Tamilnadu Petroproducts Limited

Ref: TPL – ECH - PO/ 2022/86

22nd November 2022

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 – reg.

Ref: 1) F.No. J-11011/280/2013-IA-II (I) dated 15.05.2015

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

We enclose herewith the EC compliance status report for the period from April 2022 to September 2022 for your kind reference.

Thanking you,

Yours faithfully,
For Tamilnadu Petroproducts Limited

N. Murugan
AVP - Operations

TAMILNADU PETROPRODUCTS LIMITED CHENNAI - 68

1984 2009 25 Years MOVING AHEAD

QUALITY SYSTEM CERTIFICATION DNV·GL ISO 9001:2015 MGMT. SYS. RvA C 024
ENVIRONMENTAL SYSTEM CERTIFICATION DNV·GL ISO 14001:2015 MGMT. SYS. RvA C 024
OH & S SYSTEM CERTIFICATION DNV·GL ISO 45001:2018 MGMT. SYS. RvA C 024

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 April 2022 to September 2022

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 that 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.	Complied 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. • Measuring concentration of circulating caustic and vent gas emission level. • Caustic solution is replenished when there is a depletion of level. • It is also replaced, whenever the concentration goes below the limit. 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. At no time the emission levels have gone beyond the prescribed standards. The emission levels are continuously monitored and real time monitoring data is being transmitted online to TNPCB and CPCB's servers. Interlocking system is provided with the pollution control equipment, to shut down the unit, in case of any increase in pollution load.

ii	Ambient air quality data shall be collected as per NAAQS standards notified by the ministry vide GSR No. 826 (E) dated 16.09.2009 the levels of PM_{10}, $PM_{2.5}$, SO_2, NOx, CO, Cl_2, 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)	Complied • 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 $PM_{2.5}$, PM_{10}, SO_2, 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	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,	Complied The following measures are taken to control the fugitive emission. • HC and Chlorine detectors are provided with alarm system to monitor fugitive emission regularly

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	multi 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.	in the work zone environment, Product, raw materials and storage area. • Raw material Propylene is stored in bullets with sensors/detectors. • Chlorine is received through pipeline from the adjacent Heavy Chemicals Division of the same company, thereby avoiding any potential emissions while handling Cylinders • Propylene Oxide (PO) and Chlorinated Organics are stored in closed tanks with sensors/detectors and handled in closed pipelines. • Lime (bags) is stored in a closed shed. • Water sprinkling is being carried out at lime Loading and unloading area for dust suppression. • Ambient Air Quality (AAQ) is monitored for Chlorine and VOC manually at 2 locations through accredited lab. • Chlorine in the Ambient Air is monitored at 2 locations by internal lab once in a week. • Online analysers for Chlorine and VOC are installed for continuous monitoring and the real time monitored data are being transmitted to TNPCB and CPCB's servers
iv	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.	Complied. Adequate stack height in DG set is provided, as per the CPCB standard to dispose gaseous emission from DG set. Stack height is 31.5m. Presently DG set is not in operation and

		decommissioned. 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.	Complied • 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 was conducted through M/s. Hubert Enviro Care System (P) Ltd, Chennai in September 2022. • Preventive maintenance for Pumps are carried out once in six months. • Preventive maintenance for Valves and pipelines are carried out once in a year • Proper maintenance and preventive checks for mechanical seals of pumps and valves are carried out once in six months by internal team. • VOC detectors are installed at Product Storage Yard (Propylene Oxide and Propylene Storage tanks area) to monitor fugitive emission continuously. • VOC detectors/sensors are provided in the work zone environment, Product, Raw materials storage area for continuous monitoring. • Proper maintenance program is developed & implemented to protect equipment from ageing.

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vi	Alarm for chlorine leakage if any in the liquid chlorine storage area is provided along with automatic start of the scrubbing system.	Complied Chlorine is not stored in tanks & is received by pipelines from the adjacent unit of Heavy Chemicals Division of the same company Chlorine sensors are provided with alarm, to monitor continuously for chlorine leakage. Chlorine scrubber is being operated continuously.
vii	Total water requirement from CMWSSB water supply shall not exceed 1650 m^3/day and prior permission should be obtained from competent authority.	Complied. The total water requirement from CMWSSB water supply (tertiary treated sewage) is consumed based on prior permission & has not exceeded 1650 m3/day and obtained prior permission.
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.	Complied 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. Obtained permission (CTO) from TNPCB for disposal of treated effluent into sea. Domestic sewage is treated in the common Sewage Treatment Plant (STP).
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.	Complied Collection Pit is provided and treated effluent is pumped to sea through Collection pit. 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. The manually monitored data are being submitted to TNPCB on monthly basis

