



Tamilnadu Petroproducts Limited

Ref: TPL – PO/ 2024/EC Comp/11

13th Nov- 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 – April 2024 to Sep 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&CC, 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 April-2024 to Sep-2024 for your kind reference.

Thanking you,

Yours faithfully,
For Tamilnadu Petroproducts Limited

N.Murugan
VP – Operations



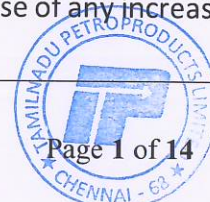
Regd. Office & Factory :
Post Box No. 9, Manali Express Highway, Manali,
Chennai - 600 068. India.
Tel. : (0091) - 44 - 25945500 to 09 Telefax : 044-2594 5588
Website : www.tnpetro.com CIN : L23200TN1984PLC010931
TPL GSTIN : 33AAACT1295M1Z6

Environmental Clearance Compliance Status Report
For the period from Apr 2024 to Sep 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 in 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>The emission levels have always been maintained within the prescribed standards.</p> <p>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>

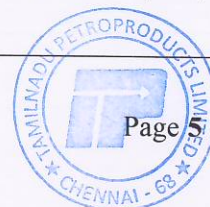


ii	<p>Ambient air quality data shall be collected as per NAAQS standards notified by the ministry vide GSR No. 826 (E) dated 16.09.2009 the levels of PM₁₀, PM_{2.5}, SO₂, NO_x, CO, Cl₂, VOC and HC (methane and non-methane) shall be monitored in the ambient air and emission from stacks and displayed at 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 in the

	<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>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 TNPCC 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>We do not have any DG set for continuous operation.</p> <p>In the Emergency DG set, which is operated for short duration, during power outages, Adequate stack height is provided, as per the CPCB standard to dispose gaseous emission from stack. Stack height is 31.5m.</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 monitoring of Valves and pipelines are carried out & required maintenance carried out to prevent fugitive emissions • 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 is met with Tertiary treated reverse osmosis (TTRO) water from CMWSSB, based on prior permission & has not exceeded 1650 m³/day.</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>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>

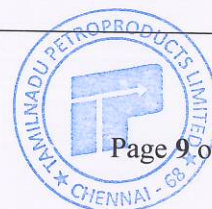


		Additionally, Medium velocity sprinkler system is also provided in the Propylene, Dichloropropane and Propylene oxide storage tanks.
xiii	All the recommendations made in the risk assessment report should be satisfactorily implemented.	<p>Complied</p> <p>Recommendations given in the risk assessment report 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. • Sensors with alarm systems are provided in the storage bullets • Fire hydrant system is provided throughout the storage area.



		<ul style="list-style-type: none"> • 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 surveillance is 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>

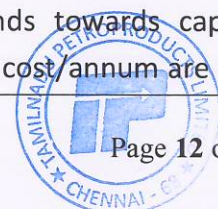
	General Conditions	
i	The project authorities shall strictly adhere to the stipulations made by the State Government and TN Pollution Control Board.	Complied All the stipulations made by the State Government and TN Pollution Control Board are being adhered regularly.
ii	No further expansion or modification 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 was 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 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 • Near Sathankadu police station
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	<p>Complied</p> <p>Adequate funds towards capital cost and recurring cost/annum are allocated</p>



	<p>stipulated by the Ministry of Environment and Forests as well as the State Government along with the implementation schedule for all the conditions stipulated herein.</p>	<p>to implement the conditions stipulated by the Ministry of Environment and Forests as well as the State Government.</p> <p>Implementation schedules are prepared for all the conditions stipulated herein and are implemented.</p>
	<p>The funds so earmarked for environmental management / pollution control measures shall not be diverted for any other purpose.</p>	<p>Complied</p> <p>Funds earmarked for environmental management / pollution control measures, are not diverted for any other purpose.</p>
xiii	<p>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.</p>	<p>Complied</p> <p>No suggestion was received from Panchayat / Municipal corporation urban local body and local NGO while processing the proposal.</p>
xiv	<p>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.</p>	<p>Complied</p> <p>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.</p>
	<p>A copy of Environmental clearance and six-monthly compliance status report shall be posted on the website of the company.</p>	<p>Complied.</p> <p>Six monthly compliance reports including monitoring data are uploaded in our company's website (www.tnpetro.com) and also updated periodically.</p>
xv	<p>The environmental statement for each financial year ending 31st March in Form – V as is mandated shall be submitted to the concerned State pollution Control Board as prescribed under Environment</p>	<p>Complied</p> <p>The environmental statement (Form V) is being submitted to TNPCB once in a year before 30th Sep every year.</p>

	(Protection) Rules 1986, as amended subsequently shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also sent to the respective Regional offices of MoEF by email.	Environmental statement (Form V) for the year 2023 – 2024 was submitted on 20.09.2024. 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.





TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

From

D. Balasubramanian, M.Sc., B.Ed.,
Deputy Chief Scientific Officer,
District Environmental Laboratory, Manali
Tamil Nadu Pollution Control Board,
950/1, Poonamallee High Road,
Arumbakkam,
Chennai-106

To

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

Lr.No.TNPC Bd/DEL-MNL/Air Survey/F. No.81/2024-25, Dt. 14.08.2024

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.81/2024-25 dt.07.08.2023
2. Your Lr.No.TPL/Payment-AAQ monitoring 24-25/ECH dt.29.05.2024
3. Cash Receipt No.158 dt.29.05.2024 Rs.78,250/-

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 **24.07.2024** with invoice for Rs.78,250/- (Rupees Seventy Eight Thousand Two 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.

**Deputy Chief Scientific Officer,
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, Ambattur 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. 28/AAQS/2024-25

Date: 14.08.2024

1. Name of the Industry : **M/s. TPL (ECH),**
2. Address of the Industry : **Manali Express Highway, Manali, Chennai - 68.**
3. Date of Survey : **24.07.2024**
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 30	Max 34	Relative Humidity (%)	Min 60	Max 74
Weather Condition	Partially Cloudy		Rain Fall (mm)	Nil	
Predominant Wind Direction	WSW – ENE		Mean Wind Speed (km/hr)	12.8	

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	2.0	34	82	15	21	<0.1
2	On top of platform near Propylene Oxide Filling Point	E	280	2.0	--	78	14	20	<0.1
3	On top of platform near STP (Gate No 5)	SE	700	2.0	--	72	13	18	<0.1
4	On top of platform near ERC Building (Gate No 3)	SW	200	2.0	23	62	10	15	<0.1
5	On top of platform near Flare Area	NW	240	2.0	--	68	12	17	<0.1

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


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

Test Performed	Test Method
PM10	IS 5182 : (Part 23) – 2006
SO2	Modified West – Gaeke / IS 5182 : (Part 2) – 2001 RA: 2012
NO2	Jacobs – Hochheiser / IS 5182 : (Part 6) – 2006 RA:2012



TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

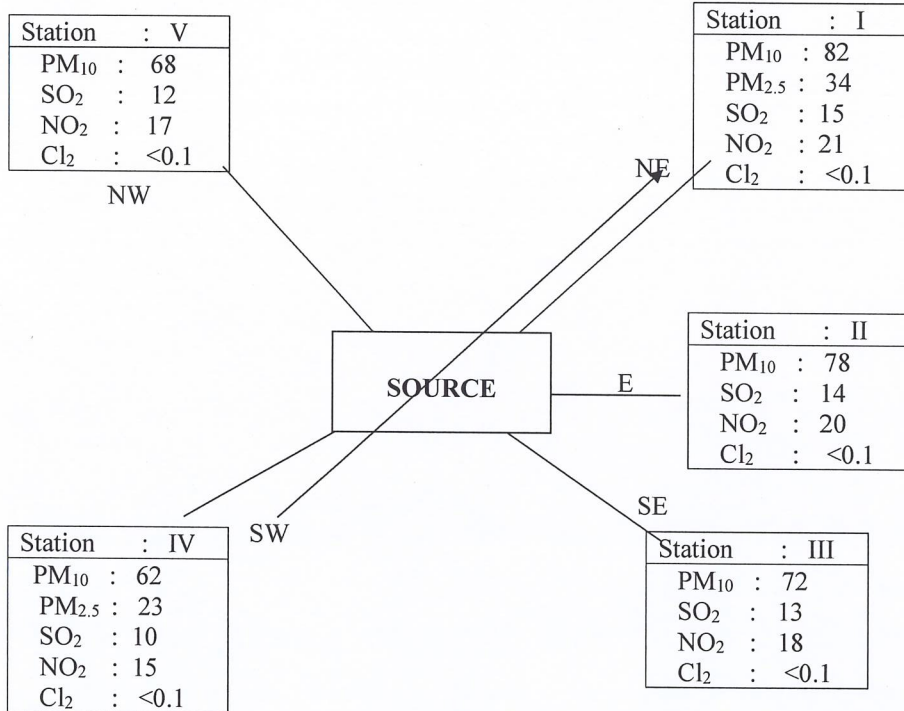
AMBIENT AIR QUALITY SURVEY

Schematic Diagram Showing Location of Sampling

Report No. 28/AAQS/2024-25

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

Date of Survey : 24.07.2024



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	WSW – ENE
Wind Speed (Km/hr)	12.8
Weather Condition	Partially Cloudy
Rainfall	Nil

[Handwritten Signature]
14/8/24

**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. 28/AAQS/2024-25

Date: 14.08.2024

1. Name of the Industry : **M/s. TPL (ECH),**
2. Address of the Industry : **Manali Express Highway, Manali, Chennai – 68**
3. Date of Survey : **24.07.2024**
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	404	9.3	8383	10	BDL	31	--
2	Vent Gas Scrubber	--	311	9.7	777	3	--	--	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



**Deputy Chief Scientific Officer,
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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 : 24.07.2024

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)	231.7 m ³ /hr	--
8.	Type of Stack and capacity	Round	Round
9.	Production on 24.07.2024	Propylene Oxide – 38.75 MT	
10.	APC Measures provided	Stack provided	Scrubber
11.	APC functional status	Functioning	Functioning
12.	Ambient temp in °K	305	305
13.	Temp of flue gas in °K	404	311
14.	Velocity of flue gas in m/sec	9.3	9.7
15.	Volume of flue gas sampled in m ³	1.000	1.000
16.	Gaseous Discharge rate per day in Nm ³ /hr	8383	777

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 – Additional details

Report No. 28/SM/2024-25

Date: 14.08.2024

1. Name of the Industry : M/s. TPL (ECH)
2. Address of the Industry : Manali Express Highway, Manali, Chennai – 68
3. Date of Survey : 24.07.2024
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,
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. 28/ NLS/2024-25

Date: 14.08.2024

1.	Name of the Industry	M/s. TPL (ECH)	
2.	Address of the Industry	Manali Express Highway, Manali, Chennai - 68	
3.	Date of Survey	24.07.2024	
Category		RL	Land use Classification
Type of Survey		Ambient/Source	Time of Survey
Meteorological conditions		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
Sound Incidence	RANDOM		Time in hrs	14.00 – 15.30

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	58.2	54.6	67.4
2	Near Propylene Oxide Filling Point	10	280	E	56.4	53.1	65.3
3	Near STP (Gate No.5)	10	700	SE	61.4	57.6	72.1
4	Near ERC Building (Gate No 3)	10	200	SW	60.2	55.4	68.7
5	Near Flare Area	10	240	NW	56.2	51.7	63.4

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



**Deputy Chief Scientific Officer,
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 : 24.07.2024
4. Predominant Wind Direction : WSW - ENE
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	82	62	100
	PM _{2.5}	34	23	60
2.	<u>GASEOUS</u> <u>POLLUTANTS:-</u>			
	(i) SO ₂	15	10	80
	(ii) NO ₂	21	15	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,
District Environmental Laboratory
Tamil Nadu Pollution Control Board
Manali



TAMIL NADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Manali

BILL

Report No. 28/AAQ/SM/2024-25

Bill No.	28/2024-25
Date	14.08.2024

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.81/2024-25 dt.07.08.2023
3. Your Lr.No.TPL/Payment-AAQ monitoring 24-25/ECH dt.29.05.2024
4. Cash Receipt No.158 dt.29.05.2024 Rs.78,250/-

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
As per Bill no.41/2023-24/27.12.2023 amount to be adjusted				17,500
Total amount to be paid				70,550
Vide O/o. DEE/AMB Our CR.No.158 dated :29.05.2024				78,250
Balance to be adjusted in next survey				7,700


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



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TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/337/09

Date of Sampling : 26.09.2024

Sample Rep No : 337/09

Reporting Date : 01.10.2024

Sampling Location

: CP Station 2

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/26.09.2024

Received On

: 26.09.2024

Analysis Commenced On

: 26.09.2024

Analysis Completed on

: 01.10.2024

Sampling Method

: IS 5182 (Part V) and (Part XIV)

Sampling Time

: 8 Hrs

Ambient Temperature

: 38°C

Relative Humidity

: 59%

Sl.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	38.0	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	69.0	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	9.60	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	10.40	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	15.50	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.1)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=1.15)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	21.60	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=1.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=0.1)	20
11	Benzene (C ₆ H ₆)	IS 5182 Part 11-2012	µg / m ³	BDL (DL=0.1)	5
12	Benzo (a) Pyrene	IS 5182 Part 12-2009	ng / m ³	BDL (DL=0.1)	1
13	Suspended Particular Matter	IS 5182 Part 4-1999	µg / m ³	72.0	-

BDL – Below Detectable Limit ; DL – Detection Limit

Remarks: The above results meet the *National Ambient Air Quality Standards –CPCB

End of Report

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY

ADDRESS

Sample Ref No : SAS/AS/338/09

Sample Rep No : 338/09

Sampling Location

Sample Description

Sample Drawn By /Date

Received On

Analysis Commenced On

Analysis Completed on

Sampling Method

Sampling Time

Ambient Temperature

Relative Humidity

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,

Manali, Chennai - 600 068.

Date of Sampling : 26.09.2024

Reporting Date : 01.10.2024

: PO Filling Point

: Ambient Air Monitoring

: SAS/26.09.2024

: 26.09.2024

: 26.09.2024

: 01.10.2024

: IS 5182 (Part V) and (Part XIV)

: 8 Hrs

: 38°C

: 59%

Sl.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	32.0	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	67.0	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	8.60	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	9.40	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	14.80	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.1)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=1.15)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	19.50	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=1.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=0.1)	20
11	Benzene (C ₆ H ₆)	IS 5182 Part 11-2012	µg / m ³	BDL (DL=0.1)	5
12	Benzo (a) Pyrene	IS 5182 Part 12-2009	ng / m ³	BDL (DL=0.1)	1
13	Suspended Particular Matter	IS 5182 Part 4-1999	µg / m ³	71.0	-

BDL – Below Detectable Limit ; DL – Detection Limit

Remarks: The above results meet the *National Ambient Air Quality Standards –CPCB

End of Report

for **SANTHOME ENVIRO SERVICES**

Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)
ADDRESS : Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/339/09 Date of Sampling : 26.09.2024
Sample Rep No : 339/09 Reporting Date : 01.10.2024

Sampling Location : Near Main Gate
Sample Description : Ambient Air Monitoring
Sample Drawn By /Date : SAS/26.09.2024
Received On : 26.09.2024
Analysis Commenced On : 26.09.2024
Analysis Completed on : 01.10.2024
Sampling Method : IS 5182 (Part V) and (Part XIV)
Sampling Time : 8 Hrs
Ambient Temperature : 38°C
Relative Humidity : 59%

