilised for process activities to conserve fresh water.</p> <p>Additionally, Recharge percolation pits are provided to recharge the rainwater into the pits.</p>
vi	Training shall be imparted to all employees on safety and health aspects of chemicals handling. Pre-employment and routine periodical medical examinations for all employees shall be undertaken on regular basis. Training to all employees on handling of chemicals shall be imparted.	<p>Complied</p> <p>Training on safety and health aspects of chemicals handling is conducted to all employees regularly.</p> <p>Pre-employment and routine periodical medical examinations are being conducted to all employees on regular basis.</p>
vii	Usage of personal protective Equipment (PPEs) by all employees / workers shall be ensured	<p>Complied</p> <p>Personal protective Equipment (PPEs) are provided to all employees / workers and ensured for using.</p>
viii	The company shall also comply with all the environmental protection measures and safe guards proposed in the documents submitted to the Ministry.	<p>Complied</p> <p>The environmental protection measures and safe guards proposed in the documents submitted to the Ministry are being complied at all times.</p>
	All the recommendations made in the EIA/EMP in respect of environmental management, Risk mitigation measures	<p>Complied</p> <p>Recommendations made in the EIA/EMP in respect of environmental</p>

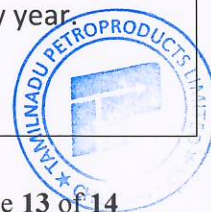


	and public hearing relating to the project shall be implemented.	<p>management and risk assessment report are being implemented regularly.</p> <ul style="list-style-type: none"> • Nitrogen gas padding is provided in propylene oxide storage and during transfer, to prevent air entering the system and forming explosive mixture. • Remote operated shut off valve is provided at inlet of reactor feed line to cut off chlorine, in case of emergency. • Manual isolation at HCD plant and automatic shutoff valve at ECH plant are provided in the chlorine pipelines. • Medium velocity sprinkler system is provided to propylene oxide and propylene storage bullets. • Dyke is provided in the storage area to contain spill. • Fencing is provided with security, to the entire storage area. • Entry is restricted to 50 m from the storage area and being ensured. • The area around the storage is free of ignition sources and other hazards. • Sensors with alarm systems are provided in the storage bullets • Fire hydrant system is provided throughout the storage area • Regular mock drill is being conducted. • Onsite emergency plan is available and recommendations are being implemented.
ix	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding	<p>Being Complied</p> <p>Following social upliftment schemes are being carried out in the nearby area.</p>

	area CSR activities shall be undertaken by involving local villages and administration.	<p>1) Primary Health Care Centre (PHCC) is provided at the following locations to cater to the primary health care needs of the people residing in nearby areas.</p> <ul style="list-style-type: none"> • PHCC is provided at Sadayan Kuppam village, Manali • PHCC is provided at Vichoor village, Manali • PHCC is provided at Seemavaram village • PHCC is provided at Kannampalayam village • Mobile PHCC is provided. <p>2) Rest Rooms were constructed at the following locations.</p> <ul style="list-style-type: none"> • Government high school at Manali New Town. • Government high school at Redhills. • Government high school at Vichoor. • Government high school at Padiyanallur
x	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	<p>Complied</p> <p>Eco-developmental measures (mainly green belt development) are taken to improve the environment.</p>
xi	A separate Environmental management cell equipped with full fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.	<p>Complied</p> <p>A separate Environmental management cell equipped with full-fledged laboratory facilities is established for carrying out the Environmental Management and Monitoring functions. In addition, third party laboratory is also engaged for monitoring.</p>
xii	The company shall earmark sufficient funds towards capital cost and recurring cost/annum to implement the conditions stipulated by the Ministry of Environment	<p>Complied</p> <p>Adequate funds towards capital cost and recurring cost/annum are allocated to implement the conditions stipulated</p>



	and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein.	by the Ministry of Environment and Forests as well as the State Government. Implementation schedules are prepared for all the conditions stipulated herein and are implemented.
	The funds so earmarked for environmental management / pollution control measures shall not be diverted for any other purpose.	Complied Funds earmarked for environmental management / pollution control measures, are not diverted for any other purpose.
xiii	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat / Municipal corporation, urban local body and local NGO, if any from who suggestions/representations, if any were received while processing the proposal.	Complied No suggestion was received from Panchayat / Municipal corporation urban local body and local NGO while processing the proposal.
xiv	The project proponent shall also submit six monthly reports on the status of the compliance of the stipulated environmental clearance conditions including results of monitored data (both in hard copies as well as email) to the respective Regional office of MoEF, the respective Zonal office of CPCB and the TN pollution Control Board.	Complied Six monthly reports on the status of the compliance of the stipulated environmental clearance conditions including results of monitored data is submitted to MOEF Regional Office through e-mail regularly.
	A copy of Environmental clearance and six-monthly compliance status report shall be posted on the website of the company.	Complied. Six monthly compliance reports including monitoring data are uploaded in our company's website (www.tnpetro.com) and also updated periodically.
xv	The environmental statement for each financial year ending 31 st March in Form – V as is mandated shall be submitted to the concerned State pollution Control Board as prescribed under Environment (Protection) Rules 1986, as amended	Complied The environmental statement (Form V) is being submitted to TNPCB once in a year before 30 th Sep every year.



	subsequently shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also sent to the respective Regional offices of MoEF by email.	Environmental statement (Form V) for the year 2022 – 2023 was submitted on 27.09.2023. Further, a copy of Form V is uploaded in the company's website. (www.tnpetro.com) The six-monthly compliance status including results of monitored data is being submitted to MOEF Regional Office through e-mail regularly.
xvi	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 / Committee and may also be seen at website of the Ministry at http://envfor.nic.in . this shall be advertised within seven days from the date of issue of the clearance letter, at least in two local news papers 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 concern Regional Office of the Ministry.	Complied Advertisements in two local news papers (In English in The Financial Express and in Tamil in Makkal Kural) was published on 10.10.2018 and copies of the same were submitted to the Regional Office.
xvii	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 start of the project.	Complied Details the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project were informed to Regional Office, MoEF&CC.



TPL – ECH – PO Plant

Environmental Clearance – News paper Advertisement

IP

தமிழ்நாடு பெட்ரோப்ராடக்ட்ஸ் லிமிடெட்
பதிவு அலுவலகம்: மணலி எக்ஸ்பிரஸ்
ஹைவே, மணலி, சென்னை-600 068.
நிபள: L23200TN1984PLC010931
தொலைபேசி: 044-25945588
வலைதளம்: www.tnpetro.com
மின்னஞ்சல்: secy-legal@tnpetro.com

பொது அறிவிப்பு
தமிழ்நாடு பெட்ரோப்ராடக்ட்ஸ்
லிமிடெட், மணலி, சென்னை 600 068ல்
புரோப்பிலின் ஆக்ஸைடு தயாரிக்கும்
மாற்று பொருள் உற்பத்தித் திட்டத்திற்கு
மத்திய சுற்றுச்சூழல், வனத்துறை மற்றும்
காலநிலை மாற்றம் அமைச்சகத்தின்
சுற்றுச்சூழல் அனுமதி
வழங்கப்பட்டுள்ளது (கடிதம் எண்.
J-1101/280/2013-IA-II(I) Dated 15.05.2015).
மேற்படி திட்டத்திற்கான சுற்றுச்சூழல்
அனுமதி கடிதத்தின் நகல் தமிழ்நாடு
மாசுகட்டுப்பாடு வாரியம்/கமிட்டி,
சென்னை அலுவலகத்தில் உள்ளது.
மேலும் இக்கடிதத்தின் நகலை மத்திய
சுற்றுச்சூழல், வனத்துறை மற்றும்
காலநிலை மாற்றம் அமைச்சகத்தின்
இணையத்தளத்திலும் (<http://envfor.nic.in>)
காணலாம்.
இடம்: சென்னை - 600068
தேதி: 9.10.2018
உதவி பொது மேலாளர் - மனிதவளம்

Makkal kural dated 10.10.2018

IP

Tamilnadu Petroproducts Limited
Regd. Office & Factory: Manali Express Highway,
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CIN: L23200TN1984PLC010931
Telefax: 044-25945588
Website: www.tnpetro.com
E-mail: secy-legal@tnpetro.com

