



# Tamilnadu Petroproducts Limited

Ref: TPL – PO/ 2023/15

01<sup>st</sup> June- 2023

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 2022 to March-2023 - reg.**

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

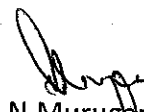
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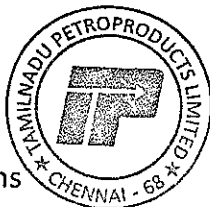
This has reference to the Environmental Clearance obtained from MoEF, New Delhi for product mix change an existing ECH plant located at Manali, Chennai.

We herewith attach the EC compliance status report for the period from October 2022 to March 2023 for your kind reference.

Thanking you,

Yours faithfully,  
For Tamilnadu Petroproducts Limited

  
N. Murugan  
AVP – Operations



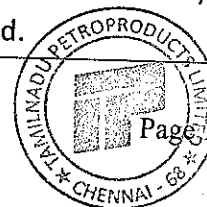
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Website : www.tnpetro.com CIN : L23200TN1984PLC010931  
TPL GSTIN : 33AAACT1295M126

**Environmental Clearance Compliance Status Report**  
**For the period from October 2022 to March 2023**

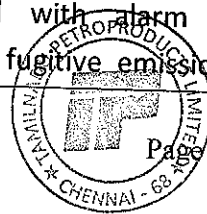
**Ref : No. J – 11011/280/2013 – IA.II(I) dated 15.05.2015**

**( 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"> <li>• Measuring concentration of circulating caustic and vent gas emission level.</li> <li>• Caustic solution is replenished when there is a depletion of level.</li> <li>• It is also replaced, whenever the concentration goes below the limit.</li> </ul> <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 PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, Cl<sub>2</sub>, 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"> <li>• 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.</li> <li>• Ambient Air Quality (AAQ) is being monitored at 2 locations for the parameters such as PM<sub>2.5</sub>, PM<sub>10</sub>, SO<sub>2</sub>, CO, NO<sub>x</sub>, Ammonia, Chlorine by internal lab once in a week.</li> <li>• Stack emissions are monitored through accredited lab, once in 6 months basis.</li> <li>• 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.</li> <li>• The real time data are also displayed near the main gate of the company.</li> <li>• The monitored data are uploaded on the company's website and also being updated periodically.</li> <li>• 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.</li> </ul>
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"> <li>• HC and Chlorine detectors are provided with alarm system to monitor fugitive emission regularly</li> </ul>



	<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"> <li>• Raw material Propylene is stored in bullets with sensors/detectors.</li> <li>• Chlorine is received through pipeline from the adjacent Heavy Chemicals Division of the same company, thereby avoiding any potential emissions while handling Cylinders</li> <li>• Propylene Oxide (PO) and Chlorinated Organics are stored in closed tanks with sensors/detectors and handled in closed pipelines.</li> <li>• Lime (bags) is stored in a closed shed.</li> <li>• Water sprinkling is being carried out at lime Loading and unloading area for dust suppression.</li> <li>• Ambient Air Quality (AAQ) is monitored for Chlorine and VOC manually at 2 locations through accredited lab.</li> <li>• Chlorine in the Ambient Air is monitored at 2 locations by internal lab once in a week.</li> <li>• 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</li> </ul>
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>

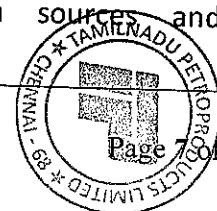
		Ambient Noise level is monitored manually by internal lab once in a month.
v	Leak Detection and Repair programme shall be prepared and implemented to control HC/VOC emissions. Focus shall be given to prevent fugitive emissions for which preventive maintenance of pumps, valves, pipelines are required. 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"> <li>• Leak Detection And Repair (LDAR) programme is prepared and is being implemented to control HC/VOC emissions.</li> <li>• LDAR survey is being carried out through accredited laboratory once in a year.</li> <li>• LDAR survey was conducted through M/s. Hubert Enviro Care System (P) Ltd, Chennai in March-2023.</li> <li>• Preventive maintenance for Pumps are carried out once in six months.</li> <li>• Preventive maintenance for Valves and pipelines are carried out once in a year</li> <li>• Proper maintenance and preventive checks for mechanical seals of pumps and valves are carried out once in six months by internal team.</li> <li>• VOC detectors are installed at Product Storage Yard (Propylene Oxide and Propylene Storage tanks area) to monitor fugitive emission continuously.</li> <li>• VOC detectors/sensors are provided in the work zone environment, Product, Raw materials storage area for continuous monitoring.</li> <li>• Proper maintenance program is developed &amp; implemented to protect equipment from ageing.</li> </ul>



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 &amp; 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 <sup>3</sup> /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 &amp; has not exceeded 1650 m<sup>3</sup>/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. 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. 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 &amp; Onsite emergency plan is maintained to mitigate, in case of any emergency.</p>
xi	<p>The company shall strictly comply with the rules &amp; 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 &amp; 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	<p>All the recommendations made in the risk assessment report should be satisfactorily implemented.</p>	<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"> <li>• Nitrogen gas padding is provided in propylene oxide storage and during transfer to prevent air entering the system and forming explosive mixture.</li> <li>• Remote operated shut off valve is provided at inlet of reactor feed line to cut off chlorine, in case of emergency.</li> <li>• Manual isolation at Heavy Chemicals Division and automatic shutoff valve at PO plant are provided in the chlorine pipelines.</li> <li>• Medium velocity sprinkler system is provided to propylene oxide and propylene storage bullets.</li> <li>• Dyke is provided in the storage area to contain spill.</li> <li>• Fencing is provided with security, to the entire storage area.</li> <li>• Entry is restricted to 50 m from the storage area and being ensured.</li> <li>• The area around the storage is free of ignition sources and other hazards.</li> </ul>





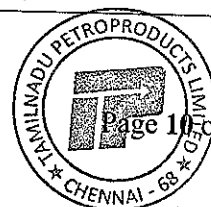
		<ul style="list-style-type: none"> <li>• Sensors with alarm systems are provided in the storage bullets</li> <li>• Fire hydrant system is provided throughout the storage area.</li> <li>• Regular mock drill is being conducted.</li> <li>• Onsite emergency plan is available and recommendations are being implemented.</li> </ul>
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 m<sup>2</sup> (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.

