



Tamilnadu Petroproducts Limited

Ref: TPL – HCD/ 2024/EC Comp/09

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 – HCD Plant – Environmental Clearance (EC) – Six Monthly Compliance Report – April 2024 to Sep 2024 - Reg.


Ref: F.No. J-11011/20/99-IA-II(I) dated 18.09.2023

This has reference to the Environmental Clearance (EC) obtained from MoEF&CC, New Delhi for Expansion of Caustic Soda production capacity from 150 TPD to 250 TPD by bipolar membrane cell process in the existing Heavy Chemicals Division Plant (HCD Plant) 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


V.S. Prakash Kumar
GM – Operations



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TPL GSTIN : 33AAACT1295M1Z6

Environmental Clearance Compliance Status Report

For the period from Apr-2024 to Sep-2024.

Environment Clearance Compliance Status

Ref: No. J-11011/20/99-IA-II(I) dated 18.09.2023.

(A) Specific Condition

S.No	Condition	Compliance Status
1	The directions issued in the Judgement dated 20.07.2023 by the Hon'ble NGT in O.A. No. 256/2020 shall be strictly complied and the compliance to each of the direction shall be submitted to the IRO, MoEF&CC along with the six-monthly reports	Being complied Compliance status of the O.A. No. 256/2020 judgement directions by the Hon'ble NGT has been fulfilled and the same has been submitted to IRO, MoEF&CC along with the six-monthly reports
2	Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards in terms of the identified critical pollutants	Complied Adequate stack height of all point sources of emissions ensured as per CPCB/SPCB guidelines and emission levels being maintained within the existing standards.
3	CEMS shall be installed and connected to SPCB/CPCB Server.	Complied Continuous Emission Monitoring System already installed. And OCEMS data is being uploaded continuously in TNPCB / CPCB server.
4	Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.	Being complied The following measures are being taken by the industry to control the fugitive emissions. <ul style="list-style-type: none"> • Regular preventive maintenance of equipment, effective plant operation and continuous monitoring are being carried out. Records are being maintained. • Chlorine detectors are installed at chlorine handling areas for monitoring and to take immediate corrective and preventive actions. • Chemicals used in the manufacturing process are stored in closed shed. • Preventive maintenance of pumps, valves, pipelines is being carried out periodically. • To eliminate leakage & to ensure maximum sealing safety, double



		<p>mechanical seals are provided in Pumps, based on Hazardous service applications.</p> <ul style="list-style-type: none">• 1 Number of Continuous Ambient Air Quality Monitoring Station is provided to monitor Chlorine, HCl Vapour and Ammonia and monitoring data is connected to CPCB/TNPCB.																				
5	Fuel (R - LNG) shall be transferred through pipeline from IOCL. Raw material and products shall be transported through dedicated road tankers, Raw material Common salt shall be shipped and transported by sea, and majority quantity of gaseous chlorine shall be transferred through pipeline	<p>Complied</p> <p>Fuel (R - LNG) is received through a pipeline from IOCL. Raw material and products are transported through dedicated road tankers. Raw material Common salt is shipped by sea, and the gaseous chlorine is transferred through pipeline.</p>																				
6	Regasified Liquefied Natural Gas / Hydrogen shall be used as fuel in Boiler.	<p>Complied</p> <p>We switched over from Fuel Oil (FO) to cleaner fuels for Boiler i.e., R-LNG / Hydrogen since 2019.</p>																				
7	The best available technology shall be used and as committed by the PP, Caustic soda shall be manufactured through latest energy efficient bipolar membrane cell technology	<p>Being Complied</p> <p>Caustic soda manufacturing is planned to carried out by using latest energy efficient bipolar membrane cell technology</p>																				
8	The PP shall develop greenbelt over an area of at least 14 acres (42.18% of total land area) by planting approx. 7000 numbers of saplings within a year of grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1 st July of every year for the activities carried	<p>Being complied</p> <p>Green belt development details</p> <table><tr><th>Sl.No</th><th>Green belt details</th><th>Area in Acres</th><th>% of green belt area</th><th>No of trees</th></tr><tr><td>1</td><td>Green belt within the plant premises</td><td>5.00</td><td>15.06</td><td>5000</td></tr><tr><td>2</td><td>Green belt adjacent to the premises – *Polymer plant</td><td>9.00*</td><td>27.11</td><td>9000</td></tr><tr><td>3</td><td>Total green belt area</td><td>14.00</td><td>42.18</td><td>14000</td></tr></table>	Sl.No	Green belt details	Area in Acres	% of green belt area	No of trees	1	Green belt within the plant premises	5.00	15.06	5000	2	Green belt adjacent to the premises – *Polymer plant	9.00*	27.11	9000	3	Total green belt area	14.00	42.18	14000
Sl.No	Green belt details	Area in Acres	% of green belt area	No of trees																		
1	Green belt within the plant premises	5.00	15.06	5000																		
2	Green belt adjacent to the premises – *Polymer plant	9.00*	27.11	9000																		
3	Total green belt area	14.00	42.18	14000																		