PUBLIC NOTICE
This is to inform that the Ministry of
Environment, Forests and Climate Change,
New Delhi vide their letter No.
J-1101/280/2013-IA-II(I) dated 15th May 2015
have accorded Environmental Clearance for
the Product mix change to manufacture
Propylene Oxide in the existing TPL-ECH
plant, Manali, Chennai - 600 068, Tamilnadu.
Copy of the Environmental Clearance letter
referred above for the proposed project is
available at Tamilnadu Pollution Control
Board/Committee, Chennai and can also be
seen at website of the Ministry of
Environment, Forests and Climate Change
at <http://envfor.nic.in>.
Place : Chennai - 600 068
Date : 9th October, 2018
AGM - HR

The Financial Express dated 10.10.2018

TPL Plant – CSR Activity



PHCC at Sadayankuppam



PHCC at Vichoor



Mobile PHCC (Dr. Mobile)

TPL Plant – CSR Activity



PHCC at Periyasekkadu



Rest Room at Govt. School, Redhills



Rest Room at Govt. School, Vitchoor



Rest Room at Govt. School, Manali



Rest Room at Govt. School, Padiyanallur



TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

From

To

Dr. P. Vijaya!akshmi, M.Sc., Ph.D.,
Deputy Chief Scientific Officer,(Adl Charge)
District Environmental Laboratory, Manali
Tamil Nadu Pollution Control Board,
950/1, Poonamallee High Road,
Arumbakkam,
Chennai-106

M/s. TPL (ECH),
Manali Express Highway,
Manali,
Chennai – 600 068.

Lr.No.TNPC Bd/DEL-MNL/Air Survey/F. No.81/2023-24, Dt. 27.12.2023

Sir,

Sub: Furnishing of Report of Analysis of Ambient Air Quality /
Stack Monitoring / Ambient Noise Level Survey – Reg.

Ref: 1. This office Lr.No. TNPCB/DEL/MNL/AAQS/SM/NLS/VOC/F.No.81/2023-24 dt.07.08.2023
2. Your Lr.No..Nil dt. 29.08.2023
3. Cash Receipt No.253 dt.01.09.2023 Rs.1,05,550/-

I am herewith sending the Report of Analysis of Ambient Air Quality / Stack Monitoring / Ambient Noise Level Survey conducted in the vicinity of your industry on M/s. TPL (ECH), Manali Express Highway, Manali, Chennai - 68 on **13.10.2023** with invoice for Rs.1,05,550/- (Rupees One Lakh Five Thousand Five Hundred and Fifty only) towards the above survey / analytical charges, and the same has been adjusted vide reference (3) cited.

Kindly acknowledge the receipt of the above without fail.

[Handwritten Signature]
Deputy Chief Scientific Officer, (A/C)

District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali

Encl.: As above.

Copy submitted to:

1. The Joint Chief Environmental Engineer (M), TNPC Bd, Chennai for favour of kind information please..
2. The District Environmental Engineer, TNPC Bd, Ambatur for favour of kind information please.
3. Copy to file.



TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

AMBIENT AIR QUALITY SURVEY – Report of Analysis

Report No. 41/AAQS/2023-24

Date: 27.12.2023

1. Name of the Industry : M/s. TPL (ECH),
2. Address of the Industry : Manali Express Highway, Manali, Chennai - 68.
3. Date of Survey : 13.10.2023
4. Duration of Survey : 8.Hours / 24 hours
5. Category : Red / Orange / Green – Large / Medium / Small
6. Land use classification : Industrial / Commercial / Residential / Sensitive

Meteorological Conditions

Ambient Temperature ($^{\circ}$ C)	Min 25	Max 26	Relative Humidity (%)	Min 66	Max 89
Weather Condition	Partially Cloudy		Rain Fall (mm)	Nil	
Predominant Wind Direction	SE – NW		Mean Wind Speed (km/hr)	14	

Ambient Air Quality Survey Results

Sl. No.	Location	Direction *	Distance (m) *	Height Form GL (m)	Pollutants Concentration (microgram / m ³)				
					PM 2.5	PM 10	SO ₂	NO ₂	Cl ₂
1	On top of platform near CP Station II	NE	150	3.0	--	62	11	14	<0.1
2	On top of platform near Propylene Oxide Filling Point	E	280	3.0	--	58	10	16	<0.1
3	On top of platform near STP (Gate No 5)	SE	700	3.0	18	56	12	18	<0.1
4	On top of platform near ERC Building (Gate No 3)	SW	200	3.0	--	64	15	16	<0.1
5	On top of platform near Flare Area	NW	240	3.0	24	78	15	21	<0.1

Note: * With respect to major emission sources. The analytical results are restricted to the sampling period of 8 hrs/24hrs

[Signature]
Deputy Chief Scientific Officer,(A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali

Test Performed	Test Method
PM10	IS 5182 : (Part 23) – 2006
SO ₂	Modified West – Gaeke / IS 5182 : (Part 2) – 2001 RA: 2012
NO ₂	Jacobs – Hochheiser / IS 5182 : (Part 6) – 2006 RA:2012



TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

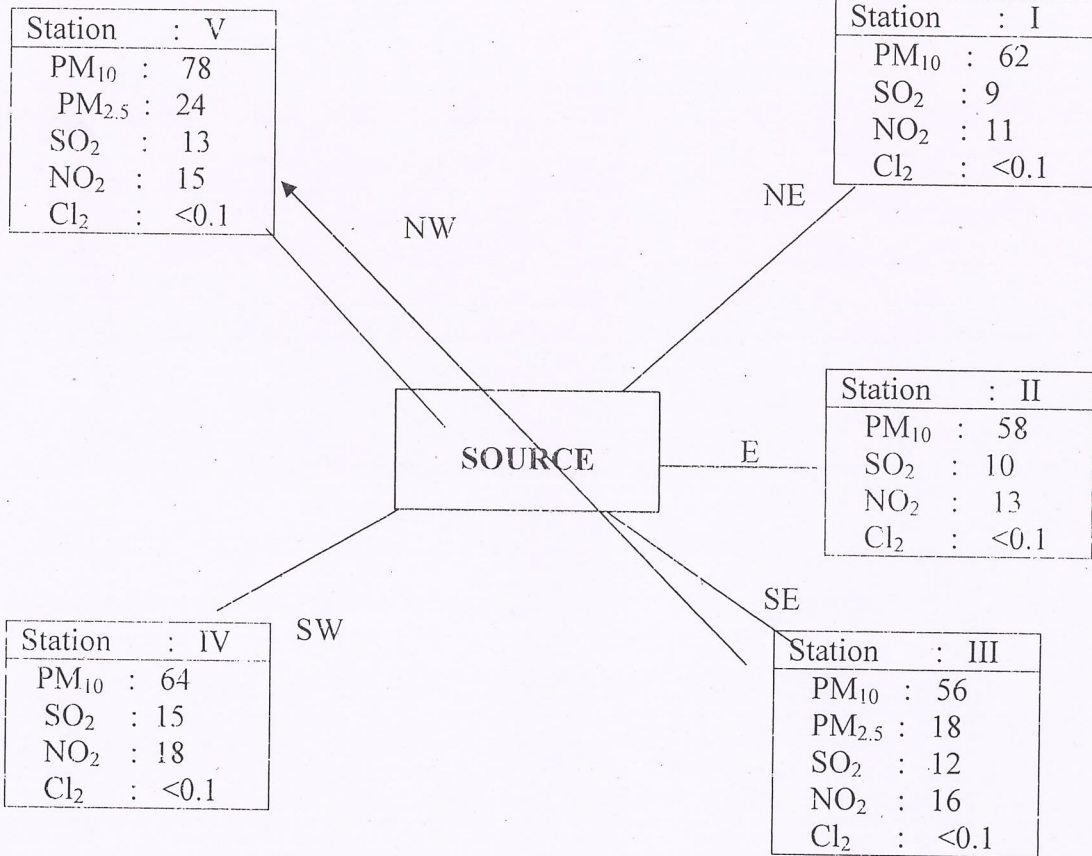
AMBIENT AIR QUALITY SURVEY

Schematic Diagram Showing Location of Sampling

Report No. 41/AAQS/2023-24

Name and Address of the Industry : **M/s. TPL (ECH)**
Manali Express Highway, Manali, Chennai – 68.