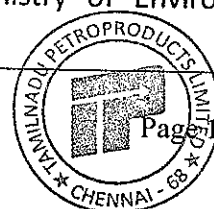


	(Protection) Act 1989 viz 75 dBA (day time) and 70 dBA (night time)	The ambient noise levels are within the prescribed standards of 75 dBA (day time) and 70 dBA (night time).
v	The company shall harvest rainwater from the roof tops of the buildings and storm water drains to recharge the ground water 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"> <li>• Mechanical workshop</li> <li>• Fire water pump house</li> <li>• Raw Water Pump house</li> </ul> <p>Area covered is 5000 m<sup>2</sup>.</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>



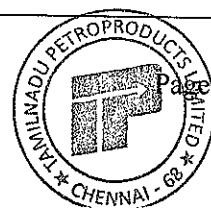
	and public hearing relating to the project shall be implemented.	<p>management and risk assessment report are being implemented regularly.</p> <ul style="list-style-type: none"> <li>• Nitrogen gas padding is provided in propylene oxide storage and during transfer, to prevent air entering the system and forming explosive mixture.</li> <li>• Remote operated shut off valve is provided at inlet of reactor feed line to cut off chlorine, in case of emergency.</li> <li>• Manual isolation at HCD plant and automatic shutoff valve at ECH plant are provided in the chlorine pipelines.</li> <li>• Medium velocity sprinkler system is provided to propylene oxide and propylene storage bullets.</li> <li>• Dyke is provided in the storage area to contain spill.</li> <li>• Fencing is provided with security, to the entire storage area.</li> <li>• Entry is restricted to 50 m from the storage area and being ensured.</li> <li>• The area around the storage is free of ignition sources and other hazards.</li> <li>• Sensors with alarm systems are provided in the storage bullets</li> <li>• Fire hydrant system is provided throughout the storage area</li> <li>• Regular mock drill is being conducted.</li> <li>• Onsite emergency plan is available and recommendations are being implemented.</li> </ul>
ix	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding	<p><b>Being Complied</b></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><b>1) Primary Health Care Centre (PHCC)</b> 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"> <li>• PHCC is provided at Sadayan Kuppam village, Manali</li> <li>• PHCC is provided at Vichoor village, Manali.</li> <li>• PHCC is provided at Periyasekkadu, Manali.</li> <li>• Mobile PHCC is provided.</li> </ul> <p><b>2) Rest Rooms were constructed at the following locations.</b></p> <ul style="list-style-type: none"> <li>• Government high school at Manali New Town.</li> <li>• Government high school at Redhills.</li> <li>• Government high school at Vichoor.</li> <li>• Government high school at Padiyanallur</li> </ul>
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 and Forests as well as the State Government along with the	<p>Complied</p> <p>Adequate funds towards capital cost and recurring cost/annum are allocated to implement the conditions stipulated by the Ministry of Environment and</p>

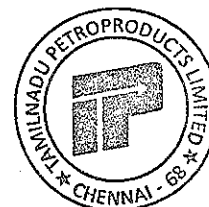


TPL – ECH – PO Plant - EC Compliance Report

	implementation schedule for all the conditions stipulated herein.	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 <sup>st</sup> 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 subsequently shall also be put on the	Complied The environmental statement (Form V) is being submitted to TNPCB once in a year before 30 <sup>th</sup> Sep every year. Environmental statement (Form V) for the year 2021 – 2022 was submitted on 22.09.2022.



	<p>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.</p>	<p>Further, a copy of Form V is uploaded in the company's website. (<a href="http://www.tnpetro.com">www.tnpetro.com</a>)</p> <p>The six-monthly compliance status including results of monitored data is being submitted to MOEF Regional Office through e-mail regularly.</p>
xvi	<p>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 <a href="http://envfor.nic.in">http://envfor.nic.in</a>. 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.</p>	<p>Complied</p> <p>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.</p>
xvii	<p>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.</p>	<p>Complied</p> <p>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&amp;CC.</p>





# TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

## AMBIENT AIR QUALITY SURVEY – Report of Analysis

Report No. 81/AAQS/2022-23

Date: 28.10.2022

1. Name of the Industry : M/s. TPL (ECH),
2. Address of the Industry : Manali Express Highway, Manali, Chennai - 68.
3. Date of Survey : 12.10.2022
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 (°C)	Min	Max	Relative Humidity (%)	Min	Max
	30	32		62	84
Weather Condition	Partially Cloudy		Rain Fall (mm)	Nil	
Predominant Wind Direction	SE-NW		Mean Wind Speed (km/hr)	13.4	

### Ambient Air Quality Survey Results

Sl. No.	Location	Direction *	Distance (m) *	Height From GL (m)	Pollutants Concentration (microgram / m <sup>3</sup> )				
					PM 2.5	PM 10	SO <sub>2</sub>	NO <sub>2</sub>	Cl <sub>2</sub>
1	On top of platform near CP Station II	NE	150	3.0	28	58	9	13	BDL
2	On top of platform near Propylene Oxide Filling Point	E	280	3.0	--	54	8	12	BDL
3	On top of platform near STP (Gate No 5)	SE	700	3.0	--	52	7	10	BDL
4	On top of platform near ERC Building (Gate No 3)	SW	200	3.0	21	63	10	14	BDL
5	On top of platform near Flare Area	NW	240	3.0	--	66	11	15	BDL

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

T. Jhamaralee 28.10.22

Deputy Chief Scientific Officer,  
District Environmental Laboratory  
Tamil Nadu Pollution Control Board  
Manali