Sl.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	31.20	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	64.50	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	8.10	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	9.20	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	14.50	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.1)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=1.15)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	18.80	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=1.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=0.1)	20
11	Benzene (C ₆ H ₆)	IS 5182 Part 11-2012	µg / m ³	BDL (DL=0.1)	5
12	Benzo (a) Pyrene	IS 5182 Part 12-2009	ng / m ³	BDL (DL=0.1)	1
13	Suspended Particular Matter	IS 5182 Part 4-1999	µg / m ³	68.0 (DL=0.1)	-

BDL – Below Detectable Limit ; DL – Detection Limit

Remarks: The above results meet the *National Ambient Air Quality Standards –CPCB

End of Report

for **SANTHOME ENVIRO SERVICES**

Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/340/09
Sample Rep No : 340/09

Date of Sampling : 26.09.2024
Reporting Date : 01.10.2024

Sampling Location

: Near Flare Tower

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/26.09.2024

Received On

: 26.09.2024

Analysis Commenced On

: 26.09.2024

Analysis Completed on

: 01.10.2024

Sampling Method

: IS 5182 (Part V) and (Part XIV)

Sampling Time

: 8 Hrs

Ambient Temperature

: 38°C

Relative Humidity

: 59%

Sl.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	39.50	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	74.80	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	12.50	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	13.80	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	20.40	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.1)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=1.15)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	28.50	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=1.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=0.1)	20
11	Benzene (C ₆ H ₆)	IS 5182 Part 11-2012	µg / m ³	BDL (DL=0.1)	5
12	Benzo (a) Pyrene	IS 5182 Part 12-2009	ng / m ³	BDL (DL=0.1)	1
13	Suspended Particular Matter	IS 5182 Part 4-1999	µg / m ³	78.0	-

BDL – Below Detectable Limit ; DL – Detection Limit

Remarks: The above results meet the *National Ambient Air Quality Standards –CPCB

End of Report

for **SANTHOME ENVIRO SERVICES**

Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)
Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/341/09

Date Of Sampling : 26.09.2024

Sample Rep No : 341/09

Reporting Date : 01.10.2024

SAMPLED ON

: 26.09.2024

STACK IDENTIFICATION NO

: Boiler Chimney

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

Sl.No	PARAMETERS	RESULT	UNIT	Limit as per Ministry Of Environment and Forests Notification, 09.06.2002 (MOEF) (mg/m ³)	Limit as per TNPCB	PROTOCOL
1	Flue Gas Temperature	198	°C	-	-	IS:11255
2	Flue Gas Pressure	2.20	mm Hg	-	-	IS:11255
3	Flue Gas Velocity	3.10	m / s	-	-	IS:11255
4	Volume of Gas Discharged	10450	Nm ³ / hr	-	-	IS:11255
5	Particulate Matter (PM)	7.40	mg / Nm ³	10(MAX)	-	IS:11255
6	Sulphur- di- oxide (SO ₂)	16.50	mg / Nm ³	50(MAX)	-	IS:11255
7	Nitrogen Dioxide (NO ₂)	52.0	mg / Nm ³	350(MAX)	-	IS:11255
8	Carbon – di - oxide (CO ₂)	2.50	%	-	-	IS:13270
9	Carbon Monoxide (CO)	42.84	mg / Nm ³	150 (MAX)	-	IS:13270
10	Oxygen (O ₂)	6.0	%	-	-	IS:13270

Report Opinion: The above results meets the MOEF notification.

There is no limit for stack emission as per TNPCB Standards.

End of Report

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,

Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/341/09

Date Of Sampling : 26.09.2024

Sample Rep No : 341/09

Reporting Date : 01.10.2024

SAMPLED ON

: 26.09.2024

STACK IDENTIFICATION NO

: **Boiler Chimney**

PITOT TUBE CONSTANT

: 0.1951

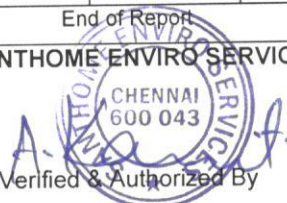
AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

Discipline- Chemical

SI. No	PARAMETERS	RESULT	UNIT	PROTOCOL
1	Non Methane Hydrocarbons	BDL(DL:0.2)	Mg/Nm ³	SOP-SAS-009:2024
2	Hydrocarbons	BDL(DL:0.1)	Mg/Nm ³	SOP-SAS-010:2024
3	Olefins	BDL(DL:0.1)	µg/Nm ³	SOP-SAS-11:2024
End of Report				
for SANTHOME ENVIRO SERVICES				
				
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A.Kaviyarasi - Technical Manager				



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TEST REPORT

**NAME OF INDUSTRY
ADDRESS**

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)
Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/341/09

Date Of Sampling : 26.09.2024

Sample Rep No : 341/09

Reporting Date : 01.10.2024

SAMPLED ON

: 26.09.2024

STACK IDENTIFICATION NO

: **Boiler Chimney Stack-VOC**

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

Sl.No	PARAMETERS	UNIT	Result	Test Method
1	Ethylene Oxide	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
2	Vinyl Chloride Monomer	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
3	Ethylene Di-Chloride	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
4	Acrylonitrile	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
5	Propylene Oxide	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024

BDL – Below Detectable Limit ; DL – Detection Limit

End of Report

for **SANTHOME ENVIRO SERVICES**


Verified & Authorized By

A.Kaviyarasi - Technical Manager

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TEST REPORT

**NAME OF INDUSTRY
ADDRESS**

TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/342/09

Date Of Sampling : 26.09.2024

Sample Rep No : 342/09

Reporting Date : 01.10.2024

SAMPLED ON

: 26.09.2024

STACK IDENTIFICATION NO

: DG Stack- 1250KVA

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

Sl.No	PARAMETERS	RESULT	UNIT	Limit as per Ministry Of Environment and Forests Notification, 09.06.2002 (MOEF) (mg/m ³)	Limit as per TNPCB	PROTOCOL
1	Flue Gas Temperature	168	°C	-	-	IS:11255
2	Flue Gas Pressure	8.40	mm Hg	-	-	IS:11255
3	Flue Gas Velocity	10.50	m / s	-	-	IS:11255
4	Volume of Gas Discharged	3480	Nm ³ / hr	-	-	IS:11255
5	Particulate Matter (PM)	35.0	mg / Nm ³	75 (max)	-	IS:11255
6	Sulphur- di- oxide (SO ₂)	12.50	mg / Nm ³	-	-	IS:11255
7	Nitrogen Dioxide (NO ₂)	65.0	mg / Nm ³	710 (max)	-	IS:11255
8	Carbon – di - oxide (CO ₂)	1.50	%	-	-	IS:13270
9	Carbon Monoxide (CO)	66.47	mg / Nm ³	150 (max)	-	IS:13270
10	Oxygen (O ₂)	14.0	%	-	-	IS:13270

BDL – Below Detectable Limit ; DL – Detection Limit

Report Opinion: The above results meets the MOEF notification.

There is no limit for stack emission as per TNPCB Standards.

End of Report

for **SANTHOME ENVIRO SERVICES**

Verified & Authorized By

A.Kaviyarasi - Technical Manager

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NAME OF INDUSTRY
ADDRESS

Sample Ref No : SAS/AS/342/09
Sample Rep No : 342/09
SAMPLED ON
STACK IDENTIFICATION NO
PITOT TUBE CONSTANT
AMBIENT TEMPERATURE
GAS VOLUME SAMPLED

TEST REPORT

: **TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)**
Manali Express Highway,
Manali, Chennai - 600 068.
Date Of Sampling : 26.09.2024
Reporting Date : 01.10.2024
: 26.09.2024
: **DG Stack- 1250KVA**
: 0.1951
: 38° C
: 400 liters

Discipline- Chemical

Sl.No	PARAMETERS	RESULT	UNIT	PROTOCOL
1	Non Methane Hydrocarbons	BDL(DL:0.2)	Mg/Nm ³	SOP-SAS-009:2024
2	Hydrocarbons	BDL(DL:0.1)	Mg/Nm ³	SOP-SAS-010:2024
3	Olefins	BDL(DL:0.1)	µg/Nm ³	SOP-SAS-011:2024