Date of Survey : 13.10.2023



Note: All the values are expressed in $\mu\text{g}/\text{m}^3$ and restricted to sampling period of 8 hrs/24hrs

Meteorological Conditions:	
Predominant Wind Direction	SE – NW
Wind Speed (Km/hr)	14
Weather Condition	Partially Cloudy
Rainfall	Nil

[Signature]
Deputy Chief Scientific Officer, (A/C)
District Environmental Laboratory



TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

STACK MONITORING SURVEY – Report of Analysis

Report No. 41/AAQS/2023-24

Date: 27.12.2023

1. Name of the Industry : M/s. TPL (ECH),
2. Address of the Industry : Manali Express Highway, Manali, Chennai – 68
3. Date of Survey : 13.10.2023
4. Type of Industry : Coal/**Chemical**/Sugar/Paper & Pulp/
Power plant / Textile Processing

Stack Monitoring Survey Results

Sl. No.	Stack attached to	Fuel used	Stack Temp °K	Velocity in (m/ sec)	Discharge rate In Nm ³ /hr	Pollutants (mg / Nm ³)			
						PM	SO ₂	NO _x	Cl ₂
1	Boiler 12.5 T	LNG	440	11.74	9604	4	--	38	--
2	Vent Gas Scrubber	--	312	10.66	846	2	--	--	4

Test Performed	Test Method
PM10	IS 5182 : (Part 23) – 2006
SO ₂	Modified West – Gaeke / IS 5182 : (Part 2) – 2001 RA: 2012
NO _x	Jacobs – Hochheiser / IS 5182 : (Part 6) – 2006 RA:2012

[Signature]
Deputy Chief Scientific Officer,(A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali



TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

1. Name and Address of the Industry : **M/s. TPL (ECH)**
Manali Express Highway, Manali, Chennai – 68
2. Date of Survey : 13.10.2023

Sl. No.	Particulars	1	2
1.	Stack attached to	Boiler	Vent gas scrubber
2.	Details of process stack	Boiler 12.5T	Vent gas scrubber
3.	Height from G Level in (m)	47.4	30.0
4.	Diameter in (m)	0.65	0.17
5.	Port hole height from Ground Level or bends or ducts in (m)	20.35	13.25
6.	Fuel Used (with % Sulphur content)	LNG	--
7.	Fuel Consumption rate per hr (mention units)	0.15 KL/hr	--
8.	Type of Stack and capacity	Round	Round
9.	Production on 13.10.2023	Propylene Oxide – 46.018 MT	
10.	APC Measures provided	Automatic Air/Fuel ratio	Scrubber
11.	APC functional status	Functional	Functional
12.	Moisture content in %	--	--
13.	Ambient temp in °K	303	303
14.	Temp of flue gas in °K	440	312
15.	Velocity of flue gas in m/sec	11.74	10.66
16.	Volume of flue gas sampled in m ³	1.001	1.003
17.	Gaseous Discharge rate per day in Nm ³ /hr	9604	846
18.	Combustion efficiency %	--	--

[Signature]
Deputy Chief Scientific Officer,(A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali



TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

STACK MONITORING SURVEY – Additional details

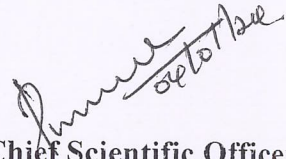
Report No. 41/SM/2023-24

Date: 27.12.2023

1. Name of the Industry : **M/s. TPL (ECH)**
2. Address of the Industry : **Manali Express Highway, Manali, Chennai – 68**
3. Date of Survey : **13.10.2023**
4. Type of Industry : **Coal/Chemical/Sugar/Paper & Pulp/
Power plant / Textile Processing**

Stack Monitoring Additional details

Sl. No.	Details of stack mentioned in the Air Consent order	Details of stack available and in working condition	Details of stack for which stack Emission sampling have been done	Justification for the left out of stack Emission Sampling
1.	Boiler 12.5T	Working	Sampling Done	--
2.	Vent Gas Scrubber	Working	Sampling Done	--


Deputy Chief Scientific Officer, (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali



TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

AMBIENT/SOURCE NOISE LEVEL SURVEY - Report of Analysis

Report No. 41/ NLS/2023-24

Date: 27.12.2023

1.	Name of the Industry	M/s. TPL (ECH)	
2.	Address of the Industry	Manali Express Highway, Manali, Chennai - 68	
3.	Date of Survey	13.10.2023	
Category		RL	Land use Classification
Type of Survey		Ambient/Source	Industrial
Meteorological conditions		Time of Survey	Day
		Calm/Windy/Rainy	Windy

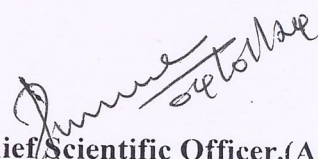
Logging Parameters

Instrument Used	CESVA Model SC310		Serial No	T243103	
Logging Interval	10 Minutes each point		Measuring Range	50-110 dB(A)	
Weighting	"A"	Peak Weighting	"C"	Time Weighting	FAST
Sound Incidence	RANDOM		Time in hrs	14.00 – 15.00	

Report of Noise Level Monitoring

Sl No	Location	Duration (min)	Distance (M)	Direction	Sound Level – dB (A)		
					L _{eq}	Min	Max
1	Near CP Station II	10	150	NE	58.4	56.8	70.1
2	Near Propylene Oxide Filling Point	10	280	E	56.0	52.0	58.0
3	Near STP (Gate No.5)	10	700	SE	61.2	56.0	65.5
4	Near ERC Building (Gate No 3)	10	200	SW	64.8	60.8	69.5
5	Near Flare Area	10	240	NW	57.9	56.7	60.4

Note: Leq value is the average energy for the measured period.


Deputy Chief Scientific Officer, (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali



TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

INFERENCE REPORT ON A.A.Q.S./ S.M.

1. Name of Industry : M/s. TPL (ECH)
2. Pollution Category : Red Large
3. Date of A.A.Q. Survey : 13.10.2023
4. Predominant Wind Direction : SE - NW
5. Weather condition : Partially Cloudy

STATUS OF POLLUTANTS LEVEL

I. AMBIENT AIR QUALITY :-

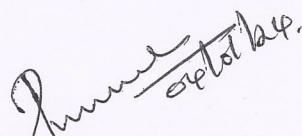
1. Total No. of A.A.Q. stations monitored : 5
2. No. of A.A.Q. stations in which Pollutants Level exceeded the Boards standards : Nil

Maximum and Minimum values of Pollutants Level observed:

Sl. No.	POLLUTANT	Values in microgram/m ³		BOARD'S STANDARD (As per consent order)
		Maximum	Minimum	
1.	PM ₁₀	78	56	100
	PM _{2.5}	24	18	60
2.	<u>GASEOUS POLLUTANTS:-</u>			
	(i) SO ₂	15	10	80
	(ii) NO ₂	21	14	80

II. STACK MONITORING:-

1. Total No. of Stacks Monitored : 2
2. No. of Stacks in which Pollutants level Exceeded the Boards standards : Nil


Deputy Chief Scientific Officer, (A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali

**TAMIL NADU POLLUTION CONTROL BOARD**

District Environmental Laboratory, Manali

BILL**Report No. 41/AAQ/SM/2023-24**

Bill No.	41/2023-24
Date	27.12.2023

To
M/s. TPL (ECH),
 Manali Express Highway
 Manali, Chennai - 600 068

- Ref: 1. B.PMs.No.6 Dt.31.03.2009.
 2. This office Lr.No. TNPCB/DEL/MNL/AAQS/SM/NLS/VOC/F.No.81/2023-24 dt.07.08.2023
 3. Your Lr.No..Nil dt. 29.08.2023
 4. Cash Receipt No.253 dt.01.09.2023 Rs.1,05,550/-

Sl. No.	Description	Rate (Rs.)	No. of Stations/ Stacks	Amount (Rs.)
1.	SAMPLING CHARGES:			
	(i) Ambient Air Quality monitoring PM ₁₀	3500	5	17,500
	(ii) Source Emission Monitoring (PM, SO ₂ , NO _x etc.,)	13100	2	26,200
	(iii) Ambient Air Quality monitoring PM _{2.5}	3500	2	7,000
2.	ANALYTICAL CHARGES:			
	(i) Ambient Air Samples PM ₁₀ , SO ₂ , NO ₂ , Cl ₂ (each Rs. 1050/-)	4200	5	21,000
	(ii) Source Emission Samples PM, SO ₂ , NO _x , Cl ₂ (each Rs.1050/-)	3150	1	3,150
	(iii) Source Emission samples (PM & Cl ₂)mbient Air Samples PM _{2.5}	2100	1	2,100
	(iv) Ambient Air Samples PM _{2.5}	1800	2	3600
3.	AMBIENT NOISE MONITORING CHARGES:			
	(i) For first 5 stations	1400	5	7,000
Transportation Charges				500
Total				88,050
Received Vide SBI Bank DD No.476384 dated :28.08.2023				
Our CR.No. 147287 dated 15.02.2022				1,05,550
LESS: Excess amount of TVOC analytical charges will be deducted in the demand of the next survey.				17,500
Balance to be adjusted				17,500

[Signature]
 Deputy Chief Scientific Officer,(A/C)

Hubert Enviro Care Systems (P) Ltd.