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





**TAMIL NADU POLLUTION CONTROL BOARD**  
**DISTRICT ENVIRONMENTAL LABORATORY – MANALI**

**TVOC Survey – Report of Analysis**

**Report No. 81 /TVOC/2022-23**

**dated 28.10.2022**

1. Name of the Industry : **M/s. TPL (ECH)**
2. Address of the Industry : **Manali Express Highway, Chennai - 68**
3. Date of Survey : **12.10.2022**
4. Pollution Category : **Red Large**

**TVOC – Analysis Report**

Sl.No.	Location	Direction	Distance (mts)	TVOC ( $\mu\text{g}/\text{m}^3$ )
1	Near CP Station II	NE	150	476
2	Near Propylene Oxide Filling Point	E	280	410
3	Near STP (Gate No.5)	SE	700	430
4	Near ERC Building (Gate No 3)	SW	200	498
5	Near Flare Area	NW	240	586

**T. Jhamarajee** 28.10.22  
Deputy Chief Scientific Officer,  
District Environmental Laboratory  
Tamil Nadu Pollution Control Board  
Manali



## **TAMIL NADU POLLUTION CONTROL BOARD**

District Environmental Laboratory, Manali

### **STACK MONITORING SURVEY – Report of Analysis**

**Report No. 81/AAQS/2022-23**

**Date: 28.10.2022**

1. Name of the Industry : **M/s. TPL (ECH),**  
2. Address of the Industry : **Manali Express Highway, Manali, Chennai – 68**  
3. Date of Survey : **12.10.2022**  
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 <sup>3</sup> /hr	Pollutants (mg / Nm <sup>3</sup> )			
						PM	SO <sub>2</sub>	NO <sub>x</sub>	Cl <sub>2</sub>
1	Boiler 12.5 T	LNG	435	9.7	7836	2	BDL	24	-
2	Vent Gas Scrubber	--	309	8.2	757	2	-	-	2

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

*T. Jhamarai* 28.10.22  
Deputy Chief Scientific Officer,  
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. 81/NLS/2022-23**

**Date: 28.10.2022**

No. 61/ NLS/2022-23		Date: 28.10.2022	
1.	Name of the Industry	M/s. TPL (ECH)	
2.	Address of the Industry	Manali Express Highway, Manali, Chennai - 68	
3.	Date of Survey	12.10.2022	
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	
Logging Interval		10 Minutes each point		T243103	
Weighting	"A"	Peak Weighting	"C"	Measuring Range	50-110 dB(A)
				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 <sub>eq</sub>	Min	Max
1	Near CP Station II	10	150	NE	60.6	57.3	65.2
2	Near Propylene Oxide Filling Point	10	280	E	59.7	55.1	65.7
3	Near STP (Gate No.5)	10	700	SE	57.8	55.5	68.3
4	Near ERC Building (Gate No 3)	10	200	SW	64.0	57.1	70.1
5	Near Flare Area	10	240	NW	53.2	48.7	60.7

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

*T. Jhamarajee*  
28.10.22  
Deputy Chief Scientific Officer,  
District Environmental Laboratory  
Tamil Nadu Pollution Control Board  
Manali

**Hubert Enviro Care Systems (P) Ltd.**

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

**Laboratory Services Division**

(Chemical & Biological Testing)  
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.

Report No. : HECSL/AA/005/220323

Report Date : 28/03/2023

Sample Description : Ambient Air Quality  
Sampling Location : Near Main Gate  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

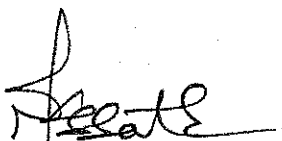
Completed On : 27/03/2023

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	$\mu\text{g}/\text{m}^3$	13.52	IS 5182 (Part - 2) : 2001	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	$\mu\text{g}/\text{m}^3$	24.61	IS 5182 (Part - 6) : 2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 $\mu\text{m}$	$\mu\text{g}/\text{m}^3$	55.73	IS 5182 (Part - 23) : 2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 $\mu\text{m}$	$\mu\text{g}/\text{m}^3$	24.06	IS 5182 (Part - 24) : 2019	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	$\text{mg}/\text{m}^3$	BLQ(LOQ 0.05)	IS 5182 (Part - 10) : 1999	4 (1 hours)	2 (8 hours)
6	Lead	$\mu\text{g}/\text{m}^3$	BLQ(LOQ 0.05)	HECS-G/INS/SOP/ 041	1 (24 hours)	0.5 (Annual)
7	Ozone	$\mu\text{g}/\text{m}^3$	12.51	IS 5182 (Part - 9) : 1974	180 (1 hours)	100 (8 hours)
8	Ammonia	$\mu\text{g}/\text{m}^3$	8.05	IS 5182 (Part - 25) : 2018	400 (24 hours)	100 (Annual)
9	Benzene	$\mu\text{g}/\text{m}^3$	BLQ(LOQ 1)	IS 5182 (Part - 11) : 2006	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	$\text{ng}/\text{m}^3$	BLQ(LOQ 1)	IS 5182 (Part - 12) : 2004	1 (Annual)	1 (Annual)
11	Arsenic	$\text{ng}/\text{m}^3$	BLQ(LOQ 2)	HECS-G/INS/SOP/041	6 (Annual)	6 (Annual)
12	Nickel	$\text{ng}/\text{m}^3$	BLQ(LOQ 10)	HECS-G/INS/SOP/041	20 (Annual)	20 (Annual)
13	Suspended Particulate Matter	$\mu\text{g}/\text{m}^3$	79.09	IS: 5182 (P-4) 1999	NA	NA

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification,  $\mu\text{g}/\text{m}^3$ - Micrograms per cubic meter,  $\text{mg}/\text{m}^3$ -Milligrams per cubic meter,  $\text{ng}/\text{m}^3$ -Nanograms per cubic meter, NA -Not Applicable.

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

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

  
Verified By



  
Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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HECS-G/Q/FMT/49

**Hubert Enviro Care Systems (P) Ltd.**

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E-mail : labsales@hecs.in

**Laboratory Services Division**

(Chemical &amp; Biological Testing)

ISO 9001, 14001 &amp; 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.