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		and uploaded on the company's website periodically.
x	The company shall obtain Authorisation for collection, storage and disposal of hazardous waste under the Hazardous waste (MH and TB) Rules 2008 and amended as on date for management of Hazardous wastes and prior permission from TNPCB shall be obtained for disposal of solid / hazardous waste in the TSDF. Measures shall be taken for firefighting facilities in case of emergency	Complied Authorisation for collection, storage and disposal of Hazardous waste under hazardous waste (MH and TB) Rules 2016 has been obtained from TNPCB. Solid waste (lime sludge) is disposed to downstream industries such as brick manufacturers. 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 Firefighting facilities are provided & Onsite emergency plan is maintained to mitigate, in case of any emergency.
xi	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	Complied 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. Material Safety data sheets are available for handling chemicals. Hazardous Chemicals are transported as per the Motor Vehicle Act (MVA) 1989.
xii	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.	Complied 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. Firefighting system is provided as per the norms and obtained Fire license

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		from Tamilnadu Fire & Rescue services, Govt. of Tamilnadu. Fire hydrant system along with fire monitors, Portable extinguisher and flame detectors are provided in the process as well as storage areas. 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.	Complied Recommendations given in the risk assessment report are implemented and being maintained. Salient recommendations are as follows; • 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. • 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	Complied Occupational health surveillances are being conducted for employees periodically, as per the Factories Act. Health records are available and being maintained as per the Factories Act.
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.	Complied Green belt is developed in 48561 m^2 (4.8562 Hectare) area in and around the factory premises to mitigate the effects of fugitive emissions all around the factory. Plant species are selected as per the CPCB guidelines.
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.	Complied 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. Construction wastes were disposed within the premises as landfill without affecting the surrounding environment.

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	General Conditions	
i	The project authorities shall strictly adhere to the stipulations made by the State Government and TN Pollution Control Board.	Complied All the stipulations made by the State Government and TN Pollution Control Board are being adhered regularly.
ii	No further expansion or modification in the plant shall be carried out without prior approval of the Ministry of Environment and Forests. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.	Complied. No further expansion or modification in the plant will be carried out, without prior approval of the Ministry of Environment and Forests. Fresh reference were not made to the Ministry to assess the adequacy of conditions imposed and to add additional environmental protection measures required as there were no deviations or alterations in the project proposal.
iii	The locations of ambient air quality monitoring stations shall be decided in consultation with the State Pollution Control board (SPCB) and it shall be ensured that at least one station is installed in the upwind and downwind direction as well as where maximum ground level concentration are anticipated.	Complied Locations of ambient air quality monitoring stations are selected to monitor ambient air quality as per given guidelines & in consultation with TNPCB. One mobile monitoring station in the upwind and one mobile monitoring station in the downwind direction are provided for ambient air quality monitoring, which includes where maximum ground level concentration is anticipated.
iv	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures, etc., on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under Environment (Protection) Act 1989 viz 75 dBA (day	Complied Acoustic hoods, silencers, enclosures, etc., are provided at DG sets to keep the noise level within the prescribed standards. Ambient noise levels at five locations are being monitored manually during day and night time by internal lab once in a month.

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	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.	Complied Rain water harvesting facility is provided at the following buildings to collect roof top rain water and it is let into freshwater reservoir. • Mechanical workshop • Fire water pump house • Raw Water Pump house Area covered is 5000 m^2. The harvested water is utilised for process activities to conserve fresh water. Additionally, Recharge percolation pits are provided to recharge the rainwater into the pits.
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.	Complied Training on safety and health aspects of chemicals handling is conducted to all employees regularly. Pre-employment and routine periodical medical examinations are being conducted to all employees on regular basis.
vii	Usage of personal protective Equipment (PPEs) by all employees / workers shall be ensured	Complied Personal protective Equipment (PPEs) are provided to all employees / workers and ensured for using.
viii	The company shall also comply with all the environmental protection measures and safe guards proposed in the documents submitted to the Ministry.	Complied The environmental protection measures and safe guards proposed in the documents submitted to the Ministry are being complied at all times.
	All the recommendations made in the EIA/EMP in respect of environmental management, Risk mitigation measures	Complied Recommendations made in the EIA/EMP in respect of environmental

	and public hearing relating to the project shall be implemented.	management and risk assessment report are being implemented regularly. • 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-	**Being Complied** Following social upliftment schemes

	economic conditions of the surrounding area CSR activities shall be undertaken by involving local villages and administration.	are being carried out in the nearby area. 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. • **PHCC** is provided at Sadayan Kuppam village, Manali • **PHCC** is provided at Vichoor village, Manali. • **PHCC** is provided at Periyasekkadu, Manali. • **Mobile PHCC** is provided. 2) **Rest Rooms were constructed at the following locations.** • Government high school at Manali New Town. • Government high school at Redhills. • Government high school at Vichoor. • Government high school at Padiyanallur
x	The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Complied Eco-developmental measures (mainly green belt development) are taken to improve the environment.
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.	Complied 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.
xii	The company shall earmark sufficient funds towards capital cost and recurring cost/annum to implement the conditions	Complied Adequate funds towards capital cost and recurring cost/annum are allocated