End of Report

for **SANTHOME ENVIRO SERVICES**

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A.Kaviyarasi - Technical Manager





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TEST REPORT

NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)
ADDRESS : Manali Express Highway,
Manali, Chennai - 600 068.
Sample Ref No : SAS/AS/343/09 Date Of Sampling : 26.09.2024
Sample Rep No : 343/09 Reporting Date : 01.10.2024
SAMPLED ON : 26.09.2024
STACK IDENTIFICATION NO : CI Scrubber Stack
PITOT TUBE CONSTANT : 0.1951
AMBIENT TEMPERATURE : 38° C
GAS VOLUME SAMPLED : 400 liters

Sl.No	PARAMETERS	UNIT	Result	Test Method
1	Chlorine	Mg/Nm ³	1.6	SOP-SAS-014:2024

BDL – Below Detectable Limit ; DL – Detection Limit

End of Report

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TEST REPORT

**NAME OF INDUSTRY
ADDRESS**

TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/343/09

Date Of Sampling : 26.09.2024

Sample Rep No : 343/09

Reporting Date : 01.10.2024

SAMPLED ON

: 26.09.2024

STACK IDENTIFICATION NO

: CI Scrubber Stack-VOC

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

Sl.No	PARAMETERS	UNIT	Result	Test Method
1	Ethylene Oxide	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
2	Vinyl Chloride Monomer	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
3	Ethylene Di-Chloride	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
4	Acrylonitrile	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024
5	Propylene Oxide	Ppm	BDL(DL:0.01)	SOP-SAS-024:2024

BDL – Below Detectable Limit ; DL - Detection Limit

End of Report

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TEST REPORT

Sample Ref No. :SAS/W/344/09	Report No. :344/09
CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED	Report Date : 01.10.2024
ADDRESS : Manali Express Highway, Manali, Chennai - 600 068.	Page: 1 of 5
Sample Description :Effluent Water	Received On : 26.09.2024
Sample Drawn By /Date :SAS/26.09.2024	Commenced On : 26.09.2024
Customer's Reference :Letter dated on 26.09.2024	Completed On : 01.10.2024
Sample Mark : ETP- Inlet	

TEST METHOD

Sl. No	PARAMETERS	Unit	RESULTS
Discipline: Chemical			

Pesticides

1	Alachlor	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
2	Aldrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
3	Alpha BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
4	Atrazine	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
5	Beta BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
6	Butachlor	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
7	Chloropyrifos	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
8	Delta BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
9	Dieldrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
10	Deltamethrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
11	Endosulfan alpha	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
12	Endosulfan Beta	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024

End of Page 1

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
13	Endosulfan Sulfate	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
14	Ethion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
15	Gamma BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
16	Malathion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
17	o,p'-DDD	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
18	o,p'-DDE	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
19	o,p'-DDT	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
20	p,p'-DDD	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
21	p,p'-DDE	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
22	p,p'-DDT	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
23	Parathion-methyl	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
24	Phorate	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024

End of Page 2

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
25	2,4-D	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
26	Isoproturon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
27	Malaoxon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
28	Methyl Paraoxon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
29	Methyl Parathion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
30	Monocrotophos	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
31	Phorate Sulfone	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
32	Phorate Sulfoxide	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
33	Arsenic	mg/l	BDL (DL:0.005)	USEPA 200.8 Revision 5.4:1994
34	Cadmium	mg/l	BDL (DL:0.01)	USEPA 200.8 Revision 5.4:1994
35	Chromium	mg/l	BDL (DL:0.0001)	USEPA 200.8 Revision 5.4:1994
36	Copper	mg/l	BDL (DL:0.01)	USEPA 200.8 Revision 5.4:1994

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
37	Nickel	mg/l	BDL (DL:0.1)	USEPA 200.8 Revision 5.4:1994
38	Selenium	mg/l	BDL (DL:0.005)	USEPA 200.8 Revision 5.4:1994
39	Zinc	mg/l	BDL (DL:0.1)	USEPA 200.8 Revision 5.4:1994
40	Ammonia as NH ₃	mg/l	1.20	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	5.0	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	180	IS: 3025 P. 44 1993 R. 2009
43	Boron as B	mg/l	0.85	IS: 3025 P. 57 2021
44	Sodium as Na	mg/l	550	IS 3025 P.45 1993
45	Chemical Oxygen Demand(COD)	mg/l	1000	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	22000	IS 3025 P.32. 1988
47	Cyanide as CN	mg/l	BDL (DL:0.01)	IS 3025 P.27. 1986
48	Fluorides as F	mg/l	0.60	APHA 24 th Edn :2023 4500 D'F

End of Page 4

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
49	Free Residual Chlorine	mg/l	BDL(DL:0.2)	IS 3025 P.26 2021
50	Hexavalent Chromium as Cr6+	mg/l	BDL (DL:0.0001)	IS 3025 P.52 2003
51	Oil and grease	mg/l	8.0	IS 3025 P.39 2021
52	pH value @25°C	mg/l	11.68	IS:3025: P.11:2022
53	Phenolic Compound	mg/l	BDL(DL:0.2)	IS 3025:P.43:1992
54	Dissolved Phosphate as P	mg/l	0.80	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	Nil	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	300	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	Nil	IS 3025 P.29 1986
58	Temperature	°C	27.0	IS 3025 P.09 1984
59	Total dissolved solids @ 180°C	mg/l	44,080	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	110	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	1000	IS 3025 P.17 1984

End of Page 5

for SANTHOME ENVIRO SERVICES

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TEST REPORT

Sample Ref No. :SAS/W/345/09	Report No. :345/09
CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED ADDRESS : Manali Express Highway, Manali, Chennai - 600 068.	Report Date : 01.10.2024 Page: 1 of 5
Sample Description :Effluent Water Sample Drawn By /Date :SAS/26.09.2024 Customer's Reference :Letter dated on 26.09.2024 Sample Mark : ETP - Outlet	Received On : 26.09.2024 Commenced On : 26.09.2024 Completed On : 01.10.2024

Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
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Discipline: Chemical

Pesticides

1	Alachlor	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
2	Aldrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
3	Alpha BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
4	Atrazine	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
5	Beta BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
6	Butachlor	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
7	Chloropyrifos	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
8	Delta BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
9	Dieldrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
10	Deltamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
11	Endosulfan alpha	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
12	Endosulfan Beta	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024

End of Page 1

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
13	Endosulfan Sulfate	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
14	Ethion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
15	Gamma BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
16	Malathion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
17	o,p'-DDD	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
18	o,p'-DDE	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
19	o,p'-DDT	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
20	p,p'-DDD	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
21	p,p'-DDE	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
22	p,p'-DDT	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
23	Parathion-methyl	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
24	Phorate	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024

End of Page 2

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
25	2,4-D	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
26	Isoproturon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
27	Malaoxon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
28	Methyl Paraaxon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
29	Methyl Parathion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
30	Monocrotophos	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
31	Phorate Sulfone	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
32	Phorate Sulfoxide	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
33	Arsenic	mg/l	BDL (DL:0.005)	0.2	USEPA 200.8 Revision 5.4:1994
34	Cadmium	mg/l	BDL (DL:0.01)	2.0	USEPA 200.8 Revision 5.4:1994
35	Chromium	mg/l	BDL (DL:0.1)	2.0	USEPA 200.8 Revision 5.4:1994
36	Copper	mg/l	BDL (DL:0.01)	3.0	USEPA 200.8 Revision 5.4:1994

End of Page 3

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
37	Nickel	mg/l	BDL (DL:0.1)	3.0	USEPA 200.8 Revision 5.4:1994
38	Selenium	mg/l	BDL (DL:0.01)	0.05	USEPA 200.8 Revision 5.4:1994
39	Zinc	mg/l	BDL (DL:0.1)	1.5	USEPA 200.8 Revision 5.4:1994
40	Ammonia as NH ₃	mg/l	0.30	5	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	2.60	50	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	9.0	30	IS: 3025 P. 44 1993 R. 2009
43	Boron as B	mg/l	BDL (DL:0.1))	2	IS: 3025 P. 57 2021
44	Sodium as Na	mg/l	238	-	IS 3025 P.45 1993
45	Chemical Oxygen Demand(COD)	mg/l	84.0	250	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	21000	-	IS 3025 P.32. 1988
47	Cyanide as CN	mg/l	BDL (DL:0.01)	0.2	IS 3025 P.27. 1986
48	Fluorides as F	mg/l	0.90	2	APHA 24 th Edn :2023 4500 D'F