Report No. : HECSL/AA/008/220323

Report Date : 28/03/2023

Sample Description : Ambient Air Quality  
Sampling Location : Near Plant Area  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

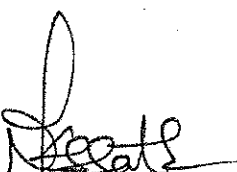
Completed On : 27/03/2023

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m³	11.52	IS 5182 (Part - 2) : 2001	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m³	23.04	IS 5182 (Part - 6) : 2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m³	48.24	IS 5182 (Part - 23) : 2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m³	21.68	IS 5182 (Part - 24) : 2019	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m³	BLQ(LOQ 0.05)	IS 5182 (Part - 10) : 1999	4 (1 hours)	2 (8 hours)
6	Lead	µg/m³	BLQ(LOQ 0.05)	HECS-G/INS/SOP/ 041	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m³	11.72	IS 5182 (Part - 9) : 1974	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m³	6.50	IS 5182 (Part - 25) : 2018	400 (24 hours)	100 (Annual)
9	Benzene	µg/m³	BLQ(LOQ 1)	IS 5182 (Part - 11) : 2006	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m³	BLQ(LOQ 1)	IS 5182 (Part - 12) : 2004	1 (Annual)	1 (Annual)
11	Arsenic	ng/m³	BLQ(LOQ 2)	HECS-G/INS/SOP/041	6 (Annual)	6 (Annual)
12	Nickel	ng/m³	BLQ(LOQ 10)	HECS-G/INS/SOP/041	20 (Annual)	20 (Annual)
13	Suspended Particulate Matter	µg/m³	69.92	IS: 5182 (P-4) 1999	NA	NA


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\*\*\*

  
Verified By



  
Authorized Signatory  
**SIVAPRAKASAM. M**  
Lab Manager

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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.

Report No. : HECSL/ST/013/220323

Report Date : 28/03/2023

Sample Description : Stack Emission  
Sample Mark : Chlorine Scrubber  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 - 22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

S.No.	Parameters	Units	Results	Test Method
1	Chlorine	mg/Nm <sup>3</sup>	2.1	HECS/AIR/STACK/SOP026

Note:- mg/Nm<sup>3</sup>- Milligrams per Normal cubic meter.

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

Verified By



Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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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.

Report No. : HECSL/ST/018/220323  
Report Date : 28/03/2023

Sample Description : Stack Emission  
Sample Mark : Boiler Stack  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 - 22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On: 27/03/2023

S.No.	Parameters	Units	Results	Test Method	CPCB Standards
1	Particulate Matter	mg/Nm <sup>3</sup>	8.50	IS 11255 (Part-1) 1985	Max 10
2	Sulphur Dioxide	mg/Nm <sup>3</sup>	11.59	IS 11255 (Part-2) 1985	Max 50
3	Oxides of Nitrogen	mg/Nm <sup>3</sup>	96.22	ASTM Method D6522: 2000	Max 350
4	Carbon monoxide	%V/V	10.42	ASTM Method D6522: 2000	Max 150
5	Hydrocarbon	mg/Nm <sup>3</sup>	BLQ(LOQ 1)	HECS-G/INS/SOP/019	NA
6	Non - Methane Hydro Carbon(NMHC)	mg/Nm <sup>3</sup>	BLQ(LOQ 0.1)	USEPA Method 25:1991	NA

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, Nm<sup>3</sup>/hr - Normal cubic meter per hour, mg/Nm<sup>3</sup>- Milligrams per Normal cubic meter, % V/V - Percentage, °C- Degree Celsius, NA - Not Applicable.

Values Corrected to 3% Oxygen.

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

  
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**SIVAPRAKASAM. M**  
Lab Manager

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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.

Report No. : HECSL/WT/074/090323

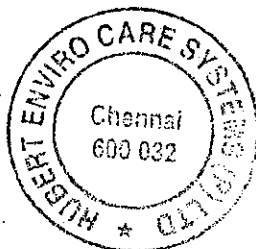
Report Date : 15/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:1  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On : 14/03/2023

S.No.	Parameters	Units	Results	Test Method
1	pH (at 25 °C)	-	7.63	IS 3025 (Part - 11):2022
2	Electrical conductivity at 25 °C	µS/cm	6300.0	IS 3025 (Part - 14):2013
3	Colour	Hazen Unit	5.0	IS 3025(Part - 4):2021
4	Turbidity	NTU	48.2	IS 3025(Part - 10):1984
5	Odour	-	Agreeable	IS 3025 (Part - 5):2018
6	Taste	-	Disagreeable	IS 3025 (Part - 8):1984
7	Total Hardness as CaCO <sub>3</sub>	mg/l	1040.0	IS 3025 (Part - 21):1983
8	Calcium as Ca	mg/l	208.41	IS 3025 (Part - 40):1991
9	Total Alkalinity as CaCO <sub>3</sub>	mg/l	540.0	IS 3025 (Part - 23):1986
10	Chloride as Cl	mg/l	1454.95	IS 3025 (Part - 32):1988
11	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):2021
12	Magnesium as Mg	mg/l	126.36	IS 3025 (Part - 59):2006
13	Total Dissolved Solids	mg/l	3291.0	IS 3025(Part-16):1984
14	Sulphate as SO <sub>4</sub>	mg/l	388.07	IS 3025(Part - 24):1986
15	Fluoride	mg/l	0.51	IS 3025 (Part - 60):2008
16	Nitrate as NO <sub>3</sub>	mg/l	8.52	IS 3025 (Part 34) Sec -3: 2021
17	Iron as Fe	mg/l	5.17	IS 3025 (Part - 53):2003
18	Aluminium as Al	mg/l	BLQ(LOQ 0.01 )	IS 3025 (Part - 55):2003
19	Zinc as Zn	mg/l	BLQ(LOQ 0.01 )	USEPA Method 200.8:1994
20	Copper as Cu	mg/l	BLQ(LOQ 0.01 )	USEPA Method 200.8:1994
21	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994
22	Cadmium as Cd	mg/l	BLQ(LOQ 0.001 )	USEPA Method 200.8:1994
23	Lead as Pb	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994
24	Arsenic as As	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994

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SIVAPRAKASAM. M  
Lab Manager

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HECS-G/Q/FMT/49



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**Laboratory Services Division**

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

**TEST REPORT**

Page : 2 of 2

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,  
Address of the Client : PO Plant, Manali Express High Way,  
Manali, Chennai - 600068.