TPL-HCD plant -EC Compliance Report

	out during previous year	<p>1.* The total Green Belt area is 14 Acres (42.18% of Total Land Area), Green Belt area of 5 Acres (15.06%) was developed inside the plant premises and 9 Acres (27.11%) was developed outside the plant premises at TPL-Polymer Plant which is located 250m from the project site.</p> <p>2.Additionally, we have developed a green belt area of around 15.14 acres outside the plant premises at Morai Village, Pandeswaram Village and Grandlyon village, Thiruvallur District during 2022 – 2023. (No. of tree sapling planted– 15000).</p>
9	1400 Nos. of avenue plantation shall develop in highway median nearby plant.	<p>Complied</p> <p>Avenue plantation was developed in highway median.</p>
10	The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.	<p>Complied</p> <p>Sufficient road space is available within the site premises for transportation of loads. The width of existing roads is min 7 m, which is adequate for transportation of loads.</p>
11	Entire liquid Effluent generated shall neutralized with Acid / Alkali and treated effluent shall be utilized in ECH – PO Process. Sludge shall be used as manure for Greenbelt.	<p>Complied</p> <p>We have an adequate effluent treatment plant to treat the effluent and the treated effluent is being utilized in ECH – PO Process. The Sewage water is being treated in combined STP plant and STP sludge is utilized as manure for greenbelt.</p>
12	As committed by the PP, zero liquid discharge shall be ensured.	<p>Complied</p> <p>There is no discharge of treated effluents into the land or any water bodies, both from existing plant and proposed expansion. Entire quantity of treated trade effluent is being recycled and reused in the TPL (ECH PO Plant) which is adjacent to TPL (HCD Plant), as per consent order issued by TNPCB. Consent No: 2408157787803 Dt:25-04-24</p>
13	Online continuous effluent monitoring system (OCEMS) shall be provided for pH, TSS and Flow for Effluent treated water shall be connected to TNPCB and CPCB	<p>Complied</p> <p>Online continuous effluent monitoring system (OCEMS) is provided for monitoring pH, TSS and flow of treated effluent and it is connected to TNPCB & CPCB.</p>
14	The roof top rainwater shall be collected in the existing Rain water harvesting pits is	<p>Being complied</p> <p>The existing rainwater Harvesting facility has</p>



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	2 Nos and 2 Nos of water reservoir 3000 KL (72m x 25m x 1.7m) & 2000 KL (26m x 36m x 2.1m) shall be maintained and used for process purpose. Rain water percolation pit shall be provided to collect rain water from Canteen building for ground water recharge. The PP also proposed to provide roof rain water harvesting facility for 4000 sq.m. which shall be collected in the existing reservoir and will be utilized for process purpose	been maintained and is being ensured that the rain water is collected in 2 Nos of water reservoir 3000 KL (72m x 25m x 1.7m) & 2000 KL (26m x 36m x 2.1m) and it is utilized for process purpose. Rain water percolation pit is also provided to collect the rainwater from the canteen to ensure ground water recharge. We proposed to provide roof rain water harvesting facility for 4000 sq.m. which shall be collected in the existing reservoir and will be utilized for process purpose.
15	4 KLD of sewage shall be treated in Common STP of capacity 160 KLD. Sewage after treatment in STP shall be used for Green Belt.	Being complied. The proposed additional sewage effluent can be treated in the existing combined STP which is adequate to treat the additional load, treated sewage effluent will be utilized for green belt.
16	As committed by the PP, no Fly ash, slag, red mud, etc., shall be generated from the plant.	Complied Ensured that no fly ash, slag, red mud, etc., shall be generated from the plant.
17	All the hazardous wastes generated from HCD plant shall be handled and disposed, as per the Authorization obtained from TNPCB	Complied All the hazardous waste generated from the HCD process is being stored at temporary storage area and is transported to approved TSDF/recycler.
18	Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.	Complied Compliance of EC conditions was audited by Third party.
19	As proposed, an amount of ₹2.5 crore shall be allocated towards CER in nearby communities	Being complied. An amount of ₹2.5 crore has been allocated towards CER in nearby communities.
20	As committed by the PP, industry shall use renewable energy of 8MW from wind energy and 2MW from solar energy within 18 months from the date of EC of the project.	Shall be complied.