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

	(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.	the year 2021 – 2022 was submitted on 22.09.2022. 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 PETROPRODUCTS LIMITED CHENNAI - 68

TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

AMBIENT AIR QUALITY SURVEY – Report of Analysis

Report No. 81/AAQS/2022-23 Date: 28.10.2022

1. Name of the Industry : **M/s. TPL (ECH),**
2. Address of the Industry : Manali Express Highway, Manali, Chennai - 68.
3. Date of Survey : 12.10.2022
4. Duration of Survey : **8 Hours** / 24 hours
5. Category : **Red** / Orange / Green – **Large** / Medium / Small
6. Land use classification : **Industrial** / Commercial / Residential / Sensitive

Meteorological Conditions

Ambient Temperature (^{0}C)	Min	Max	Relative Humidity (%)	Min	Max
	30	32		62	84
Weather Condition	Partially Cloudy		Rain Fall (mm)	Nil	
Predominant Wind Direction	SE-NW		Mean Wind Speed (km/hr)	13.4	

Ambient Air Quality Survey Results

Sl. No.	Location	Direction *	Distance (m) *	Height Form GL (m)	Pollutants Concentration (microgram / m^3)				
					PM 2.5	PM 10	SO_2	NO_2	Cl_2
1	On top of platform near CP Station II	NE	150	3.0	28	58	9	13	BDL
2	On top of platform near Propylene Oxide Filling Point	E	280	3.0	--	54	8	12	BDL
3	On top of platform near STP (Gate No 5)	SE	700	3.0	--	52	7	10	BDL
4	On top of platform near ERC Building (Gate No 3)	SW	200	3.0	21	63	10	14	BDL
5	On top of platform near Flare Area	NW	240	3.0	--	66	11	15	BDL

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

T. Thamaraiselvi 28.10.22

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

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

TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

STACK MONITORING SURVEY – Report of Analysis

Report No. 81/AAQS/2022-23 Date: 28.10.2022

1. Name of the Industry : **M/s. TPL (ECH),**
2. Address of the Industry : Manali Express Highway, Manali, Chennai – 68
3. Date of Survey : 12.10.2022
4. Type of Industry : Coal/**Chemical**/Sugar/Paper & Pulp/ Power plant / Textile Processing

Stack Monitoring Survey Results

Sl. No.	Stack attached to	Fuel used	Stack Temp ^0K	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	435	9.7	7836	2	BDL	24	-
2	Vent Gas Scrubber	--	309	8.2	757	2	-	-	2

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

T. Thamaraiselvi 28.10.22

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

TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

AMBIENT/SOURCE NOISE LEVEL SURVEY - Report of Analysis

Report No. 81/ NLS/2022-23 Date: 28.10.2022

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

Category	**RL**	**Land use Classification**	Industrial
Type of Survey	**Ambient**/Source	**Time of Survey**	Day
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**	FAST
Sound Incidence	RANDOM			**Time in hrs**	14.00 – 15.00

Report of Noise Level Monitoring

Sl No	**Location**	Duration (min)	Distance (M)	Direction	**Sound Level – dB (A)**		
					L_{eq}	**Min**	**Max**
1	Near CP Station II	10	150	NE	60.6	57.3	65.2
2	Near Propylene Oxide Filling Point	10	280	E	59.7	55.1	65.7
3	Near STP (Gate No.5)	10	700	SE	57.8	55.5	68.3
4	Near ERC Building (Gate No 3)	10	200	SW	64.0	57.1	70.1
5	Near Flare Area	10	240	NW	53.2	48.7	60.7

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

T. Thamaraiselvi 28.10.22

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

TAMIL NADU POLLUTION CONTROL BOARD

DISTRICT ENVIRONMENTAL LABORATORY – MANALI

TVOC Survey – Report of Anlaysis

Report No. **81** /TVOC/2022-23 dated 28.10.2022

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

TVOC – Analysis Report

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

T. Thamaraiselvi 28.10.22

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

Hubert Enviro Care Systems (P) Ltd.
A-21, III Phase, Thiru Vi Ka Industrial Estate,
Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in