A-21, III Phase, Thiru Vi Ka Industrial Estate,
Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in



TC-12310

Laboratory Services Division

(Chemical & Biological Testing)
FSSAI Notified Laboratory
ISO 9001, 14001 & 45001 Certified.



TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Ambient Air
Sample Mark : NA
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : Near Main Gate
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 5182 Part 5 & Part 14

ULR : TC1231024000016271F
Report No. : HECS/AP/8585/050424
Sample ID No : 050424266
Sampling Date : 04/04/2024 To 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method	NAAQ Standards : 2009	
Discipline : Chemical						
1	Lead	µg/m³	BLQ (LOQ: 0.002)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	1 (24 hours)	0.5 (Annual)
2	Arsenic	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	6 (Annual)	6 (Annual)
3	Nickel	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	20 (Annual)	20 (Annual)
4	Benzene-AAQ	µg/m³	BLQ (LOQ: 0.1)	IS 5182 Part 11: 2006	5 (Annual)	5 (Annual)
5	Benzo (a) pyrene-AAQ	ng/m³	BLQ (LOQ: 0.1)	IS : 5182 Part 12: 2004	1 (Annual)	1 (Annual)
6	Ammonia as NH3	µg/m³	8.33	IS 5182 (Part 25) 2018	400 (24 hours)	100 (Annual)
7	Carbon Monoxide (CO)	mg/ m³	BLQ(LOQ 0.05)	IS 5182 (Part 10) Clause 4 1999	4 (1 hours)	2 (8 hours)
8	Nitrogen dioxides as NO2	µg/m³	20.27	IS 5182 (Part 6) 2006	80 (24 hours)	40 (Annual)
9	Ozone as O3	µg/m³	11.94	IS 5182 (Part 9) 1974	180 (1 hours)	100 (8 hours)
10	Particulate matter (Size less than 10 µm)	µg/m³	55.98	IS 5182 (Part 23) 2006	100 (24 hours)	60 (Annual)
11	Particulate matter (Size less than 2.5 µm)	µg/m³	26.04	IS 5182 (Part 24) 2019	60 (24 hours)	40 (Annual)
12	Sulphur dioxide as SO2	µg/m³	10.20	IS 5182 (Part 2) 2001	80 (24 hours)	50 (Annual)
13	Total Suspended Particular Matter	µg/m³	81.82	IS 5182 (Part 4) 1999	-	-

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, µg/m³- Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter, NA -Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of NAAQ Standards 2009.

End of Report


M. Sivaprakasam
Lab Manager
Authorized Signatory



Hubert Enviro Care Systems (P) Ltd.

A-21, III Phase, Thiru Vi Ka Industrial Estate,
Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in



TC-12310

Laboratory Services Division

(Chemical & Biological Testing)
FSSAI Notified Laboratory
ISO 9001, 14001 & 45001 Certified.



TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Ambient Air
Sample Mark : NA
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : Near Boiler House
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 5182 Part 5 & Part 14

ULR : TC1231024000016272F
Report No. : HECS/AP/8686/050424
Sample ID No : 050424267
Sampling Date : 04/04/2024 To 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA


S.No.	Test Parameters	Units	Results	Test Method	NAAQ Standards : 2009	
Discipline : Chemical						
1	Lead	µg/m³	BLQ (LOQ: 0.002)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	1 (24 hours)	0.5 (Annual)
2	Arsenic	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	6 (Annual)	6 (Annual)
3	Nickel	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	20 (Annual)	20 (Annual)
4	Benzene-AAQ	µg/m³	BLQ (LOQ: 0.1)	IS 5182 Part 11: 2006	5 (Annual)	5 (Annual)
5	Benzo (a) pyrene-AAQ	ng/m³	BLQ (LOQ: 0.1)	IS : 5182 Part 12: 2004	1 (Annual)	1 (Annual)
6	Ammonia as NH3	µg/m³	5.54	IS 5182 (Part 25) 2018	400 (24 hours)	100 (Annual)
7	Carbon Monoxide (CO)	mg/ m³	BLQ(LOQ 0.05)	IS 5182 (Part 10) Clause 4 1999	4 (1 hours)	2 (8 hours)
8	Nitrogen dioxides as NO2	µg/m³	24.36	IS 5182 (Part 6) 2006	80 (24 hours)	40 (Annual)
9	Ozone as O3	µg/m³	13.90	IS 5182 (Part 9) 1974	180 (1 hours)	100 (8 hours)
10	Particulate matter (Size less than 10 µm)	µg/m³	48.17	IS 5182 (Part 23) 2006	100 (24 hours)	60 (Annual)
11	Particulate matter (Size less than 2.5 µm)	µg/m³	23.26	IS 5182 (Part 24) 2019	60 (24 hours)	40 (Annual)
12	Sulphur dioxide as SO2	µg/m³	13.79	IS 5182 (Part 2) 2001	80 (24 hours)	50 (Annual)
13	Total Suspended Particular Matter	µg/m³	71.43	IS 5182 (Part 4) 1999	-	

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, µg/m³- Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter, NA -Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of NAAQ Standards 2009.

End of Report




M.Sivaprakasam
Lab Manager
Authorized Signatory

Hubert Enviro Care Systems (P) Ltd.

A-21, III Phase, Thiru Vi Ka Industrial Estate,
Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in



Laboratory Services Division

(Chemical & Biological Testing)
FSSAI Notified Laboratory
ISO 9001, 14001 & 45001 Certified.



TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Ambient Air
Sample Mark : NA
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : Near DG Area
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 5182 Part 5 & Part 14

ULR : TC1231024000016273F
Report No. : HECS/AP/8787/050424
Sample ID No : 050424268
Sampling Date : 04/04/2024 To 05/04/2024

Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

Sampling Method & Plan : IS 5182 Part 5 & Part 4

S.No.	Test Parameters	Units	Results	Test Method	NAAQ Standards : 2009	
Discipline : Chemical						
1	Lead	µg/m³	BLQ (LOQ: 0.002)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	1 (24 hours)	0.5 (Annual)
2	Arsenic	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	6 (Annual)	6 (Annual)
3	Nickel	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	20 (Annual)	20 (Annual)
4	Benzene-AAQ	µg/m³	BLQ (LOQ: 0.1)	IS 5182 Part 11: 2006	5 (Annual)	5 (Annual)
5	Benzo (a) pyrene-AAQ	ng/m³	BLQ (LOQ: 0.1)	IS : 5182 Part 12: 2004	1 (Annual)	1 (Annual)
6	Ammonia as NH3	µg/m³	7.92	IS 5182 (Part 25) 2018	400 (24 hours)	100 (Annual)
7	Carbon Monoxide (CO)	mg/ m³	BLQ(LOQ 0.05)	IS 5182 (Part 10) Clause 4 1999	4 (1 hours)	2 (8 hours)
8	Nitrogen dioxides as NO2	µg/m³	20.32	IS 5182 (Part 6) 2006	80 (24 hours)	40 (Annual)
9	Ozone as O3	µg/m³	10.64	IS 5182 (Part 9) 1974	180 (1 hours)	100 (8 hours)
10	Particulate matter (Size less than 10 µm)	µg/m³	53.92	IS 5182 (Part 23) 2006	100 (24 hours)	60 (Annual)
11	Particulate matter (Size less than 2.5 µm)	µg/m³	20.97	IS 5182 (Part 24) 2019	60 (24 hours)	40 (Annual)
12	Sulphur dioxide as SO2	µg/m³	8.93	IS 5182 (Part 2) 2001	80 (24 hours)	50 (Annual)
13	Total Suspended Particular Matter	µg/m³	74.89	IS 5182 (Part 4) 1999	-	

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, µg/m³- Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter, NA -Not Applicable.
Remarks: The Tested Parameters as above are within the Limits of NAAQ Standards 2009.

End of Report



M. Sivaprakasam
Lab Manager
Authorized Signatory

Hubert Enviro Care Systems (P) Ltd.