End of Page 4

for SANTHOME ENVIRO SERVICES

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
49	Free Residual Chlorine	mg/l	BDL(DL:0.01)	-	IS 3025 P.26 2021
50	Hexavalent Chromium as Cr6+	mg/l	BDL (DL:0.05)	-	IS 3025 P.52 2003
51	Oil and grease	mg/l	BDL(DL:4.0)	10	IS 3025 P.39 2021
52	pH value @25°C	mg/l	6.55	5.5 to 9.0	IS:3025: P.11:2022
53	Phenolic Compound	mg/l	BDL(DL:0.01)	1.0	IS 3025:P.43:1992
54	Dissolved Phosphate as P	mg/l	0.60	5.0	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	Nil	NA	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	185	1000	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	Nil	2	IS 3025 P.29 1986
58	Temperature	°C	27.0	40° C at the point of discharge	IS 3025 P.09 1984
59	Total dissolved solids @ 180°C	mg/l	42,420	-	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	62.0	100	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	55.0	100	IS 3025 P.17 1984

End of Page 5

for SANTHOME ENVIRO SERVICES

A. Kanti
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

Sample Ref No. :SAS/W/345/09				Report No. :345/09	
CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED ADDRESS : Manali Express Highway, Manali, Chennai - 600 068.				Report Date : 01.10.2024 Page: 1 of 5	
Sample Description :Effluent Water Sample Drawn By /Date :SAS/26.09.2024 Customer's Reference :Letter dated on 26.09.2024 Sample Mark : ETP - Outlet				Received On : 26.09.2024 Commenced On : 26.09.2024 Completed On : 01.10.2024	
Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
Discipline: Chemical					
Pesticides					
1	Alphamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
2	Cypermethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
3	Deltamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
4	Permethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
5	Mercury	mg/l	BDL (DL:0.01)	0.01	USEPA 200.08 REV 1994
6	Lead	mg/l	BDL (DL:0.1)	0.1	USEPA 200.08 REV 1994
7	Alpha Emitters	Microcurie/ ml	BDL (DL:0.000000001)	0.0000001	IS 14194(Part 2) 1994
8	Beta Emitters	Microcurie/ ml	BDL (DL:0.000000001)	0.0000001	IS 14194(Part 1) 1994
End of Page 1					
for SANTHOME ENVIRO SERVICES					
A. Kaviyarasi - Technical Manager					

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TEST REPORT

Sample Ref No. :SAS/W/346/09	Report No. :346/09
NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED ADDRESS Manali Express Highway, Manali Chennai-600068	Report Date :01.10.2024 Page: 1 of 3
Sample Description : Water Sample Drawn By/ Date :Customer26.09.2024 Customer's Reference : Letter Dated on 26.09.2024 Sample Mark : Bore Well Water -1	Received On :26.09.2024 Commenced On :26.09.2024 Completed On :01.10.2024

Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
1	Color (Hazen Unit)	15.0	5.0	15.0	APHA 24 th Edn :2023 2120 B
2	Odor	Agreeable	Agreeable	Agreeable	IS 3025 P.5 1983 R.2012
3	pH value @ 25°C	7.16	6.5-8.5	No relaxation	APHA 24 th Edn :2023 4500 H ⁺ B
4	Dissolved Oxygen	6.50	NA	NA	IS 3025 P-38:1989
5	Salinity	676	NA	NA	APHA 24 th Edn :2023 2520 B
6	Total Dissolved Solids (mg/l)	1200	500	2000	IS 3025:P.16:1984:R.2012
7	Total Suspended Solids	18.0	-	-	IS:3025: P.17:1984:R.2012
8	Electrical Conductivity at 25°C	2020	NA	NA	IS 3025 P-14:2013
9	Aluminium as Al(mg/l)	BDL (DL=0.01)	0.03	0.2	APHA 24 th Edn :2023 3500-Al B
10	Taste	Agreeable	Agreeable	Agreeable	IS3025 P-8:1 984
11	BOD at 27°C for 3 days	BDL(DL:2.0)	NA	NA	IS: 3025 P. 44 1993 R. 2009
12	COD	12.0	NA	NA	APHA 24 th Edn :2023 5220 B
13	Sodium as Na	240	NA	NA	IS 3025 P-45 :1993

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TEST REPORT – ADDITIONAL SHEET

Sample Ref No. :SAS/W/346/09

Report No. :346/09

Report Date :01.10.2024

Page : 2 of 4

Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
14	Turbidity (NTU)	4.0	1.0	5.0	IS 3025 (Part 10) : 1984
	Temperature °C	27.0	NA	NA	IS 3025 P.09 1984
15					
16	Chlorides as Cl(mg/l)	410	250	1000	APHA 24 th Edn :2023 4500 Cl ⁻ B
17	Copper as Cu (mg/l)	BDL (DL=0.01)	0.05	1.5	APHA 24 th Edn :2023 3500-Cu B
18	Fluoride as F (mg/l)	BDL (DL=0.1)	1.0	1.5	APHA 24 th Edn :2023 4500-F D
19	Free Residual Chlorine (mg/l)	<0.2	0.2	1.0	APHA 24 th Edn :2023 4500 Cl ⁻ B
20	Total Iron as Fe(mg/l)	0.35	1.0	No Relaxation	APHA 24 th Edn :2023 3500 Fe B
21	Magnesium as Mg (mg/l)	54.0	30.0	100	APHA 24 th Edn :2023 2340 C
	Total Arsenic as As (mg/l)	BDL (DL=0.005)	0.01	No Relaxation	APHA 24 th Edn :2023 3500-As
22	Cadmium as Cd (mg/l)	BDL (DL=0.001)	0.003	No Relaxation	APHA 24 th Edn :2023 3500-Cd
21					
22	Nitrate as NO ₃ (mg/l)	BDL (DL=0.1)	45.0	No Relaxation	IS 3025 P.34 1988 R.2009
23	Total Chromium as Cr(mg/l)	BDL (DL=0.01)	0.05	No Relaxation	APHA 24 th Edn :2023 3500 Cr
24	Lead as Pb (mg/l)	BDL (DL=0.005)	0.01	No Relaxation	APHA 24 th Edn :2023 3500 Pb B
25	Silver as Ag(mg/l)	BDL (DL=0.01)	0.01	No Relaxation	APHA 24 th Edn :2023 3500 Ag

BDL=Below Detectable Limit

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TEST REPORT - ADDITIONAL SHEET

Sample Ref No. :SAS/W/346/09

Report No. :346/09
Report Date :01.10.2024
Page : 3 of 4

Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
26	Sulphates as SO ₄ (mg/l)	135	200	400	APHA 24 th Edn :2023 4500 SO ₄ E
27	Mercury as Hg (mg/l)	BDL (DL=0.0005)	0.001	No Relaxation	APHA 24 th Edn :2023 3500-Hg
28	Total Alkalinity as CaCO ₃ (mg/l)	510	200	600	APHA 24 th Edn :2023 2320B
29	Total Hardness as CaCO ₃ (mg/l)	480	200	600	APHA 24 th Edn :2023 2340 C
30	Zinc as Zn (mg/l)	BDL (DL=0.01) 106	5.0	15.0	APHA 24 th Edn :2023 3500-Zn B
31	Calcium as Ca (mg/l)		75.0	200	APHA 24 th Edn :2023 3500 - Ca B
32	Manganese as Mn(mg/l)	BDL(DL :0.01)	0.1	0.3	APHA 24 th Edn :2023 3500-Mn B