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

TEST REPORT

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

Report No. : **HECSL/AA/021/300922**
Report Date : **06/10/2022**

Sample Description : **Ambient Air Quality**
Sampling Location : **Near Propylene Bullet**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On :**05/10/2022**

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m³	10.43	IS : 5182 (Part - 2):2001	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m³	19.49	IS: 5182 (Part - 6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m³	50.63	IS: 5182 (Part - 23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m³	21.14	IS: 5182 (Part - 24):2019	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m³	BLQ(LOQ 0.05)	IS : 5182 (Part - 10) 1999	4 (1 hours)	2 (8 hours)
6	Lead	µg/m³	BLQ(LOQ 0.05)	IS: 5182 (Part - 22): 2004	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m³	10.73	HECS/AIR/AMBIENT/SOP/007 :2013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m³	5.29	HECS/AIR/AMBIENT/SOP/006 :2013	400 (24 hours)	100 (Annual)
9	Benzene	µg/m³	BLQ(LOQ 1)	IS: 5182 (Part - 11):2006	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m³	BLQ(LOQ 1)	IS: 5182 (Part - 12): 2004	1 (Annual)	1 (Annual)
11	Arsenic	ng/m³	BLQ(LOQ 2)	HECS/AIR/AMBIENT/009:2013	6 (Annual)	6 (Annual)
12	Nickel	ng/m³	BLQ(LOQ 10)	HECS/AIR/AMBIENT/009:2013	20 (Annual)	20 (Annual)
13	Suspended Particulate Matter	µg/m³	78.09	IS: 5182 (P-4) 1999	NA	NA

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

Authorized Signatory

SIVAPRAKASAM. M
Lab Manager

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Guindy, Chennai - 600 032.
Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in

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

TEST REPORT

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

Report No. : **HECSL/AA/022/300922**
Report Date : **06/10/2022**

Sample Description : **Ambient Air Quality**
Sampling Location : **Near Main Gate No.3**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results Obtained	Test Method	NAAQ Standards : 2009	
1	Sulphur Dioxide	µg/m³	13.25	IS : 5182 (Part - 2):2001	80 (24 hours)	50 (Annual)
2	Nitrogen Dioxide	µg/m³	21.61	IS: 5182 (Part - 6):2006	80 (24 hours)	40 (Annual)
3	Particulate Matter Size Less than 10 µm	µg/m³	53.37	IS: 5182 (Part - 23):2006	100 (24 hours)	60 (Annual)
4	Particulate Matter Size Less than 2.5 µm	µg/m³	23.28	IS: 5182 (Part - 24):2019	60 (24 hours)	40 (Annual)
5	Carbon Monoxide	mg/m³	BLQ(LOQ 0.05)	IS : 5182 (Part - 10) 1999	4 (1 hours)	2 (8 hours)
6	Lead	µg/m³	BLQ(LOQ 0.05)	IS: 5182 (Part - 22): 2004	1 (24 hours)	0.5 (Annual)
7	Ozone	µg/m³	12.24	HECS/AIR/AMBIENT/SOP/007 :2013	180 (1 hours)	100 (8 hours)
8	Ammonia	µg/m³	7.20	HECS/AIR/AMBIENT/SOP/006 :2013	400 (24 hours)	100 (Annual)
9	Benzene	µg/m³	BLQ(LOQ 1)	IS: 5182 (Part - 11):2006	5 (Annual)	5 (Annual)
10	Benzo(a)pyrene	ng/m³	BLQ(LOQ 1)	IS: 5182 (Part - 12): 2004	1 (Annual)	1 (Annual)
11	Arsenic	ng/m³	BLQ(LOQ 2)	HECS/AIR/AMBIENT/009:2013	6 (Annual)	6 (Annual)
12	Nickel	ng/m³	BLQ(LOQ 10)	HECS/AIR/AMBIENT/009:2013	20 (Annual)	20 (Annual)
13	Suspended Particulate Matter	µg/m³	82.25	IS: 5182 (P-4) 1999	NA	NA

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

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SIVAPRAKASAM. M
Lab Manager

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TEST REPORT

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

Report No. : **HECSL/ST/010/300922**
Report Date : **06/10/2022**

Sample Description : **Stack Emission**
Sample Mark : **Chlorine Scrubber**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method
1	Chlorine	mg/Nm³	1.1	HECS/AIR/STACK/SOP026