A-21, III Phase, Thiru Vi Ka Industrial Estate,
Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in



Laboratory Services Division

(Chemical & Biological Testing)
FSSAI Notified Laboratory
ISO 9001, 14001 & 45001 Certified.



TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Atmospheric Pollution

Sample Name : Ambient Air

Sample Mark : NA

Sample Reference : NA

Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.

Sample Location : Near Gate 5

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 5182 Part 5 & Part 14

ULR : TC1231024000016274F

Report No. : HECS/AP/8888/050424

Sample ID No : 050424269

Sampling Date : 04/04/2024 To 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 10/04/2024

Report Date : 11/04/2024

Sample quantity : NA

Sampling Method & Plan						
S.No.	Test Parameters	Units	Results	Test Method	NAAQ Standards : 2009	
Discipline : Chemical						
1	Lead	µg/m³	BLQ (LOQ: 0.002)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	1 (24 hours)	0.5 (Annual)
2	Arsenic	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	6 (Annual)	6 (Annual)
3	Nickel	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	20 (Annual)	20 (Annual)
4	Benzene-AAQ	µg/m³	BLQ (LOQ: 0.1)	IS 5182 Part 11: 2006	5 (Annual)	5 (Annual)
5	Benzo (a) pyrene-AAQ	ng/m³	BLQ (LOQ: 0.1)	IS : 5182 Part 12: 2004	1 (Annual)	1 (Annual)
6	Ammonia as NH3	µg/m³	6.19	IS 5182 (Part 25) 2018	400 (24 hours)	100 (Annual)
7	Carbon Monoxide (CO)	mg/ m³	BLQ(LOQ 0.05)	IS 5182 (Part 10) Clause 4 1999	4 (1 hours)	2 (8 hours)
8	Nitrogen dioxides as NO2	µg/m³	18.94	IS 5182 (Part 6) 2006	80 (24 hours)	40 (Annual)
9	Ozone as O3	µg/m³	12.96	IS 5182 (Part 9) 1974	180 (1 hours)	100 (8 hours)
10	Particulate matter (Size less than 10 µm)	µg/m³	50.57	IS 5182 (Part 23) 2006	100 (24 hours)	60 (Annual)
11	Particulate matter (Size less than 2.5 µm)	µg/m³	19.29	IS 5182 (Part 24) 2019	60 (24 hours)	40 (Annual)
12	Sulphur dioxide as SO2	µg/m³	12.40	IS 5182 (Part 2) 2001	80 (24 hours)	50 (Annual)
13	Total Suspended Particular Matter	µg/m³	69.86	IS 5182 (Part 4) 1999	-	

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, µg/m³- Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter, NA --Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of NAAQ Standards 2009.

End of Report



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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Atmospheric Pollution

Sample Name : Ambient Air

Sample Mark : NA

Sample Reference : NA

Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.

Sample Location : Near ETP

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 5182 Part 5 & Part 14

ULR : TC1231024000016275F

Report No. : HECS/AP/8989/050424

Sample ID No : 050424270

Sampling Date : 04/04/2024 To 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 10/04/2024

Report Date : 11/04/2024

Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method	NAAQ Standards : 2009	
Discipline : Chemical						
1	Lead	µg/m³	BLQ (LOQ: 0.002)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	1 (24 hours)	0.5 (Annual)
2	Arsenic	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	6 (Annual)	6 (Annual)
3	Nickel	ng/m³	BLQ (LOQ: 2.0)	HECS-G/INS/SOP/ 041 Issue No.:01 Issue Date:01.03.2021	20 (Annual)	20 (Annual)
4	Benzene-AAQ	µg/m³	BLQ (LOQ: 0.1)	IS 5182 Part 11: 2006	5 (Annual)	5 (Annual)
5	Benzo (a) pyrene-AAQ	ng/m³	BLQ (LOQ: 0.1)	IS : 5182 Part 12: 2004	1 (Annual)	1 (Annual)
6	Ammonia as NH3	µg/m³	5.50	IS 5182 (Part 25) 2018	400 (24 hours)	100 (Annual)
7	Carbon Monoxide (CO)	mg/ m³	BLQ(LOQ 0.05)	IS 5182 (Part 10) Clause 4 1999	4 (1 hours)	2 (8 hours)
8	Nitrogen dioxides as NO2	µg/m³	18.43	IS 5182 (Part 6) 2006	80 (24 hours)	40 (Annual)
9	Ozone as O3	µg/m³	10.36	IS 5182 (Part 9) 1974	180 (1 hours)	100 (8 hours)
10	Particulate matter (Size less than 10 µm)	µg/m³	49.96	IS 5182 (Part 23) 2006	100 (24 hours)	60 (Annual)
11	Particulate matter (Size less than 2.5 µm)	µg/m³	22.07	IS 5182 (Part 24) 2019	60 (24 hours)	40 (Annual)
12	Sulphur dioxide as SO2	µg/m³	10.20	IS 5182 (Part 2) 2001	80 (24 hours)	50 (Annual)
13	Total Suspended Particular Matter	µg/m³	72.03	IS 5182 (Part 4) 1999	-	

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, µg/m³- Micrograms per cubic meter, mg/m³-Milligrams per cubic meter, ng/m³-Nanograms per cubic meter, NA -Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of NAAQ Standards 2009.

End of Report




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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission
Sample Mark : Chlorine Scrubber
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

Report No. : HECS/AP/113/050424
Sample ID No : 050424310
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/05/2024
Report Date : 10/05/2024
Sample quantity : NA

S.No.	Parameters	Units	Results	Test Method
1	Chlorine	mg/Nm ³	1.8	HECS/AIR/STACK/SOP026

Note:- mg/Nm³- Milligrams per Normal cubic meter.

End of Report



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Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission (VOC)
Sample Mark : Chlorine Scrubber
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

Report No. : HECS/AP/121/050424/N
Sample ID No : 050424323
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Ethylene Oxide	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
2	Vinyl Chloride Monomer	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
3	Ethylene Di Chloride	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
4	Acrylonitrile	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
5	Propylene Oxide	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification.

End of Report



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TEST REPORT

Page : 1 of 2

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission
Sample Mark : Emergency DG Set
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

ULR : TC1231024000021108F
Report No. : HECS/AP/114/050424
Sample ID No : 050424311
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : NA


S.No.	Test Parameters	Units	Results	Test Method	CPCB Standards
Discipline : Chemical					
1	CarbonMonoxide (CO)	mg/Nm ³	38.35	IS 13270 Clause 4 1992	150
2	Flue Gas Velocity	m/sec	10.7	IS 11255 (Part 3) 2008	-
3	Particulate matter (PM)	mg/Nm ³	36.40	IS 11255 Part 1 1985	75
4	Sulphur dioxide (SO ₂)	mg/Nm ³	13.24	IS 11255 (Part 2) 1985	-
5	Nitrogen dioxide(NO ₂)	mg/Nm ³	241.74	ASTM Method D6522 (by Flue gas Analyzer) 2000	710*
6	Carbon dioxide (CO ₂)	%	6.4	IS 13270 Clause 4 1992	-
7	Flue Gas Discharge (Flow Rate)	Nm ³ /hr	5132.0	IS 11255 (Part 3) 2008	-
8	Fluegas Temperature	°C	117.0	IS 11255 (Part 3) 2008	-

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, Nm³/hr - Normal cubic meter per hour,
CNTE- Concentration not to Exceed, mg/Nm³- Milligrams per Normal cubic meter, °C- Degree Celsius,
m/s- Meter per second, % V/V - Percentage, NA - Not Applicable,*ppm- Parts Per Million.

Remarks: The Tested Parameters as above are within the Limits of CPCB Stack Emission Standards.

End of Report




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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission
Sample Mark : Emergency DG Set
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000


Report No. : HECS/AP/114/050424/N
Sample ID No : 050424311
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Non Methane Hydrocarbons	mg/Nm ³	BLQ (LOQ:0.2)	HECS-G/INS/SOP/056 Issue No.:01 Issue Date:01.03: 2021
2	Hydrocarbons	µg/Nm ³	BLQ (LOQ: 0.1)	HECS-G/INS/SOP/019 Issue No.:01 Issue Date:01.03.2021
3	Olefins	µg/Nm ³	BLQ (LOQ: 0.1)	Inhouse Method

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, °C- Degree Celsius.