Report No. : HECSL/WT/074/090323  
Report Date : 15/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:1  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On : 14/03/2023

S.No.	Parameters	Units	Results	Test Method
25	Mercury as Hg	mg/l	BLQ(LOQ 0.0005)	USEPA Method 200.8:1994
26	Sodium as Na	mg/l	712.0	IS3025 (Part - 35):1988
27	BOD,3 days @27°C as O2	mg/l	6.0	IS 3025 (Part - 44):1993
28	Chemical oxygen demand as O2	mg/l	48.0	IS 3025 (Part - 58):2006
29	Temperature	°C	28.7	IS 3025 (Part - 9):1984
30	Dissolved oxygen	mg/l	6.2	IS 3025 (Part - 38):1989
31	Salinity	ppt	2.63	2520 A APHA 23rd Edn. 2017
32	Total Chromium	mg/l	0.038	USEPA Method 200.8 : 1994

Note :- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, NTU- Nephelometric Turbidity Unit,  
°C - Degree Celsius, mg/l- Milligrams per litre.

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

  
Verified By



  
Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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HECS-G/Q/FMT/49

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**Laboratory Services Division**

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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.

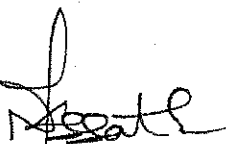
Report No. : HECSL/MB/070/090323  
Report Date : 13/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:1  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 - 09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On : 10/03/2023

S.No.	Parameters	Units	Results	Test Method
1	Total Coliforms	Per 100ml	Absent	IS 1622
2	Faecal coliform	Per 100ml	Absent	IS 1622

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



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Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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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.

Report No. : HECSL/WT/077/090323

Report Date : 15/03/2023

Sample Description : WATER  
Sample Mark : RO Drinking Water - Canteen  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On: 14/03/2023

S.No.	Parameters	Units	Results	Test Method	IS:10500-2012	
					Acceptable Limits	Permissible Limits
1	pH (at 25 °C)	-	7.16	IS 3025 (Part - 11):2022	6.5 - 8.5	No relaxation
2	Colour	Hazen Unit	BLQ(LOQ:1.0)	IS 3025(Part - 4):2021	5	15
3	Turbidity	NTU	BLQ(LOQ:0.1)	IS 3025(Part - 10):1984	1	5
4	Odour	-	Agreeable	IS 3025 (Part - 5):2018	Agreeable	Agreeable
5	Taste	-	Agreeable	IS 3025 (Part - 8):1984	Agreeable	Agreeable
6	Total Hardness as CaCO <sub>3</sub>	mg/l	2.0	IS 3025 (Part - 21):2009	200	600
7	Calcium as Ca	mg/l	BLQ(LOQ:1.0)	IS 3025 (Part - 40):1991	75	200
8	Total Alkalinity as CaCO <sub>3</sub>	mg/l	8.0	IS 3025 (Part - 23):1986	200	600
9	Chloride as Cl	mg/l	10.39	IS 3025 (Part - 32):1988	250	1000
10	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):2021	0.2	1
11	Magnesium as Mg	mg/l	BLQ(LOQ:1.0)	IS 3025 (Part - 46) 1994	30	100
12	Total Dissolved Solids	mg/l	25.0	IS 3025(Part-16):1984	500	2000
13	Sulphate as SO <sub>4</sub>	mg/l	1.08	IS 3025(Part - 29):2017	200	400
14	Fluoride	mg/l	BLQ(LOQ:0.2)	IS 3025 (Part - 60):2008	1.0	1.5
15	Nitrate as NO <sub>3</sub>	mg/l	1.22	IS 3025 (Part 34) Sec -3: 2021	45	No Relaxation
16	Iron as Fe	mg/l	BLQ(LOQ:0.01)	IS 3025 (Part - 53):2003	1.0	No Relaxation
17	Aluminium as Al	mg/l	BLQ(LOQ 0.01)	IS 3025 (Part - 55):2003	0.03	0.2
18	Zinc as Zn	mg/l	BLQ(LOQ 0.01)	USEPA Method 200.8:1994	5	15
19	Copper as Cu	mg/l	BLQ(LOQ 0.01)	USEPA Method 200.8:1994	0.05	1.5
20	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994	0.1	0.3
21	Cadmium as Cd	mg/l	BLQ(LOQ 0.001)	USEPA Method 200.8:1994	0.003	No Relaxation

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Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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HECS-G/Q/FMT/49

**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)

ISO 9001, 14001 & 45001 Certified.

**TEST REPORT**

Page : 2 of 2

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,  
Address of the Client : PO Plant, Manali Express High Way,  
Manali, Chennai - 600068.

Report No. : HECSL/WT/077/090323

Report Date : 15/03/2023

Sample Description : WATER  
Sample Mark : RO Drinking Water - Canteen  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On: 14/03/2023

S.No.	Parameters	Units	Results	Test Method	IS:10500-2012	
					Acceptable Limits	Permissible Limits
22	Lead as Pb	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994	0.01	No Relaxation
23	Arsenic as As	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994	0.01	0.05
24	Mercury as Hg	mg/l	BLQ(LOQ 0.0005)	USEPA Method 200.8:1994	0.001	No Relaxation
25	Total Chromium	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8 : 1994	0.05	No Relaxation

Note :- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, NTU- Nephelometric Turbidity Unit, mg/l- Milligrams per litre, NA -Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of Drinking Water Standards IS: 10500:2012.

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Lab Manager

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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.