MICROBIOLOGICAL EXAMINATION

Sl. No	PARAMETERS	RESULTS	Requirement as per IS 10500: 2012 Second revision (Acceptable Limit)	TEST METHOD
33	Total Coliforms (MPN / 100ml)	Absent	Shall not be detectable in any 100 ml	IS:1622-1981 Amd.4 RA 2012
34	E.coli (MPN / 100ml)	Absent	Shall not be detectable in any 100 ml	IS:1622-1981 Amd.4 RA 2012

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TEST REPORT

Sample Ref No. :SAS/W/347/09			Report No. :347/09		
NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED ADDRESS Manali Express Highway, Manali Chennai-600068			Report Date :01.10.2024 Page: 1 of 3		
Sample Description : Water Sample Drawn By/ Date :Customer26.09.2024 Customer's Reference : Letter Dated on 26.09.2024 Sample Mark : Bore Well Water -2			Received On :26.09.2024 Commenced On :26.09.2024 Completed On :01.10.2024		
Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
1	Color (Hazen Unit)	10.0	5.0	15.0	APHA 24 th Edn :2023 2120 B
2	Odor	Agreeable	Agreeable	Agreeable	IS 3025 P.5 1983 R.2012
3	pH value @ 25°C	8.09	6.5-8.5	No relaxation	APHA 24 th Edn :2023 4500 H ⁺ B
4	Dissolved Oxygen	6.80	NA	NA	IS 3025 P-38:1989
5	Salinity	840	NA	NA	APHA 24 th Edn :2023 2520 B
6	Total Dissolved Solids (mg/l)	1540	500	2000	IS 3025:P.16:1984:R.2012
7	Total Suspended Solids	20.0	-	-	IS:3025: P.17:1984:R.2012
8	Electrical Conductivity at 25°C	2410	NA	NA	IS 3025 P-14:2013
9	Aluminium as Al(mg/l)	BDL (DL=0.01)	0.03	0.2	APHA 24 th Edn :2023 3500-Al B
10	Taste	Disagreeable	Agreeable	Agreeable	IS3025 P-8:1 984
11	BOD at 27°C for 3 days (mg/l)	BDL(DL : 2.0)	NA	NA	IS: 3025 P. 44 1993 R. 2009
12	COD (mg/l)	10.0	NA	NA	APHA 24 th Edn :2023 5220 B
13	Sodium as Na (mg/l)	260	NA	NA	IS 3025 P-45 :1993

for SANTHOME ENVIRO SERVICES

A. Kaviyarasi
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TEST REPORT – ADDITIONAL SHEET

Sample Ref No. :SAS/W/347/09			Report No. :347/09 Report Date :01.10.2024 Page : 2 of 4		
Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
14	Turbidity (NTU)	3.0	1.0	5.0	IS 3025 (Part 10) : 1984
15	Temperature °C	27.0	NA	NA	IS 3025 P.09 1984
16	Chlorides as Cl(mg/l)	510	250	1000	APHA 24 th Edn :2023 4500 Cl ⁻ B
17	Copper as Cu (mg/l)	BDL (DL=0.01)	0.05	1.5	APHA 24 th Edn :2023 3500-Cu B
18	Fluoride as F (mg/l)	0.40	1.0	1.5	APHA 24 th Edn :2023 4500-F D
19	Free Residual Chlorine (mg/l)	<0.2	0.2	1.0	APHA 24 th Edn :2023 4500 Cl B
20	Total Iron as Fe(mg/l)	0.030	1.0	No Relaxation	APHA 24 th Edn :2023 3500 Fe B
21	Magnesium as Mg (mg/l)	54.0	30.0	100	APHA 24 th Edn :2023 2340 C
22	Total Arsenic as As (mg/l)	BDL (DL=0.005)	0.01	No Relaxation	APHA 24 th Edn :2023 3500-As
21	Cadmium as Cd (mg/l)	BDL (DL=0.001)	0.003	No Relaxation	APHA 24 th Edn :2023 3500-Cd
22	Nitrate as NO ₃ (mg/l)	BDL (DL=0.1)	45.0	No Relaxation	IS 3025 P.34 1988 R.2009
23	Total Chromium as Cr(mg/l)	BDL (DL=0.01)	0.05	No Relaxation	APHA 24 th Edn :2023 3500 Cr
24	Lead as Pb (mg/l)	BDL (DL=0.005)	0.01	No Relaxation	APHA 24 th Edn :2023 3500 Pb B
25	Silver as Ag(mg/l)	BDL (DL=0.01)	0.01	No Relaxation	APHA 24 th Edn :2023 3500 Ag
BDL=Below Detectable Limit					
for SANTHOME ENVIRO SERVICES					
<div style="text-align: center;">  Verified & Authorized By A.Kaviyarasi - Technical Manager </div>					
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TEST REPORT - ADDITIONAL SHEET					
Sample Ref No. :SAS/W/347/09			Report No. :347/09 Report Date :01.10.2024 Page : 3 of 4		
Sl. No	PARAMETERS	RESULTS	IS 10500:2012		TEST METHOD
			Acceptable Limits	Permissible Limits	
26	Sulphates as SO ₄ (mg/l)	130	200	400	APHA 24 th Edn :2023 4500 SO ₄ E
27	Mercury as Hg (mg/l)	BDL (DL=0.0005)	0.001	No Relaxation	APHA 24 th Edn :2023 3500-Hg
28	Total Alkalinity as CaCO ₃ (mg/l)	495	200	600	APHA 24 th Edn :2023 2320B
29	Total Hardness as CaCO ₃ (mg/l)	490	200	600	APHA 24 th Edn :2023 2340 C
30	Zinc as Zn (mg/l)	BDL (DL=0.01)	5.0	15.0	APHA 24 th Edn :2023 3500-Zn B
31	Calcium as Ca (mg/l)	106	75.0	200	APHA 24 th Edn :2023 3500 - Ca B
32	Manganese as Mn(mg/l)	BDL(DL :0.01)	0.1	0.3	APHA 24 th Edn :2023 3500-Mn B
MICROBIOLOGICAL EXAMINATION					
Sl. No	PARAMETERS	RESULTS	Requirement as per IS 10500: 2012 Second revision (Acceptable Limit)		TEST METHOD
33	Total Coliforms (MPN / 100ml)	Absent	Shall not be detectable in any100 ml		IS:1622-1981 Amd.4 RA 2012
34	E.coli (MPN / 100ml)	Absent	Shall not be detectable in any100 ml		IS:1622-1981 Amd.4 RA 2012
for SANTHOME ENVIRO SERVICES					
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TEST REPORT					
Sample Ref No. :SAS/W/348/09			Report No. :348/09		
NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED ADDRESS Manali Express Highway, Manali Chennai-600068			Report Date :01.10.2024 Page: 1 of 3		
Sample Description : Water Sample Drawn By/ Date :Customer26.09.2024 Customer's Reference : Letter Dated on 26.09.2024 Sample Mark : Drinking Water			Received On :26.09.2024 Commenced On :26.09.2024 Completed On :01.10.2024		
Sl. No	PARAMETERS	RESULTS	As Per IS 10500:2012		TEST METHOD
			Requirement (Acceptable limit)	Permissible limit in the absence of alternate source	
1	Color (Hazen Unit)	<1.0	5	15	APHA 24 th Edn :2023 2120 B
2	Odor	Agreeable	Agreeable	Agreeable	IS 3025 P.5 1983 R.2012
3	pH value @ 25°C	7.10	6.5 – 8.5	6.5 – 8.5	APHA 24 th Edn :2023 4500 H ⁺ B
4	Dissolved Oxygen	8.20	NA	NA	IS 3025 P-38:1989
5	Salinity	21.0	NA	NA	APHA 24 th Edn :2023 2520 B
6	Total Dissolved Solids (mg/l)	40.0	500	2000	IS 3025:P.16:1984:R.2012
7	Total Suspended Solids	<1.0	14.0	30	IS:3025: P.17:1984:R.2012
8	Electrical Conductivity at 25°C	80.0	NA	NA	IS 3025 P-14:2013
9	Aluminium as Al(mg/l)	BDL (DL=0.01)	0.03	0.2	APHA 24 th Edn :2023 3500-AI B
10	Taste	Agreeable			IS3025 P-8:1 984
11	BOD at 27°C for 3 days	BDL (DL=2.0)	14.0	30	IS: 3025 P. 44 1993 R. 2009
12	COD	BDL (DL=1.0)	110	250	APHA 24 th Edn :2023 5220 B
13	Sodium as Na	2.0	NA	NA	IS 3025 P-45 :1993
for SANTHOME ENVIRO SERVICES					
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TEST REPORT – ADDITIONAL SHEET