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21	As committed by the PP, industry shall use organic waste for the manure preparation and the same shall be used for Greenbelt development	Being complied. A dedicated space for manure preparation has been identified, and civil work is planned to develop the facility.
22	As committed by the PP, industry shall install roof top solar panel and the power from the same shall be utilized for the plant to facilitate the renewable energy utilisation	Shall be complied.
23	As committed by the PP, Industry shall proceed long term feasibility study for the green hydrogen generation	Shall be complied.
24	A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions. PP shall engage whole time director operations- DGM operations- Head Environment- HOD- Tech service- HOD quality Assurance. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1 st July of every year for the activities carried out during previous year.	Being complied A separate Environmental Management cell is available with qualified environmental science personnel. Full-fledged laboratory is available to carryout Environmental Management and Monitoring functions. Safety & health officer as per the qualification given in Factories Act 1948 has been engaged.
25	The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.	Being complied All the environmental protection measures and safeguards proposed in the documents submitted to the Ministry is being complied. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures being implemented.

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	<p>The budget propose under EMP is ₹285 Lakh (Capital cost) and ₹23.5lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.</p>	<p>Being complied</p> <p>EMP budget annual allocation details shall be intimated and separate account with annual audit details shall be submitted along with proof of implementation to the Regional Office of MoEF&CC.</p>
26	<p>The total water requirement is 1710 m3/day (Existing 1170 m3/day & Proposed 540 m3/day) of which fresh water requirement of 1690 m3/day (Existing 1154 m3/day & Proposed 536 m3/day) will be met from CMWSSB-City Sewage TTRO. The PP should ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining valid agreement from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.</p>	<p>Being complied</p> <p>The proposed water demand will be met through CMWSSB-City Sewage TTRO, we have established the agreement with CMWSSB and committed to use the water within the consented quantity, The TTRO water utilization details shall be submitted.</p>
27	<p>No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.</p>	<p>Complied</p> <p>No banned chemicals/raw materials used in the manufacturing process and always ensured for the adherence of notifications/guidelines issued by Government in this regard.</p>
28	<p>The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.</p>	<p>Being complied</p> <p>Carbon sequestration has been achieved by the greenbelt development. Carbon sequestration and Carbon footprint study was conducted by the NABL accredited lab.</p>



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29	The PP shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608(E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986	Vide GSR 608(E), dated 21.7.2010 under the provisions of the Environment (Protection) Rules, 1986 is meant for Emission standards for organic chemicals manufacturing Industry. TPL-HCD plant is under category of Chlor-Alkali industry, have complied the chlorine and Hydrochloric acid emission as per the applicable standard.
30	All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996	Complied We have taken all necessary precautions to avoid accidents and we have adequate Onsite emergency plan which is approved by the Directorate of Industrial Health and Safety dept. We have been conducting mock drill once in three months to verify the effectiveness of on-site plan as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996
31	The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.	Organic compounds (VOCs)/Fugitive emissions are meant for organic chemicals manufacturing Industry. TPL-HCD plant is under category of Chlor-Alkali industry However we have complied the chlorine and Hydrochloric acid emission as per the applicable standard.
32	The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.	Being complied We shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal
33	The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.	Being complied The storage of toxic/hazardous raw material being maintained at bare minimum with respect to quantity and inventory as per Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 The inventory quantity and days of storage

		<p>shall submit to the Regional Office of Ministry and SPCB along with the compliance report.</p> <p>As on Sep-24 Liquid Chlorine inventory is 5.39 MT</p> <p>And Hydrochloric Acid Inventory is 245.027 MT</p> <p>Compliance report has been submitted</p>
34	<p>An occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.</p>	<p>Complied</p> <p>Occupational health centre is available in the site with the following facility.</p> <ul style="list-style-type: none"> • Doctor • Nurse, round the clock. • Ambulance <p>Periodic medical check-up for all employees is being done at regular interval. Records are maintained. The health data is being used in deploying the duties of the employees.</p> <p>Primary Health Care Centres (PHCC) and mobile clinic are provided at nearby villages (Vichoor, Sadayankuppam, Periyasekkadu, Kannampalayam and Seemavaram) to cater to the primary health care needs of the peoples residing nearby areas.</p> <p>Required Personal Protective Equipment (PPEs) are being given to all employees & contractors.</p>
35	<p>Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.</p>	<p>Being complied</p> <p>Training are being imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training also provided through periodic refresh/demonstration kind of programme.</p>