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

End of Report

Authorized Signatory

SIVAPRAKASAM. M
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TEST REPORT

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

Report No. : **HECSL/ST/011/300922**
Report Date : **06/10/2022**

Sample Description : **Stack Emission**
Sample Mark : **Boiler Stack**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method	Standards
1	Particulate Matter	mg/Nm³	5.04	IS 11255 (Part-1) 1985	Max 10
2	Sulphur Dioxide	mg/Nm³	10.68	IS 11255 (Part-2) 1985	Max 50
3	Oxides of Nitrogen	mg/Nm³	42.90	IS 11255 (Part-7) 2005	Max 350
4	Carbon monoxide	mg/Nm³	47.14	IS 13270 - 1992	Max 150
5	Hydrocarbon	mg/Nm³	BLQ(LOQ 1)	IS 5182 (Part-17) 1979	NA
6	Non - Methane Hydro Carbon(NMHC)	mg/Nm³	BLQ(LOQ 0.1)	USEPA METHOD 25	NA

Note:- BLQ - Below the Limit of Quantification, LOQ- Limit of Quantification, mg/Nm³- Milligrams per Normal cubic meter, NA –Not Applicable.

Values Corrected to 3% Oxygen.

End of Report

Authorized Signatory
SWAMINAKASAM. M
Lab Manager

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TEST REPORT

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

Report No. : **HECSL/ST/010/300922**
Report Date : **06/10/2022**

Sample Description : **Stack Emission (VOC)**
Sample Mark : **Chlorine Scrubber**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

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

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

End of Report

Authorized Signatory
SIVAPRAKASAM. N
Lab Manager

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TEST REPORT

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

Report No. : **HECSL/ST/011/300922**
Report Date : **06/10/2022**

Sample Description : **Stack Emission (VOC)**
Sample Mark : **Boiler Stack**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

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

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

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TEST REPORT

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

Report No. : **HECSL/WT/003/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **RO Drinking Water**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method	IS:10500-2012	
					Acceptable Limits	Permissible Limits
1	pH (at 25 °C)	-	6.94	IS 3025 (Part - 11):1983	6.5 - 8.5	No relaxation
2	Colour	Hazen Unit	BLQ(LOQ:1.0)	IS 3025(Part - 4):1983	5	15
3	Turbidity	NTU	BLQ(LOQ:0.1)	IS 3025(Part - 10):1984	1	5
4	Odour	-	Agreeable	IS 3025 (Part - 5):1983	Agreeable	Agreeable
5	Taste	-	Agreeable	IS 3025 (Part - 8):1984	Agreeable	Agreeable
6	Total Hardness as CaCO3	mg/l	28.0	IS 3025 (Part - 21):1983	200	600
7	Calcium as Ca	mg/l	7.40	IS 3025 (Part - 40):1991	75	200
8	Total Alkalinity as CaCO3	mg/l	22.0	IS 3025 (Part - 23):1986	200	600
9	Chloride as Cl	mg/l	46.04	4500 Cl — B APHA 23rd Edn: 2017	250	1000
10	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):1986	0.2	1
11	Magnesium as Mg	mg/l	2.56	IS 3025 (Part - 46) 1994	30	100
12	Total Dissolved Solids	mg/l	114.0	IS 3025(Part -16):1984	500	2000
13	Sulphate as SO4	mg/l	18.6	IS 3025(Part - 24):1986	200	400
14	Fluoride	mg/l	BLQ(LOQ:0.2)	IS 3025 (Part - 60):1986	1.0	1.5
15	Nitrate as NO3	mg/l	1.4	IS 3025 (Part 34): 1988	45	No Relaxation
16	Iron as Fe	mg/l	BLQ(LOQ:0.02)	IS 3025 (Part - 53):2003	1.0	No Relaxation
17	Aluminium as Al	mg/l	BLQ(LOQ:0.03)	IS 3025 (Part - 55):2003	0.03	0.2
18	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	USEPA Method 200.8:1994	5	15
19	Copper as Cu	mg/l	BLQ(LOQ 0.01)	USEPA Method 200.8:1994	0.05	1.5
20	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994	0.1	0.3
21	Cadmium as Cd	mg/l	BLQ(LOQ 0.001)	USEPA Method 200.8:1994	0.003	No Relaxation

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TEST REPORT

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

Report No. : **HECSL/WT/003/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **RO Drinking Water**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

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

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

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

Authorized Signatory

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TEST REPORT

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

Report No. : **HECSL/MB/014/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **RO Drinking Water**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **01/10/2022**

S.No.	Parameters	Units	Results	Test Method	IS:10500-2012	
					Acceptable Limits	Permissible Limits
1	Total Coliforms	Per 100ml	Absent	IS 1622	Absent/100ml	NA
2	Escherichia coli	Per 100ml	Absent	IS 1622	Absent/100ml	NA

Note:-NA - Not Applicable.