Sample Ref No. :SAS/W/348/09

Report No. :348/09

Report Date :01.10.2024

Page : 2 of 4

Sl. No	PARAMETERS	RESULTS	As Per IS 10500:2012		TEST METHOD
			Requirement (Acceptable limit)	Permissible limit in the absence of alternate source	
14	Turbidity (NTU)	<1.0	1	5	IS 3025 (Part 10) : 1984
15	Temperature °C	27.0	27.0	40° C at the point of discharge	IS 3025 P.09 1984
16	Chlorides as Cl(mg/l)	13.0	250	1000	APHA 24 th Edn :2023 4500 Cl ⁻ B
17	Copper as Cu (mg/l)	BDL (DL=0.01)	0.05	1.5	APHA 24 th Edn :2023 3500-Cu B
18	Fluoride as F (mg/l)	BDL (DL=0.1)	1.0	1.5	APHA 24 th Edn :2023 4500-F D
19	Free Residual Chlorine (mg/l)	BDL (DL=0.1)	0.2	1.0	APHA 24 th Edn :2023 4500 Cl B
20	Total Iron as Fe(mg/l)	BDL (DL=0.01)	0.3	0.3	APHA 24 th Edn :2023 3500 Fe B
21	Magnesium as Mg (mg/l)	0.96	30	100	APHA 24 th Edn :2023 2340 C
22	Total Arsenic as As (mg/l)	BDL (DL=0.005)	0.01	0.05	APHA 24 th Edn :2023 3500-As
21	Cadmium as Cd (mg/l)	BDL (DL=0.001)	0.003	0.003	APHA 24 th Edn :2023 3500-Cd
22	Nitrate as NO ₃ (mg/l)	BDL (DL=0.1)	45	45	IS 3025 P.34 1988 R.2009
23	Total Chromium as Cr(mg/l)	BDL (DL=0.01)	0.05	0.05	APHA 24 th Edn :2023 3500 Cr
24	Lead as Pb (mg/l)	BDL (DL=0.005)	0.01	0.01	APHA 24 th Edn :2023 3500 Pb B
25	Silver as Ag(mg/l)	BDL (DL=0.01)	0.1	0.1	APHA 24 th Edn :2023 3500 Ag

BDL=Below Detectable Limit

for SANTHOME ENVIRO SERVICES

A. Kanti
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TEST REPORT - ADDITIONAL SHEET

Sample Ref No. :SAS/W/348/09			Report No. :348/09 Report Date :01.10.2024 Page : 3 of 4		
Sl. No	PARAMETERS	RESULTS	As Per IS 10500:2012		TEST METHOD
			Requirement (Acceptable limit)	Permissible limit in the absence of alternate source	
26	Sulphates as SO ₄ (mg/l)	4.0	200	400	APHA 24 th Edn :2023 4500 SO ₄ E
27	Mercury as Hg (mg/l)	BDL (DL=0.0005)	0.001	0.001	APHA 24 th Edn :2023 3500-Hg
28	Total Alkalinity as CaCO ₃ (mg/l)	11.0	200	600	APHA 24 th Edn :2023 2320B
29	Total Hardness as CaCO ₃ (mg/l)	10.0	200	600	APHA 24 th Edn :2023
30	Zinc as Zn (mg/l)	BDL (DL=0.01)	5	15	APHA 24 th Edn :2023 3500-Zn B
31	Calcium as Ca (mg/l)	2.40	75	200	APHA 24 th Edn :2023
32	Manganese as Mn(mg/l)	BDL(DL :0.01)	0.1	0.3	APHA 24 th Edn :2023 3500-Mn B
MICROBIOLOGICAL EXAMINATION					
Sl. No	PARAMETERS	RESULTS	Requirement as per IS 10500: 2012 Second revision (Acceptable Limit)		TEST METHOD
33	Total Coliforms (MPN / 100ml)	Absent	Shall not be detectable in any100 ml		IS:1622-1981 Amd.4 RA 2012
34	E.coli (MPN / 100ml)	Absent	Shall not be detectable in any100 ml		IS:1622-1981 Amd.4 RA 2012
for SANTHOME ENVIRO SERVICES					
Verified & Authorized By A.Kaviyarasi - Technical Manager					
End of Page 3					

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TEST REPORT

Sample Ref No. :SAS/W/349/09

Report No. :349/09

CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED
ADDRESS : Manali Express Highway,
Manali, Chennai - 600 068.

Report Date : 01.10.2024
Page: 1 of 5

Sample Description : Effluent Water
Sample Drawn By /Date : SAS/26.09.2024
Customer's Reference : Letter dated on 26.09.2024
Sample Mark : STP- Inlet

Received On : 26.09.2024
Commenced On : 26.09.2024
Completed On : 01.10.2024

Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
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Discipline: Chemical

Pesticides

1	Alachlor	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
2	Aldrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
3	Alpha BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
4	Atrazine	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
5	Beta BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
6	Butachlor	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
7	Chloropyrifos	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
8	Delta BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
9	Dieldrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
10	Deltamethrin	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
11	Endosulfan alpha	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
12	Endosulfan Beta	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
13	Endosulfan Sulfate	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
14	Ethion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
15	Gamma BHC	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
16	Malathion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
17	o,p'-DDD	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
18	o,p'-DDE	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
19	o,p'-DDT	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
20	p,p'-DDD	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
21	p,p'-DDE	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
22	p,p'-DDT	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
23	Parathion-methyl	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
24	Phorate	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024

End of Page 2

for SANTHOME ENVIRO SERVICES



A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
25	2,4-D	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
26	Isoproturon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
27	Malaoxon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
28	Methyl Paraoxon	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
29	Methyl Parathion	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
30	Monocrotophos	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
31	Phorate Sulfone	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
32	Phorate Sulfoxide	mg/l	BDL (DL:0.0001)	SOP/SAS/ 012/2024
33	Arsenic	mg/l	BDL (DL:0.005)	USEPA 200.8 Revision 5.4:1994
34	Cadmium	mg/l	BDL (DL:0.01)	USEPA 200.8 Revision 5.4:1994
35	Chromium	mg/l	BDL (DL:0.0001)	USEPA 200.8 Revision 5.4:1994
36	Copper	mg/l	BDL (DL:0.01)	USEPA 200.8 Revision 5.4:1994
End of Page 3				
for SANTHOME ENVIRO SERVICES				
 Verified & Authorized By A. Kaviyarasi - Technical Manager				
				

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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
37	Nickel	mg/l	BDL (DL:0.1)	USEPA 200.8 Revision 5.4:1994
38	Selenium	mg/l	BDL (DL:0.005)	USEPA 200.8 Revision 5.4:1994
39	Zinc	mg/l	BDL (DL:0.1)	USEPA 200.8 Revision 5.4:1994
40	Ammonia as NH ₃	mg/l	2.50	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	485	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	180	IS: 3025 P. 44 1993 R. 2009
43	Boron as B	mg/l	BDL (DL:0.1))	IS: 3025 P. 57 2021
44	Sodium as Na	mg/l	180	IS 3025 P.45 1993
45	Chemical Oxygen Demand(COD)	mg/l	465	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	305	IS 3025 P.32. 1988
47	Cyanide as CN	mg/l	BDL (DL:0.01)	IS 3025 P.27. 1986
48	Fluorides as F	mg/l	0.80	APHA 24 th Edn :2023 4500 D F