Report No. : HECSL/MB/073/090323

Report Date : 13/03/2023

Sample Description : WATER  
Sample Mark : RO Drinking Water - Canteen  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

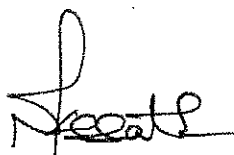
Completed On : 10/03/2023

S.No.	Parameters	Units	Results	Test Method	IS:10500-2012	
					Acceptable Limits	Permissible Limits
1	Total Coliforms	Per 100ml	Absent	IS 15185:2016	Absent/100 ml	NA
2	Escherichia coli	Per 100ml	Absent	IS 15185:2016	Absent/100 ml	NA


Note:-NA - Not Applicable.

Remarks: The Tested Parameters as above are within the Limits of Drinking Water Standards IS:10500:2012.

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

  
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Lab Manager

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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.

Report No. : HECSL/WW/023/090323  
Report Date : 15/03/2023

Sample Description : Waste Water  
Sample Mark : Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On:14/03/2023

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits *
1	Total suspended Solids	mg/l	28.0	IS 3025 (Part 17) 1984	100
2	pH @ 25°C	-	6.11	IS 3025 (Part 11) 1983	5.5 - 9.0
3	Total Dissolved Solids	mg/l	50250.0	IS 3025 (Part 16) 1984	-
4	Temperature	°C	28.9	IS 3025 (Part 9):1983	45°C
5	Oil & Grease	mg/l	BLQ(LOQ4.0)	IS 3025 (Part 39) 2021	20
6	Ammonical Nitrogen as N	mg/l	11.52	IS 3025 Part (34)1988	50
7	Total Kjeldahl Nitrogen as N	mg/l	17.74	IS 3025 Part (34)1988	100
8	Free Ammonia as NH3	mg/l	BLQ(LOQ0.02)	IS:3025 (Part34)1998	5
9	BOD, 3 days @ 27°C as O2	mg/l	16.0	IS:3025 (Part 44)1993	100
10	COD as O2	mg/l	126.0	IS 3025 (Part 58) 2006	250
11	Lead as Pb	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part 47)1994	1
12	Chromium (Hexavalent) as Cr6+	mg/l	BLQ(LOQ0.1)	IS 3025 Part (52):2003	1
13	Total Chromium as Cr	mg/l	0.29	IS 3025(Part 52):2003	2
14	Copper as Cu	mg/l	BLQ(LOQ 0.05)	IS:3025(Part 42)1992	3
15	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part49)1994	1.5
16	Nickel as Ni	mg/l	0.37	IS:3025 (Part54)2003	3
17	Boron as B	mg/l	BLQ(LOQ0.1)	IS 3025:(Part-57):2005	2
18	Chloride as Cl-	mg/l	11620.0	IS 3025 (Part 32) 1988	-
19	Fluoride as F-	mg/l	1.26	IS 3025 part (60):2008	15
20	Dissolved Phosphate as PO4	mg/l	0.25	IS 3025 (Part 31):1988	-
21	Sulphate as SO4	mg/l	656.8	IS 3025 (Part 24) 1986	1000
22	Sulphide as S2-	mg/l	BLQ(LOQ0.04)	IS:3025 (Part 29)1986	5

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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.

Report No. : HECSL/WW/023/090323

Report Date : 15/03/2023

Sample Description : Waste Water  
Sample Mark : Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On : 14/03/2023

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits*
23	Arsenic as As	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part37)1988	0.2
24	Mercury as Hg	mg/l	BLQ(LOQ 0.001)	IS:3025 (Part48)1994	0.01
25	Cadmium as Cd	mg/l	BLQ(LOQ 0.01)	IS:3025 (Part41)1992	2.0
26	Selenium as Se	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part56)2014	0.05
27	Residual Sodium Carbonate as Na <sub>2</sub> CO <sub>3</sub>	meq/l	BLQ(LOQ1.0)	IS 11624-1986	NA
28	Cyanide as CN	mg/l	BLQ(LOQ0.01)	IS:3025 (Part27)1986	0.2
29	Pesticides				
	2,4-D	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Isoproturon	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Malathion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Methyl Parathion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Monochrotophos	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Phorate	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	o,p -DDT	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	p,p'-DDT	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	o,p-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	p,p'-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	o,p-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	o,p-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	p,p'-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	o,p-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	p,p'-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent

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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.

Report No. : HECSL/WW/023/090323  
Report Date : 15/03/2023

Sample Description : Waste Water  
Sample Mark : Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 - 09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On: 14/03/2023

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits*
	Endosulphan alpha	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Endosulphan Beta	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Endosulphan Sulphate	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Alpha HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Beta HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Gamma HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Delta HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Butachlor	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Chlorpyrifos	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Alachlor	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Atrazine	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Aldrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Dieldrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Ethion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Cypermethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Alphamethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Permethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
	Deltamethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	Absent
30	Phenolic Compounds as C6H5OH	mg/l	BLQ(LOQ 0.001)	IS 3025 Part (43) 1992	1.0
31	Residual Free Chlorine	mg/l	BLQ(LOQ 0.1)	IS 3025 Pt 26 - 1986	NA
32	Sodium as Na	mg/l	3584.0	IS 3025 (Pt 45) : 1993	NA
33	Alpha emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part-2)-1994	0.0000001
34	Beta emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	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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**SIVAPRAKASAM. M**  
Lab Manager

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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.