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

End of Report

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TEST REPORT

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

Report No. : **HECSL/WT/004/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **Borewell Water No:1**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method
1	pH (at 25 °C)	-	7.78	IS 3025 (Part - 11):1983
2	Electrical conductivity at 25 °C	µS/cm	5400.0	IS 3025 (Part - 14):1983
3	Colour	Hazen Unit	4.0	IS 3025(Part - 4):1983
4	Turbidity	NTU	26.9	IS 3025(Part - 10):1984
5	Odour	-	Agreeable	IS 3025 (Part - 5):1983
6	Taste	-	Disagreeable	IS 3025 (Part - 8):1984
7	Total Hardness as CaCO3	mg/l	730.0	IS 3025 (Part - 21):1983
8	Calcium as Ca	mg/l	140.06	IS 3025 (Part - 40):1991
9	Total Alkalinity as CaCO3	mg/l	460.0	IS 3025 (Part - 23):1986
10	Chloride as Ci	mg/l	1048.72	4500 Cl — B APHA 23rd Edn: 2017
11	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):1986
12	Magnesium as Mg	mg/l	89.17	IS 3025 (Part - 46) 1994
13	Total Dissolved Solids	mg/l	2604.0	IS 3025(Part -16):1984
14	Sulphate as SO4	mg/l	560.26	IS 3025(Part - 24):1986
15	Fluoride	mg/l	0.48	IS 3025 (Part - 60):1986
16	Nitrate as NO3	mg/l	8.36	IS 3025 (Part 34): 1988
17	Iron as Fe	mg/l	0.82	IS 3025 (Part - 53):2003
18	Aluminium as Al	mg/l	BLQ(LOQ:0.03)	IS 3025 (Part - 55):2003
19	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	USEPA Method 200.8:1994
20	Copper as Cu	mg/l	BLQ(LOQ 0.01)	USEPA Method 200.8:1994
21	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994
22	Cadmium as Cd	mg/l	BLQ(LOQ 0.001)	USEPA Method 200.8:1994
23	Lead as Pb	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994

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TEST REPORT

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

Report No. : **HECSL/WT/004/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **Borewell Water No:1**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method
24	Arsenic as As	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994
25	Mercury as Hg	mg/l	BLQ(LOQ 0.0005)	USEPA Method 200.8:1994
26	Sodium as Na	mg/l	540.0	IS3025 (Part - 45):1993
27	BOD,3 days @27°C as O2	mg/l	2.0	IS 3025 (Part - 44):1993
28	Chemical oxygen demand as O2	mg/l	24.0	IS 3025 (Part - 58):2006
29	Temperature	°C	29.0	IS 3025 (Part - 9):1984
30	Dissolved oxygen	mg/l	6.3	IS 3025 (Part - 38):1989
31	Salinity	ppt	1.46	2520 A APHA 23rd Edn. 2017
32	Total Chromium	mg/l	0.028	USEPA Method 200.8 : 1994

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

End of Report

Hubert Enviro Care Systems (P) Ltd. Chennai 600 032

Authorized Signatory
SWAPPAKASAM. M
Lab Manager

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Ph: 42985555 / 43635555 Fax : 42985500
E-mail : labsales@hecs.in

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

TEST REPORT

Report No. : **HECSL/MB/015/300922**
Report Date : **06/10/2022**

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

Sample Description : **WATER**
Sample Mark : **Borewell Water No:1**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**
Completed On : **01/10/2022**

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

End of Report

Authorized Signatory

SIVAPRAKASAM. M
Lab Manager

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TEST REPORT

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

Report No. : **HECSL/WT/005/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **Borewell Water No:2**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method
1	pH (at 25 °C)	-	7.16	IS 3025 (Part - 11):1983
2	Electrical conductivity at 25 °C	µS/cm	7640.0	IS 3025 (Part - 14):1983
3	Colour	Hazen Unit	7.0	IS 3025(Part - 4):1983
4	Turbidity	NTU	38.4	IS 3025(Part - 10):1984
5	Odour	-	Agreeable	IS 3025 (Part - 5):1983
6	Taste	-	Disagreeable	IS 3025 (Part - 8):1984
7	Total Hardness as CaCO3	mg/l	810.0	IS 3025 (Part - 21):1983
8	Calcium as Ca	mg/l	220.16	IS 3025 (Part - 40):1991
9	Total Alkalinity as CaCO3	mg/l	360.0	IS 3025 (Part - 23):1986
10	Chloride as Cl	mg/l	1392.04	4500 Cl --- B APHA 23rd Edn: 2017
11	Residual free Chlorine	mg/l	BLQ(LOQ:0.1)	IS 3025 (Part - 26):1986
12	Magnesium as Mg	mg/l	69.48	IS 3025 (Part - 46) 1994
13	Total Dissolved Solids	mg/l	4206.0	IS 3025(Part -16):1984
14	Sulphate as SO4	mg/l	970.2	IS 3025(Part - 24):1986
15	Fluoride	mg/l	0.56	IS 3025 (Part - 60):1986
16	Nitrate as NO3	mg/l	19.2	IS 3025 (Part 34): 1988
17	Iron as Fe	mg/l	5.6	IS 3025 (Part - 53):2003
18	Aluminium as Al	mg/l	BLQ(LOQ 0.03)	IS 3025 (Part - 55):2003
19	Zinc as Zn	mg/l	BLQ(LOQ 0.1)	USEPA Method 200.8:1994
20	Copper as Cu	mg/l	0.042	USEPA Method 200.8:1994
21	Manganese as Mn	mg/l	BLQ(LOQ:0.05)	USEPA Method 200.8:1994
22	Cadmium as Cd	mg/l	BLQ(LOQ 0.001)	USEPA Method 200.8:1994
23	Lead as Pb	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