End of Page 4

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
49	Free Residual Chlorine	mg/l	BDL (DL:0.0001)	IS 3025 P.26 2021
50	Hexavalent Chromium as Cr6+	mg/l	BDL (DL:0.005)	IS 3025 P.52 2003
51	Oil and grease	mg/l	10.0	IS 3025 P.39 2021
52	pH value @25°C	mg/l	7.16	IS:3025: P.11:2022
53	Phenolic Compound	mg/l	BDL(DL:0.01)	IS 3025:P.43:1992
54	Dissolved Phosphate as P	mg/l	0.65	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	Nil	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	105	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	2.40	IS 3025 P.29 1986
58	Temperature	°C	27.0	IS 3025 P.09 1984
59	Total dissolved solids @ 180°C	mg/l	1210	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	495	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	120	IS 3025 P.17 1984

End of Page 5

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Santhome Enviro services

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ISO 9001:2015 Certified Laboratory**



TEST REPORT

Sample Ref No. :SAS/W/350/09	Report No. :350/09
CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED ADDRESS : Manali Express Highway, Manali, Chennai - 600 068.	Report Date : 01.10.2024 Page: 1 of 5
Sample Description :Effluent Water Sample Drawn By /Date :SAS/26.09.2024 Customer's Reference :Letter dated on 26.09.2024 Sample Mark : STP- Outlet	Received On : 26.09.2024 Commenced On : 26.09.2024 Completed On : 01.10.2024

Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
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Discipline: Chemical

Pesticides

1	Alachlor	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
2	Aldrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
3	Alpha BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
4	Atrazine	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
5	Beta BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
6	Butachlor	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
7	Chloropyrifos	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
8	Delta BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
9	Dieldrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
10	Deltamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
11	Endosulfan alpha	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
12	Endosulfan Beta	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024

End of Page 1

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
13	Endosulfan Sulfate	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
14	Ethion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
15	Gamma BHC	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
16	Malathion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
17	o,p'-DDD	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
18	o,p'-DDE	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
19	o,p'-DDT	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
20	p,p'-DDD	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
21	p,p'-DDE	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
22	p,p'-DDT	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
23	Parathion-methyl	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
24	Phorate	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024

End of Page 2

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
25	2,4-D	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
26	Isoproturon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
27	Malaoxon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
28	Methyl Paraoxon	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
29	Methyl Parathion	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
30	Monocrotophos	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
31	Phorate Sulfone	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
32	Phorate Sulfoxide	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
33	Arsenic	mg/l	BDL (DL:0.005)	Absent	USEPA 200.8 Revision 5.4:1994
34	Cadmium	mg/l	BDL (DL:0.01)	Absent	USEPA 200.8 Revision 5.4:1994
35	Chromium	mg/l	BDL (DL:0.0001)	Absent	USEPA 200.8 Revision 5.4:1994
36	Copper	mg/l	BDL (DL:0.01)	Absent	USEPA 200.8 Revision 5.4:1994

End of Page 3

for SANTHOME ENVIRO SERVICES

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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
37	Nickel	mg/l	BDL (DL:0.1)	Absent	USEPA 200.8 Revision 5.4:1994
38	Selenium	mg/l	BDL (DL:0.005)	Absent	USEPA 200.8 Revision 5.4:1994
39	Zinc	mg/l	BDL (DL:0.1)	Absent	USEPA 200.8 Revision 5.4:1994
40	Ammonia as NH ₃	mg/l	0.50	-	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	8.0	-	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	6.0	10	IS: 3025 P. 44 1993 R. 2009
43	Boron as B	mg/l	BDL (DL:0.1))	-	IS: 3025 P. 57 2021
44	Calcium as ca	mg/l	86.0	-	IS 3025 P.40 1991
45	Chemical Oxygen Demand(COD)	mg/l	19.0	50	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	244	-	IS 3025 P.32. 1988
47	Cyanide as CN	mg/l	BDL (DL:0.01)	0.2	IS 3025 P.27. 1986
48	Fluorides as F	mg/l	0.60	2	APHA 24 th Edn :2023 4500 D'F

End of Page 4

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
49	Free Residual Chlorine	mg/l	BDL (DL:0.2)	-	IS 3025 P.26 2021
50	Hexavalent Chromium as Cr6+	mg/l	BDL (DL:0.0001)	-	IS 3025 P.52 2003
51	Oil and grease	mg/l	BDL(DL : 1.0)	10	IS 3025 P.39 2021
52	pH value @25°C	mg/l	7.88	5.5 to 9.0	IS:3025: P.11:2022
53	Phenolic Compound	mg/l	BDL(DL :0.01)	1.0	IS 3025:P.43:1992
54	Dissolved Phosphate as P	mg/l	Nil	-	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	Nil	NA	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	132	-	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	Nil	-	IS 3025 P.29 1986
58	Temperature	°C	27.0	40° C at the point of discharge	IS 3025 P.09 1984
59	Total dissolved solids @ 180°C	mg/l	1500	-	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	1.90	-	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	15.0	20	IS 3025 P.17 1984

End of Page 5

for **SANTHOME ENVIRO SERVICES**

Akari
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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Santhome Enviro services

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TEST REPORT

Sample Ref No. :SAS/W/350/09	Report No. :350/09
CUSTOMER NAME : TAMILNADU PETROPRODUCTS LIMITED ADDRESS : Manali Express Highway, Manali, Chennai - 600 068.	Report Date : 01.10.2024 Page: 1 of 5
Sample Description :Effluent Water Sample Drawn By /Date :SAS/26.09.2024 Customer's Reference :Letter dated on 26.09.2024 Sample Mark : STP - Outlet	Received On : 26.09.2024 Commenced On : 26.09.2024 Completed On : 01.10.2024

Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
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Discipline: Chemical

Pesticides

1	Alphamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
2	Cypermethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
3	Deltamethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
4	Permethrin	mg/l	BDL (DL:0.0001)	Absent	SOP/SAS/ 012/2024
5	Mercury	mg/l	BDL (DL:0.01)	0.01	USEPA 200.08 REV 1994
6	Lead	mg/l	BDL (DL:0.1)	0.1	USEPA 200.08 REV 1994
7	Alpha Emitters	Microcurie/ ml	BDL (DL:0.000000001)	0.0000001	IS 14194(Part 2) 1994
8	Beta Emitters	Microcurie/ ml	BDL (DL:0.000000001)	0.0000001	IS 14194(Part 1) 1994

End of Page 1

for **SANTHOME ENVIRO SERVICES**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY

: TAMILNADU PETROPRODUCTS LIMITED(PO-ECH PLANT)

ADDRESS

Manali Express Highway,

Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/338/09

Date of Sampling : 26.09.2024

Sample Rep No : 338/09

Reporting Date : 01.10.2024

Sampling Location

: STP Gate No : 5

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/26.09.2024

Received On

: 26.09.2024

Analysis Commenced On

: 26.09.2024

Analysis Completed on

: 01.10.2024

Sampling Method

: IS 5182 (Part V) and (Part XIV)

Sampling Time

: 8 Hrs

Ambient Temperature

: 38°C

Relative Humidity

: 59%

Sl.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	44.50	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	79.80	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	12.80	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	14.50	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	22.60	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.1)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=1.15)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	29.50	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=1.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=0.1)	20
11	Benzene (C ₆ H ₆)	IS 5182 Part 11-2012	µg / m ³	BDL (DL=0.1)	5
12	Benzo (a) Pyrene	IS 5182 Part 12-2009	ng / m ³	BDL (DL=0.1)	1
13	Suspended Particular Matter	IS 5182 Part 4-1999	µg / m ³	89.50	-

BDL – Below Detectable Limit ; DL – Detection Limit

Remarks: The above results meet the *National Ambient Air Quality Standards –CPCB

End of Report

for **SANTHOME ENVIRO SERVICES**

Verified & Authorized By

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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,
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

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.