Report No. : HECSL/WW/024/090323

Report Date : 15/03/2023

Sample Description : Sewage Water  
Sample Mark : Sewage Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On:14/03/2023

S.No.	Parameters	Units	Results	Test Method	CPCB Limits
1	Total suspended Solids	mg/l	18.0	IS 3025 (Part 17) 1984	100
2	pH @ 25°C	-	7.41	IS 3025 (Part 11) 1983	6.5 - 9.0
3	Total Dissolved Solids	mg/l	2040.0	IS 3025 (Part 16) 1984	-
4	Temperature	°C	28.9	IS 3025 (Part 9):1983	-
5	Oil & Grease	mg/l	BLQ(LOQ4.0)	IS 3025 (Part 39) 2021	-
6	Ammonical Nitrogen as N	mg/l	2.16	IS 3025 Part (34)1988	-
7	Total Kjeldahl Nitrogen as N	mg/l	3.32	IS 3025 Part (34)1988	-
8	Free Ammonia as NH3	mg/l	BLQ(LOQ0.02)	IS:3025 (Part34)1998	-
9	BOD, 3 days @ 27°C as O2	mg/l	8.0	IS:3025 (Part 44)1993	30
10	COD as O2	mg/l	46.0	IS 3025 (Part 58) 2006	-
11	Lead as Pb	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part 47)1994	-
12	Chromium (Hexavalent) as Cr6+	mg/l	BLQ(LOQ0.1)	IS 3025 Part (52):2003	-
13	Total Chromium as Cr	mg/l	BLQ(LOQ0.01)	IS 3025(Part 52):2003	-
14	Copper as Cu	mg/l	BLQ(LOQ 0.05)	IS:3025(Part 42)1992	-
15	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part49)1994	-
16	Nickel as Ni	mg/l	BLQ(LOQ0.1)	IS:3025 (Part54)2003	-
17	Boron as B	mg/l	BLQ(LOQ0.1)	IS 3025:(Part-57):2005	-
18	Chloride as Cl-	mg/l	360.5	IS 3025 (Part 32) 1988	-
19	Fluoride as F-	mg/l	BLQ(LOQ0.2)	IS 3025 part (60):2008	-
20	Dissolved Phosphate as PO4	mg/l	0.63	IS 3025 (Part 31):1988	-
21	Sulphate as SO4	mg/l	468.0	IS 3025 (Part 24) 1986	-
22	Sulphide as S2-	mg/l	BLQ(LOQ0.04)	IS:3025 (Part 29)1986	-

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**SIVAPRAKASAM. M**  
Lab Manager

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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,  
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Report No. : HECSL/WW/024/090323  
Report Date: 15/03/2023

Sample Description : Sewage Water  
Sample Mark : Sewage Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 - 09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On: 14/03/2023

S.No.	Parameters	Units	Results	Test Method	CPCB Limits
23	Arsenic as As	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part37)1988	-
24	Mercury as Hg	mg/l	BLQ(LOQ 0.001)	IS:3025 (Part48)1994	-
25	Cadmium as Cd	mg/l	BLQ(LOQ 0.01)	IS:3025 (Part41)1992	-
26	Selenium as Se	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part56)2014	-
27	Residual Sodium Carbonate as Na <sub>2</sub> CO <sub>3</sub>	meq/l	BLQ(LOQ 1.0)	IS 11624-1986	-
28	Cyanide as CN	mg/l	BLQ(LOQ 0.01)	IS:3025 (Part27)1986	-
29	Pesticides				
	2,4-D	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Isoproturon	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Malathion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Methyl Parathion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Monochrotophos	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Phorate	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	o,p-DDT	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	p,p'-DDT	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	o,p-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	p,p'-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	o,p-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	o,p-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	p,p'-DDD	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	o,p-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	p,p'-DDE	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-

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SIVAPRAKASAM. M  
Lab Manager

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HECS-G/Q/FMT/49

**Hubert Enviro Care Systems (P) Ltd.**

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E-mail : labsales@hecs.in

**Laboratory Services Division**

(Chemical &amp; Biological Testing)

ISO 9001, 14001 &amp; 45001 Certified.

**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.

Report No. : HECSL/WW/024/090323

Report Date: 15/03/2023

Sample Description : Sewage Water  
Sample Mark : Sewage Treated Effluent Outlet  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 08/03/2023 -09/03/2023  
Analysis Commenced On : 09/03/2023

Completed On:14/03/2023

S.No.	Parameters	Units	Results	Test Method	CPCB Limits
	Endosulphan alpha	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Endosulphan Beta	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Endosulphan Sulphate	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Alpha HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Beta HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Gamma HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Delta HCH	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Butachlor	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Chlorpyrifos	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Alachlor	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Atrazine	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Aldrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Dieldrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Ethion	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Cypermethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Alphamethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Permethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
	Deltamethrin	mg/l	BLQ(LOQ 0.0001)	HECS-G/INS/SOP/032	-
30	Phenolic Compounds as C <sub>6</sub> H <sub>5</sub> OH	mg/l	BLQ(LOQ 0.001)	IS 3025 Part (43):1992	-
31	Residual Free Chlorine	mg/l	BLQ(LOQ 0.1)	IS 3025 Pt 26 - 1986	-
32	Sodium as Na	mg/l	122.0	IS 3025 (Pt 45):1993	-
33	Alpha emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part-2)-1994	-
34	Beta emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part-1)-1994	-

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

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

Verified By



Authorized Signatory

**SIVAPRAKASAM. M**  
Lab Manager

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HECS-G/Q/FMT/49

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**Laboratory Services Division**

(Chemical & Biological Testing)

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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.

Report No. : HECSL/ST/09/220323  
Report Date : 27/03/2023

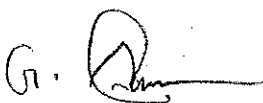
Sample Description : Stack Emission  
Sample Mark : Emergency DG Set  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

S.No.	Parameters	Units	Results	Test Method	Standards
1	Ambient Temperature	° C	31.0	IS 11255 (Part-3) 2008	NA
2	Temperature	° C	128.0	IS 11255 (Part-3) 2008	NA
3	Velocity	m/sec	10.2	IS 11255 (Part-3) 2008	NA
4	Flow rate	Nm <sup>3</sup> /hr	4394.0	IS 11255 (Part-3) 2008	NA
5	Particulate Matter	mg/Nm <sup>3</sup>	36.94	IS 11255 (Part-1) 1985	Max 150
6	Sulphur Dioxide	mg/Nm <sup>3</sup>	10.46	IS 11255 (Part-2) 1985	NA
7	Oxides of Nitrogen	mg/Nm <sup>3</sup>	229.08	IS 11255 (Part-7) 2005	Max 1100
8	Carbon monoxide	mg/Nm <sup>3</sup>	48.20	IS 13270 - 1992	Max 150
9	Carbon dioxide	%V/V	7.9	IS 13270 - 1992	NA
10	Hydrocarbon	mg/Nm <sup>3</sup>	BLQ(LOQ 1)	IS 5182 (Part-17) 1979	NA
11	Non - Methane Hydro Carbon(NMHC)	mg/Nm <sup>3</sup>	BLQ(LOQ 0.1)	USEPA METHOD 25	NA
12	Olefin (Aromatic)	%	BLQ(LOQ 0.1)	ASTM D6550-05	NA

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, Nm<sup>3</sup>/hr - Normal cubic meter per hour,  
mg/Nm<sup>3</sup>- Milligrams per Normal cubic meter, %V/V - Percentage, °C- Degree Celsius, NA - Not Applicable.