Authorized Signatory
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Lab Manager

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TEST REPORT

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

Report No. : **HECSL/WT/005/300922**
Report Date : **06/10/2022**

Sample Description : **WATER**
Sample Mark : **Borewell Water No:2**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method
24	Arsenic as As	mg/l	BLQ(LOQ 0.005)	USEPA Method 200.8:1994
25	Mercury as Hg	mg/l	BLQ(LOQ 0.0005)	USEPA Method 200.8:1994
26	Sodium as Na	mg/l	740.0	IS3025 (Part - 45):1993
27	BOD,3 days @27°C as O2	mg/l	5.0	IS 3025 (Part - 44):1993
28	Chemical oxygen demand as O2	mg/l	42.0	IS 3025 (Part - 58):2006
29	Temperature	°C	29.0	IS 3025 (Part - 9):1984
30	Dissolved oxygen	mg/l	6.1	IS 3025 (Part - 38):1989
31	Salinity	ppt	1.74	2520 A APHA 23rd Edn. 2017
32	Total Chromium	mg/l	0.014	USEPA Method 200.8 : 1994

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD Chennai 600 032

Authorized Signatory
SIVAPRAKASAM. M
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ISO 9001, 14001 & 45001 Certified.

TEST REPORT

Report No. : **HECSL/MB/016/300922**
Report Date : **06/10/2022**

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

Sample Description : **WATER**
Sample Mark : **Borewell Water No:2**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **01/10/2022**

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

End of Report

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

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TEST REPORT

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

Report No. : **HECSL/WW/013/300922**
Report Date : **06/10/2022**

Sample Description : **Waste Water**
Sample Mark : **Treated Effluent Outlet**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits *
1	Total suspended Solids	mg/l	BLQ(LOQ1.0)	IS 3025 (Part 17) 1984	100
2	pH @ 25°C	-	6.94	4500 H+B APHA 23rd Edition: 2017	5.5 - 9.0
3	Total Dissolved Solids	mg/l	30560.0	IS 3025 (Part 16) 1984	-
4	Temperature	°C	29.0	IS 3025 (Part 9):1983	45°C
5	Oil & Grease	mg/l	BLQ(LOQ4.0)	IS 3025 (Part 39) 1991	20
6	Ammonical Nitrogen as N	mg/l	9.46	IS 3025 Part (34)1988	50
7	Total Kjeladahl Nitrogen as N	mg/l	15.04	IS 3025 Part (34)1988	100
8	Free Ammonia as NH3	mg/l	BLQ(LOQ0.02)	IS:3025 (Part34)1998	5
9	BOD, 3 days @ 27°C as O2	mg/l	11.0	IS:3025 (Part 44)1993	100
10	COD as O2	mg/l	102.0	IS 3025 (Part 58) 2006	250
11	Lead as Pb	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part 47)1994	1
12	Chromium (Hexavalent) as Cr6+	mg/l	BLQ(LOQ0.1)	IS 3025 Part (52):2003	1
13	Total Chromium as Cr	mg/l	BLQ(LOQ 0.01)	IS 3025(Part 52):2003	2
14	Copper as Cu	mg/l	BLQ(LOQ 0.05)	IS:3025(Part 42)1992	3
15	Zinc as Zn	mg/l	0.038	IS:3025 (Part49)1994	1.5
16	Nickel as Ni	mg/l	BLQ(LOQ 0.1)	IS:3025 (Part54)2003	3
17	Boron as B	mg/l	BLQ(LOQ0.1)	IS 3025:(Part-57):2003	2
18	Chloride as Cl-	mg/l	7842.8	IS 3025 (Part 32) 1988	-
19	Fluoride as F-	mg/l	0.94	IS 3025 part (60):2008	15
20	Dissolved Phosphate as PO4	mg/l	0.16	IS 3025 (Part 31):1988	-
21	Sulphate as SO4	mg/l	502.8	IS 3025 (Part 24) 1986	1000
22	Sulphide as S2-	mg/l	BLQ(LOQ0.04)	IS:3025 (Part 29)1986	5