End of Report




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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission
Sample Mark : Boiler Stack
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

ULR Report : TC1231024000016276F
No. Sample : HECS/AP/090/050424
ID No : 050424271
Sampling Date : 05/04/2024

Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

Stack Details

S.No.	Particulars	Units	Stack Specification
1	Stack Height	Meter	47.4
2	Stack Diameter	Meter	0.65

Discipline : Chemical

S.No.	Test Parameters	Units	Results	Test Method	CPCB Standards
1	CarbonMonoxide (CO)	mg/Nm ³	7.93	IS 13270 Clause 4 1992	Max 150
2	Flue Gas Velocity	m/sec	12.9	IS 11255 (Part 3) 2008	-
3	Particulate matter (PM)	mg/Nm ³	9.20	IS 11255 Part 1 1985	Max 10
4	Sulphur dioxide (SO ₂)	mg/Nm ³	8.62	IS 11255 (Part 2) 1985	Max 50
5	Nitrogen dioxide(NO ₂)	mg/Nm ³	65.26	ASTM Method D6522 (by Flue gas Analyzer) 2000	Max 350
6	Carbon dioxide (CO ₂)	%	9.4	IS 13270 Clause 4 1992	-
7	Flue Gas Discharge (Flow Rate)	Nm ³ /hr	9281.0	IS 11255 (Part 3) 2008	-
8	Fluegas Temperature	°C	176.0	IS 11255 (Part 3) 2008	-

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, Nm³/hr - Normal cubic meter per hour, CNTE- Concentration not to Exceed, mg/Nm³- Milligrams per Normal cubic meter, °C- Degree Celsius, %V/V - Percentage, NA - Not Applicable.
Remarks: The Tested Parameters as above are within the Limits of CPCB Stack Emission Standards.

End of Report



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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission
Sample Mark : Boiler Stack
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

Report No. : HECS/AP/090/050424/N
Sample ID No : 050424271
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Hydrocarbons	µg/Nm ³	BLQ (LOQ: 0.1)	HECS-G/INS/SOP/019 Issue No.:01 Issue Date:01.03.2021
2	Non Methane Hydrocarons	mg/Nm ³	BLQ (LOQ:0.2)	HECS-G/INS/SOP/056 Issue No.:01 Issue Date:01.03: 2021
3	Olefins	µg/Nm ³	BLQ (LOQ: 0.1)	Inhouse Method

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, mg/Nm³- Milligrams per Normal cubic meter.

End of Report



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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Atmospheric Pollution
Sample Name : Stack Emission (VOC)
Sample Mark : Boiler Stack
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : ISO 16000

Report No. : HECS/AP/120/050424/N
Sample ID No : 050424322
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 10/04/2024
Report Date : 11/04/2024
Sample quantity : NA

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Ethylene Oxide	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
2	Vinyl Chloride Monomer	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
3	Ethylene Di Chloride	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
4	Acrylonitrile	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073
5	Propylene Oxide	ppm	BLQ(LOQ 0.01)	HECS/IN S/SOP/073

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification.

End of Report



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TEST REPORT

Page : 1 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Borewell Water 1
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021109F
Report No. : HECSL/WT/114/050424
Sample ID No : 050424312
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 12/04/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Biological Oxygen Demand (BOD)@ 27°C For 3 days	mg/l	3.0	IS 3025 Part 44: 1993
2	Calcium as Ca	mg/l	120.24	IS 3025 Part 40: 1991(EDTA Titrimetric Method)
3	Chemical Oxygen Demand (COD)	mg/l	24.0	IS 3025 Part 58: 2006
4	Chloride as Cl	mg/l	801.7	IS 3025 Part 32: 1988 (Argentometric Method)
5	Residual Free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part 26): 2021 (DPD method b,c)
6	Colour	Hazen units	2.0	IS 3025 (Part4): 2021
7	Dissolved oxygen	mg/l	6.5	IS 3025 (Part 38): 1989 (Titrimetric Method)
8	Electrical Conductivity at 25°C	µ S/cm	3520.0	IS 3025 Part-14: 2013
9	Fluoride as F	mg/l	0.49	APHA 23rd edition (Method 4500- F-B,D): 2017
10	Iron as Fe	mg/l	2.17	IS 3025 (Part 53): 2003
11	Magnesium as Mg	mg/l	58.32	IS 3025 Part 46: 1994 (Valumetric Method using EDTA)
12	Nitrate as NO3	mg/l	14.7	APHA 23rd edition (Method 4500 NO3B): 2017
13	Odour	-	Agreeable	IS 3025 (Part 5): 2018



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TEST REPORT

Page : 2 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Borewell Water 1
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021109F
Report No. : HECSL/WT/114/050424
Sample ID No : 050424312
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 12/04/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
14	pH at 25°C	-	7.74	IS 3025(Part 11) : 2022 (Electrometric method)
15	Salinity	ppt	1.45	APHA 23rd edition (Method 2520 B): 2017
16	Sodium as Na	mg/l	410.0	IS 3025 Part 45: 1993 (Flame emission Photometric Method)
17	Sulphate as SO4	mg/l	140.71	IS 3025 Part 24 Sec 1: 2022(Turbidity Method)(Turbidity Method)
18	Temperature(°C)	°C	26.9	IS 3025 (Part 9): 1984
19	Total alkalinity as CaCO3	mg/l	380.0	IS 3025 (Part 23): 1986
20	Total dissolved solids	mg/l	1812.0	IS 3025 (Part 16): 1984
21	Total hardness as CaCO3	mg/l	540.0	IS 3025 (Part 21): 2009
22	Turbidity, NTU	NTU	21.4	IS 3025 (Part 10): 1984
23	Aluminium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
24	Arsenic	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 : 1994
25	Cadmium	mg/l	BLQ (LOQ: 0.001)	USEPA 200.8 : 1994
26	Chromium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
27	Copper	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
28	Lead	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 : 1994
29	Manganese	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
30	Mercury	mg/l	BLQ (LOQ: 0.0005)	USEPA 200.8 : 1994

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TEST REPORT

Page : 3 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Borewell Water 1
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021109F
Report No. : HECSL/WT/114/050424
Sample ID No : 050424312
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 12/04/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
31	Zinc	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994

BLQ : Below Limit of Quantification, LOQ: Limit of Quantification, mg/l: milligram per Litre.

End of Report



D.Anusuya
Deputy Quality Manager
Authorized Signatory

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TC-12310

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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Bore well Water 1
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 21.0 | Humidity (%) : 45.0
Sampling Method & Plan : HECS-G/Micro/Sop/04

ULR : TC1231024000021285F
Report No. : HECSL/WT/116/050424
Sample ID No : 050424314
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 08/04/2024
Completed On : 10/04/2024
Report Date : 11/05/2024
Sample quantity : 100ml

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Biological				
1	Faecal Coliform	MPN/100ml	<2	IS 1622 : 1981
2	Total Coliform	MPN/100ml	<2	IS 1622 : 1981

Note:- MPN-Most Propable Number, <2 is Considered as Absent.

End of Report



Dr. Rajkumar Samuel
Director Technical
Authorized Signatory

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TEST REPORT

Page : 1 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Water

Sample Name : Bore Well Water

Sample Mark : Borewell Water 2

Sample Reference : NA

Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.

Sample Location : NA

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021117F

Report No. : HECSL/WT/115/050424

Sample ID No : 050424313

Sampling Date : 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 12/04/2024

Report Date : 11/05/2024

Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Biological Oxygen Demand (BOD)@ 27°C For 3 days	mg/l	2.0	IS 3025 Part 44: 1993
2	Calcium as Ca	mg/l	128.25	IS 3025 Part 40: 1991(EDTA Titrimetric Method)
3	Chemical Oxygen Demand (COD)	mg/l	16.0	IS 3025 Part 58: 2006
4	Chloride as Cl	mg/l	831.4	IS 3025 Part 32: 1988 (Argentometric Method)
5	Residual Free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part 26): 2021 (DPD method b,c)
6	Colour	Hazen units	2.0	IS 3025 (Part4): 2021
7	Dissolved oxygen	mg/l	6.4	IS 3025 (Part 38): 1989 (Titrimetric Method)
8	Electrical Conductivity at 25°C	µ S/cm	3810.0	IS 3025 Part-14: 2013
9	Fluoride as F	mg/l	0.52	APHA 23rd edition (Method 4500- F-B,D): 2017
10	Iron as Fe	mg/l	2.11	IS 3025 (Part 53): 2003
11	Magnesium as Mg	mg/l	65.61	IS 3025 Part 46: 1994 (Valumetric Method using EDTA)
12	Nitrate as NO3	mg/l	14.17	APHA 23rd edition (Method 4500 NO3B): 2017
13	Odour		Agreeable	IS 3025 (Part 5): 2018



M. Sivaprakasam

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TEST REPORT

Page : 2 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Water

Sample Name : Bore Well Water

Sample Mark : Borewell Water 2

Sample Reference : NA

Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.