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



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SIVAPRAKASAM. M  
Lab Manager

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HECS/Q/FMT/50

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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.

Report No. : HECSL/ST/010/220323

Report Date : 27/03/2023

Sample Description : Stack Emission (VOC)  
Sample Mark : Chlorine Scrubber  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

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

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, ppm- Parts per Million.

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

  
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Lab Manager

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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.

Report No. : HECSL/ST/011/220323  
Report Date : 27/03/2023

Sample Description : Stack Emission (VOC)  
Sample Mark : Boiler Stack  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 - 22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

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

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, ppm- Parts per Million.

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

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Lab Manager



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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.

Report No. : HECSL/WT/005/220323  
Report Date : 27/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:2  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

S.No.	Parameters	Units	Results	Test Method
1	pH (at 25 °C)	-	7.34	IS 3025 (Part - 11):1983
2	Electrical conductivity at 25 °C	µS/cm	7180.0	IS 3025 (Part - 14):1983
3	Colour	Hazen Unit	5.0	IS 3025(Part - 4):1983
4	Turbidity	NTU	32.9	IS 3025(Part - 10):1984
5	Odour	-	Agreeable	IS 3025 (Part - 5):1983.
6	Taste	-	Disagreeable	IS 3025 (Part - 8):1984
7	Total Hardness as CaCO <sub>3</sub>	mg/l	780.0	IS 3025 (Part - 21):1983
8	Calcium as Ca	mg/l	204.70	IS 3025 (Part - 40):1991
9	Total Alkalinity as CaCO <sub>3</sub>	mg/l	310.0	IS 3025 (Part - 23):1986
10	Chloride as Cl	mg/l	1276.04	4500 Cl -- B APHA 23rd Edn: 2017
11	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):1986
12	Magnesium as Mg	mg/l	62.70	IS 3025 (Part - 46):1994
13	Total Dissolved Solids	mg/l	3960.0	IS 3025(Part-16):1984
14	Sulphate as SO <sub>4</sub>	mg/l	956.4	IS 3025(Part - 24):1986
15	Fluoride	mg/l	0.48	IS 3025 (Part - 60):1986
16	Nitrate as NO <sub>3</sub>	mg/l	17.5	IS 3025 (Part 34): 1988
17	Iron as Fe	mg/l	4.2	IS 3025 (Part - 53):2003
18	Aluminium as Al	mg/l	BLQ(LOQ 0.03)	IS 3025 (Part - 55):2003
19	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	USEPA Method 200.8:1994
20	Copper as Cu	mg/l	0.038	USEPA Method 200.8:1994
21	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994
22	Cadmium as Cd	mg/l	BLQ(LOQ 0.001)	USEPA Method 200.8:1994
23	Lead as Pb	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994

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SIVAPRAKASAM, M  
Lab Manager

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**TEST REPORT**

Page : 2 of 2

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,  
Address of the Client : PO Plant, Manali Express High Way,  
Manali, Chennai - 600068.

Report No. : HECSL/WT/005/220323

Report Date : 27/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:2  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 27/03/2023

S.No.	Parameters	Units	Results	Test Method
24	Arsenic as As	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994
25	Mercury as Hg	mg/l	BLQ(LOQ 0.0005)	USEPA Method 200.8:1994
26	Sodium as Na	mg/l	710.0	IS3025 (Part - 45):1993
27	BOD,3 days @27°C as O2	mg/l	4.0	IS 3025 (Part - 44):1993
28	Chemical oxygen demand as O2	mg/l	36.0	IS 3025 (Part - 58):2006
29	Temperature	°C	29.0	IS 3025 (Part - 9):1984
30	Dissolved oxygen	mg/l	6.3	IS 3025 (Part - 38):1989
31	Salinity	ppt	1.56	2520 A APHA 23rd Edn. 2017
32	Total Chromium	mg/l	0.010	USEPA Method 200.8 : 1994

Note :- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, NTU- Nephelometric Turbidity Unit,  
°C - Degree Celsius, mg/l- Milligrams per litre.

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

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Authorized Signatory

SIVAPRAKASAM. M  
Lab Manager

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ISO 9001, 14001 & 45001 Certified.

## TEST REPORT

Name of the Client : M/s. TamilNadu Petroproducts Ltd.,  
Address of the Client : PO Plant, Manali Express High Way,  
Manali, Chennai - 600068.

Page : 1 of 1  
Report No. : HECSL/MB/016/220323  
Report Date : 27/03/2023

Sample Description : WATER  
Sample Mark : Borewell Water No:2  
Sample Drawn By : Hubert Enviro Care Systems (P) Ltd  
Sampling/received Date : 22/03/2023 -22/03/2023  
Analysis Commenced On : 22/03/2023

Completed On : 23/03/2023

S.No.	Parameters	Units	Results	Test Method
1	Total Coliforms	Per 100ml	Absent	IS 1622
2	Faecal coliform	Per 100ml	Absent	IS 1622

End of Report

V. Anqi  
Verified By



M. S. V.  
Authorized Signatory

SIVAPRAKASAM. M  
Lab Manager

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## TPL – ECH – PO Plant

### Environmental Clearance – News paper Advertisement

**IP**

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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,  
Manali, Chennai 600 068.  
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