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Sample Description : **Waste Water**
Sample Mark : **Treated Effluent Outlet**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits*
23	Arsenic as As	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part37)1988	0.2
24	Mercury as Hg	mg/l	BLQ(LOQ 0.001)	IS:3025 (Part48)1994	0.01
25	Cadmium as Cd	mg/l	BLQ(LOQ 0.01)	IS:3025 (Part41)1991	2.0
26	Selenium as Se	mg/l	BLQ(LOQ 0.005)	IS:3025 (Part56)2003	0.05
27	Residual Sodium Carbonate as Na2CO3	meq/l	BLQ(LOQ1.0)	IS 11624-1986	NA
28	Cyanide as CN	mg/l	BLQ(LOQ0.01)	IS:3025 (Part27)1986	0.2
29	**Pesticides**				
	2,4-D	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Isoproturon	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Malathion	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Methyl Parathion	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Monochrotophos	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Phorate	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	o,p -DDT	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	p,p'-DDT	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	o,p-DDD	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	p,p'-DDD	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	o,p-DDE	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	o,p-DDD	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	p,p'-DDD	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	o,p-DDE	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	p,p'-DDE	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent

HUBERT ENVIRO CARE SYSTEMS (P) LTD. Chennai 600 032

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Report No. : **HECSL/WW/013/300922**
Report Date : **06/10/2022**

Sample Description : **Waste Water**
Sample Mark : **Treated Effluent Outlet**
Sample Drawn By : **Hubert Enviro Care Systems (P) Ltd**
Sampling/received Date : **30/09/2022 -30/09/2022**
Analysis Commenced On : **30/09/2022**

Completed On : **05/10/2022**

S.No.	Parameters	Units	Results	Test Method	TNPCB Limits*
	Endosulphan alpha	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Endosulphan Beta	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Endosulphan Sulphate	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Alpha HCH	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Beta HCH	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Gamma HCH	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Delta HCH	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Butachlor	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Chlorpyrifos	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Alachlor	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Atrazine	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Aldrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Dieldrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Ethion	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/074	Absent
	Cypermethrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Alphamethrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Permethrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
	Deltamethrin	mg/l	BLQ(LOQ: 0.00001)	HECS/INS/SOP/072	Absent
30	Phenolic Compounds as C6H5OH	mg/l	BLQ(LOQ0.001)	IS 3025 Part (43)1992	1.0
31	Residual Free Chlorine	mg/l	BLQ(LOQ 0.1)	IS 3025 Pt 26 - 1986	NA
32	Calcium as Ca	mg/l	3917.0	IS 3025 (Pt 45) :1993	NA
33	Alpha emitters	microcurie/ml	BLQ(LOQ 0.00000000001)	IS 14194 (Part-2)-1994	0.0000001
34	Beta emitters	microcurie/ml	BLQ(LOQ 0.0000000001)	IS 14194 (Part -1)-1994	0.000001

Note:- BLQ-Below limit of Quantification, LOQ-Limit of Quantification, mg/l- milligrams per litre , * - Marine Coastal Areas.
Remarks:- Treated Effluent Water as above parameters meets TNPCB Standards.

End of Report

Authorized Signatory

SWAPRAKASAM. M
Lab Manager

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TPL – ECH – PO Plant

Environmental Clearance – News paper Advertisement

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

பொது அறிவிப்பு

தமிழ்நாடு பெட்ரோப்ராடக்ட்ஸ் லிமிடெட், மணலி, சென்னை 600 068ல் புரோப்பிலீன் ஆக்ஸைடு தயாரிக்கும் மாற்று பொருள் உற்பத்தித் திட்டத்திற்கு மத்திய சுற்றுச்சுழல், வனத்துறை மற்றும் காலநிலை மாற்றம் அமைச்சகத்தின் சுற்றுச்சுழல் அனுமதி வழங்கப்பட்டுள்ளது (கடிதம் எண். J-1101I/280/2013-IA-II(I)Dated 15.05.2015).

மேற்படி திட்டத்திற்கான சுற்றுச்சுழல் அனுமதி கடிதத்தின் நகல் தமிழ்நாடு மாசுகட்டுப்பாடு வாரியம்/கமிட்டி, சென்னை அலுவலகத்தில் உள்ளது. மேலும் இக்கடிதத்தின் நகலை மத்திய சுற்றுச்சுழல், 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

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-1101I/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