Sample Location : NA

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021117F

Report No. : HECSL/WT/115/050424

Sample ID No : 050424313

Sampling Date : 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 12/04/2024

Report Date : 11/05/2024

Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
14	pH at 25°C	-	7.48	IS 3025(Part 11) : 2022 (Electrometric method)
15	Salinity	ppt	1.51	APHA 23rd edition (Method 2520 B): 2017
16	Sodium as Na	mg/l	430.0	IS 3025 Part 45: 1993 (Flame emission Photometric Method)
17	Sulphate as SO ₄	mg/l	277.9	IS 3025 Part 24 Sec 1: 2022(Turbidity Method)(Turbidity Method)
18	Temperature(°C)	°C	26.7	IS 3025 (Part 9): 1984
19	Total alkalinity as CaCO ₃	mg/l	350.0	IS 3025 (Part 23): 1986
20	Total dissolved solids	mg/l	1969.0	IS 3025 (Part 16): 1984
21	Total hardness as CaCO ₃	mg/l	590.0	IS 3025 (Part 21): 2009
22	Turbidity, NTU	NTU	18.7	IS 3025 (Part 10): 1984
23	Aluminium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
24	Arsenic	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 : 1994
25	Cadmium	mg/l	BLQ (LOQ: 0.001)	USEPA 200.8 : 1994
26	Chromium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
27	Copper	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
28	Lead	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 : 1994
29	Manganese	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994
30	Mercury	mg/l	BLQ (LOQ: 0.0005)	USEPA 200.8 : 1994



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TEST REPORT

Page : 3 of 3

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Borewell Water 2
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-1):2021

ULR : TC1231024000021117F
Report No. : HECSL/WT/115/050424
Sample ID No : 050424313
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 12/04/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method
31	Zinc	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 : 1994

Note:- BLQ-Below limit of Quantification, LOQ-Limit of Quantification, mg/l-milligrams per litre.

End of Report



M. Sivaprakasam
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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Water
Sample Name : Bore Well Water
Sample Mark : Borewell Water 2
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 22.0 | Humidity (%) : 45.0
Sampling Method & Plan : HECS-G/Micro/Sop/04

ULR : TC1231024000021286F
Report No. : HECSL/WT/117/050424
Sample ID No : 050424315
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 06/04/2024
Completed On : 08/04/2024
Report Date : 11/05/2024
Sample quantity : 100ml

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Biological				
1	Faecal Coliform	MPN/100ml	<2	IS 1622 : 1981
2	Total Coliform	MPN/100ml	<2	IS 1622 : 1981

Note:- MPN-Most Propable Number, <2 is Considered as Absent.

End of Report




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TEST REPORT

Page : 1 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
Discipline : Chemical					
Pesticides					
1	Alachlor	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
2	Aldrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
3	Alpha BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
4	Atrazine	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
5	Beta BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
6	Butachlor	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
7	Chloropyrifos	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
8	Delta BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
9	Dieldrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent

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TEST REPORT

Page : 2 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
10	Endosulfan alpha	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
11	Endosulfan beta	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
12	Endosulfan sulfate	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
13	Ethion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
14	Gamma BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
15	Malathion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
16	o,p-DDD	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
17	o,p-DDE	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
18	o,p-DDT	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent

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TEST REPORT

Page : 3 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
19	p,p'-DDD	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
20	p,p'-DDE	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
21	p,p'-DDT	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
22	Parathion-methyl	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
23	Phorate	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
24	2,4-D	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
25	Isoproturon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
26	Malaoxon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
27	Methyl Paraoxon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
28	Methyl Parathion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent

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TEST REPORT

Page : 4 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
29	Monocrotophos	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
30	Phorate Sulfone	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
31	Phorate Sulfoxide	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
32	Arsenic	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 Revision 5.4: 1994	0.2
33	Cadmium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	2.0
34	Chromium	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	2.0
35	Copper	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	3.0
36	Nickel	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	3.0
37	Selenium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	0.05
38	Zinc	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	1.5
39	Ammonia as NH3	mg/l	3.72	IS 3025 (Part 34) Clause 2.3 1988	5
40	Ammonical Nitrogen as NH3-N	mg/l	2.90	IS 3025 (Part 34) Clause 2.5 1988	50
41	Bio-Chemical Oxygen Demand(BOD) 3 days @27 °C	mg/l	24.0	IS 3025 (Part 44) 1993	30
42	Boron as B	mg/l	BLQ (LOQ 0.1)	IS 3025 (Part 57) Clause 6 2021	2



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TEST REPORT

Page : 5 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
43	Chemical Oxygen Demand (COD)	mg/l	238.0	IS 3025 (Part 58) 2006	250
44	Chloride as Cl-	mg/l	9370.0	IS 3025 (Part 32) Clause 2 1988	-
45	Cyanide as CN	mg/l	BLQ (LOQ 0.01)	IS 3025 Part 27 Clause 2 1986	0.2
46	Fluorides as F	mg/l	0.96	APHA 23 rd Edn. 4500 D-F Spadns method: 2017	2
47	Free Residual Chlorine	mg/l	BLQ (LOQ 0.1)	IS 3025 (Part 26) Clause 5 2021	-
48	Hexavalent Chromium as Cr6+	mg/l	BLQ (LOQ 0.05)	IS 3025 (Part 52) Clause 6 2003	1
49	Oil and grease	mg/l	BLQ (LOQ 4.0)	IS : 3025 (Part 39) Clause 5 2021	10
50	pH value @ 25 °C	-	6.20	IS 3025 (Part 11) Clause 2 2022	5.5 to 9.0
51	Phenolic compound	mg/l	BLQ (LOQ 0.01)	IS 3025 (Part 43) Clause 5 1992	1
52	Dissolved Phosphate as P	mg/l	BLQ (LOQ 0.1)	APHA 23 rd Edn. 4500 P-B,D 2017	5
53	Residual Sodium Carbonate	mEq/L	BLQ (LOQ 0.1)	IS:11624 1986	NA
54	Sulphate as SO42-	mg/l	529.6	IS:3025 (Part 24) Clause 4 1986	1000
55	Sulphide as S2-	mg/l	BLQ (LOQ 1.0)	IS 3025 (Part 29) Clause 2 1986	2
56	Temperature	°C	27.2	IS:3025 (Part 09) 1984	40°C
57	Total dissolved solids @ 180° C	mg/l	40324.0	IS 3025 (Part 16) 1984	-



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TC-12310

Laboratory Services Division

(Chemical & Biological Testing)
FSSAI Notified Laboratory
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TEST REPORT

Page : 6 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000016078F
Report No. : HECS/PE/049/050424
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPSB Limits *
58	Total Kjeldahl Nitrogen as N	mg/l	6.0	IS 3025 (Part 34) Clause 5.3 1988	100
59	Total suspended solids @ 105° C	mg/l	4.0	IS: 3025 (Part 17) 1984	100

Note:- BLQ-Below limit of Quantification, LOQ-Limit of Quantification, mg/l-milligrams per litre ,

* - Marine Coastal Areas.

Remarks:- Treated Effluent Water as above parameters meets TNPSB Standards.

End of Report



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TEST REPORT

Page : 1 of 1

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : ETP Treated Water
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

Report No. : HECS/PE/049/050424/N
Sample ID No : 050424222
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/04/2024
Report Date : 11/04/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits *
Discipline : Chemical					
1	Alphamethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
2	Cypermethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
3	Deltamethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
4	Permethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	Absent
5	Mercury	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	0.01
6	Lead	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	0.1
7	Alpha Emitters	microcurie/ml	BLQ(LOQ 0.000000001)	IS 14194 (Part-2)-1994	0.0000001
8	Beta emitters	microcurie/ml	BLQ(LOQ 0.000000001)	IS 14194 (Part -1)-1994	0.000001

Note:- BLQ-Below limit of Quantification, LOQ-Limit of Quantification, mg/l-milligrams per litre ,

* - Marine Coastal Areas.

Remarks:- Treated Effluent Water as above parameters meets TNPCB Standards.

End of Report




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**TEST REPORT**

Page : 1 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : STP Outlet
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F
Report No. : HECS/PE/055/050424
Sample ID No : 050424316
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
Discipline : Chemical					
Pesticides					
1	Alachlor	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
2	Aldrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
3	Alpha BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
4	Atrazine	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
5	Beta BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
6	Butachlor	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
7	Chloropyrifos	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
8	Delta BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
9	Dieldrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-



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**TEST REPORT**

Page : 2 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Pollution & Environment

Sample Name : Waste Water

Sample Mark : STP Outlet

Sample Reference : NA

Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.

Sample Location : NA

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F

Report No. : HECS/PE/055/050424

Sample ID No : 050424316

Sampling Date : 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 11/05/2024

Report Date : 11/05/2024

Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
10	Endosulfan alpha	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
11	Endosulfan beta	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
12	Endosulfan sulfate	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
13	Ethion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
14	Gamma BHC	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
15	Malathion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
16	o,p-DDD	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
17	o,p-DDE	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
18	o,p-DDT	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-

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TEST REPORT

Page : 3 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : STP Outlet
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F
Report No. : HECS/PE/055/050424
Sample ID No : 050424316
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
19	p,p'-DDD	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
20	p,p'-DDE	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
21	p,p'-DDT	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
22	Parathion-methyl	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
23	Phorate	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
24	2,4-D	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
25	Isoproturon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
26	Malaoxon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
27	Methyl Paraoxon	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
28	Methyl Parathion	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-



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TEST REPORT

Page : 4 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : STP Outlet
Sample Reference : NA
Sample Drawn By : M/s.Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F
Report No. : HECS/PE/055/050424
Sample ID No : 050424316
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
29	Monocrotophos	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
30	Phorate Sulfone	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
31	Phorate Sulfoxide	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021	-
32	Arsenic	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 Revision 5.4: 1994	-
33	Cadmium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	-
34	Chromium	mg/l	BLQ (LOQ: 0.01)	USEPA 200.8 Revision 5.4: 1994	-
35	Copper	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	-
36	Nickel	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	-
37	Selenium	mg/l	BLQ (LOQ: 0.005)	USEPA 200.8 Revision 5.4: 1994	-
38	Zinc	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994	-
39	Ammonia as NH3	mg/l	1.59	IS 3025 (Part 34) Clause 2.3 1988	-
40	Ammonical Nitrogen as NH3-N	mg/l	1.32	IS 3025 (Part 34) Clause 2.5 1988	-
41	Bio-Chemical Oxygen Demand(BOD) 3 days @27 ° C	mg/l	4.0	IS 3025 (Part 44) 1993	10



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**TEST REPORT**

Page : 5 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,

Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.

Group : Pollution & Environment

Sample Name : Waste Water

Sample Mark : STP Outlet

Sample Reference : NA

Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.

Sample Location : NA

Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0

Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F

Report No. : HECS/PE/055/050424

Sample ID No : 050424316

Sampling Date : 05/04/2024

Received Date : 05/04/2024

Commenced Date : 05/04/2024

Completed On : 11/05/2024

Report Date : 11/05/2024

Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
42	Boron as B	mg/l	BLQ (LOQ 0.1)	IS 3025 (Part 57) Clause 6 2021	-
43	Calcium as Ca	mg/l	88.0	IS 3025 (Part 40) Clause 5 1991	-
44	Chemical Oxygen Demand (COD)	mg/l	20.0	IS 3025 (Part 58) 2006	50
45	Chloride as Cl-	mg/l	246.9	IS 3025 (Part 32) Clause 2 1988	-
46	Cyanide as CN	mg/l	BLQ (LOQ 0.01)	IS 3025 Part 27 Clause 2 1986	-
47	Fluorides as F	mg/l	BLQ (LOQ 0.1)	APHA 23 rd Edn. 4500 D-F Spadns method: 2017	-
48	Free Residual Chlorine	mg/l	BLQ (LOQ 0.1)	IS 3025 (Part 26) Clause 5 2021	-
49	Hexavalent Chromium as Cr6+	mg/l	BLQ (LOQ 0.05)	IS 3025 (Part 52) Clause 6 2003	-
50	Oil and grease	mg/l	BLQ (LOQ 4.0)	IS : 3025 (Part 39) Clause 5 2021	-
51	pH value @ 25 °C	-	7.86	IS 3025 (Part 11) Clause 2 2022	5.5-9.0
52	Phenolic compound	mg/l	BLQ (LOQ 0.01)	IS 3025 (Part 43) Clause 5 1992	-
53	Dissolved Phosphate as P	mg/l	0.42	APHA 23 rd Edn. 4500 P-B,D 2017	-
54	Residual Sodium Carbonate	mEq/L	BLQ (LOQ 0.1)	IS:11624 1986	-
55	Sulphate as SO42-	mg/l	386.4	IS:3025 (Part 24) Clause 4 1986	-
56	Sulphide as S2-	mg/l	BLQ (LOQ 1.0)	IS 3025 (Part 29) Clause 2 1986	-
57	Temperature	°C	26.8	IS:3025 (Part 09) 1984	-



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TEST REPORT

Page : 6 of 6

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,
Address of the Client : PO Plant, Manali Express High Way,
Manali, Chennai - 600068.
Group : Pollution & Environment
Sample Name : Waste Water
Sample Mark : STP Outlet
Sample Reference : NA
Sample Drawn By : M/s. Hubert Enviro care Systems (P) Ltd.
Sample Location : NA
Environmental Condition : Temperature (°C) : 32.0 | Humidity (%) : 56.0
Sampling Method & Plan : IS 17614(Part-10):2021

ULR : TC1231024000021110F
Report No. : HECS/PE/055/050424
Sample ID No : 050424316
Sampling Date : 05/04/2024
Received Date : 05/04/2024
Commenced Date : 05/04/2024
Completed On : 11/05/2024
Report Date : 11/05/2024
Sample quantity : 2 Litres

S.No.	Test Parameters	Units	Results	Test Method	TNPCB Limits*
58	Total dissolved solids @ 180° C	mg/l	1980.0	IS 3025 (Part 16) 1984	-
59	Total Kjeldahl Nitrogen as N	mg/l	2.03	IS 3025 (Part 34) Clause 5.3 1988	-
60	Total suspended solids @ 105° C	mg/l	12.0	IS: 3025 (Part 17) 1984	20

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, mg/l - Milligrams per liter.

*-Mega and Metropolitan Cities as per Standards for STP Outlet.

Remarks:- Treated Effluent Water as above parameters meets TNPCB Standards.

End of Report



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TEST REPORT

Page : 1 of 2

Name of the Client	: M/s. TamilNadu Petroproducts Ltd.,	Report No.	: HECS/PE/055/050424/N
Address of the Client	: PO Plant, Manali Express High Way, Manali, Chennai - 600068.	Sample ID No	: 050424316
Group	: Pollution & Environment	Sampling Date	: 05/04/2024
Sample Name	: Waste Water	Received Date	: 05/04/2024
Sample Mark	: STP Outlet	Commenced Date	: 05/04/2024
Sample Reference	: NA	Completed On	: 11/05/2024
Sample Drawn By	: M/s.Hubert Enviro care Systems (P) Ltd.	Report Date	: 11/05/2024
Sample Location	: NA	Sample quantity	: 2 Litres
Environmental Condition	: Temperature (°C) : 32.0 Humidity (%) : 56.0		
Sampling Method & Plan	: IS 17614(Part-10):2021		

S.No.	Test Parameters	Units	Results	Test Method
Discipline : Chemical				
1	Alphamethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021
2	Cypermethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021
3	Deltamethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021
4	Permethrin	mg/L	BLQ (LOQ: 0.0001)	HECSG/INS/SOP/032 Issue No.:01 Issue Date:01.03.2021
5	Mercury	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994
6	Lead	mg/l	BLQ (LOQ: 0.1)	USEPA 200.8 Revision 5.4: 1994
7	Alpha Emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part-2)-1994
8	Beta emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part -1)-1994

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, mg/l - Milligrams per liter.

*-Mega and Metropolitan Cities as per Standards for STP Outlet.

Remarks:- Treated Effluent Water as above parameters meets TNPCB Standards.

End of Report




D. Anusuya
Deputy Quality Manager
Authorized Signatory

CORPORATE SOCIAL RESPONSIBILITY

Primary Health Care Centre is provided at Sadayankuppam Village, Kannampalayam & Seemavaram, Manali by AM Foundation on behalf of **Tamilnadu Petroproducts Limited** under its CSR project and Inaugurated.