36	<p>The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms</p>	<p>Complied</p> <p>Firefighting system is provided as per the Tamilnadu Factories Rules.</p> <p>Fire hydrant system along with hydrants, fire monitors, portable fire extinguishers, foam pourers, sprinkler system, and flame detectors, etc are provided in the process as well as in the storage areas for protection of possible fire hazards during manufacturing process in material handling. Fire license obtained from Tamilnadu Fire & Rescue services, Govt. of Tamilnadu. (Renewal Fire license validity is up to 03.09.2025).</p>
37	<p>The solvent management shall be carried out as follows:</p> <p>(a) Reactor shall be connected to chilled brine condenser system.</p> <p>(b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages.</p> <p>(c) Solvents shall be stored in a separate space specified with all safety measures.</p> <p>(d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done.</p> <p>(e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses.</p> <p>(f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation</p>	<p>Complied</p> <p>TPL-HCD plant is under category of Chlor-Alkali industry. we don't have solvents stock/ solvent handling equipment. However, we have provided Proper earthing for all the electrical equipment.</p>
38	<p>The PP shall undertake waste minimization measures as below.</p> <p>(a) Metering and control of quantities of active ingredients to minimize waste;</p> <p>(b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes.</p> <p>(c) Use of automated filling to minimize spillage.</p>	<p>Being complied</p>

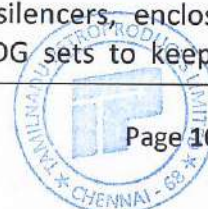


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	<p>(d) Use of Close Feed system into batch reactors.</p> <p>(e) Venting equipment through vapour recovery system.(f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.</p>	
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Environmental Clearance – General Condition

S. No	Condition	Compliance Status
1	No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. 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/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.,	<p>Complied.</p> <p>No further expansion or modification in the plant will be carried out without prior approval of the Ministry of Environment, Forests & Climate Change.</p> <p>in case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference will be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.,</p>
2	The Project proponent shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.	<p>Complied.</p> <p>We have complied with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016.</p>
3	The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.	<p>Complied</p> <p>Energy efficient LED bulbs are being used for lighting purpose to conserve energy and environment betterment.</p>
4	The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control	<p>Complied</p> <p>Acoustic hoods, silencers, enclosures, etc., are provided at DG sets to keep the noise</p>



	measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (daytime) and 70 dBA (night time).	level within the prescribed standards. All machineries like blowers, compressors are being maintained properly and preventive maintenance are taken as per the schedule to control the noise levels. Ambient noise levels are being monitored periodically through in-house laboratory and TNPCB laboratory.
5	The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. CER activities shall be undertaken by involving local villages and administration and shall be implemented. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.	Being complied All relevant measures will be taken towards the improvement of socio-economic conditions of the surrounding area. Action plan is prepared to undertake eco-developmental measures including community welfare measures under Corporate Environmental Responsibility (CER) involving local villages and administration in the project area for the overall improvement of the environment. Following community welfare measures are taken under CSR/CER activities. Primary Health Care Centre (PHCC) is provided at following location in Manali area to cater to the primary health care needs of the peoples residing nearby areas. <ul style="list-style-type: none"> • Sadayankuppam, • Vichoor, • Periyasekkadu, • Kannampalayam, • Seemavaram, • Mobile Primary Health Care Centre (Dr. Mobile). • Smart classroom facility provided to Sadayankuppam village school <tructured <ul="" at="" following="" government="" in="" in,="" location="" manali.="" rest="" rooms="" schools=""> • Government high school at Manali New Town • Government high school at Redhill • Government high school at Vichoor. & Near Sathankadu police station </tructured>
6	The company shall earmark sufficient funds towards capital cost and recurring	Being complied Sufficient funds are earmarked towards



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	cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.	capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government and implementation schedule is prepared and being followed. Funds earmarked for environmental management / pollution control measures will not be diverted for any other purpose.
7	A copy of the clearance letter shall be sent by the project proponent to concerned Panchayat, Zilla Parishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom 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.
8	The project proponent shall also submit six monthly reports on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data (both in hard copies as well as by e-mail) to the respective Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report shall be posted on the website of the company.	Being complied 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 by e-mail) has been submitted to MOEF Regional Office/ the Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six-monthly compliance status report are uploaded in our company's website (www.tnpetro.com) and will be updated periodically.
9	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 the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance	Complied The environmental statement (Form V) is being submitted to TNPCB once in a year before 30 th Sep every year. Environmental statement (Form V) for the year 2023 – 2024 was submitted to TNPCB on 20.09.2024. The six-monthly compliance status of environmental clearance conditions including results of monitored data is being



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	conditions and shall also be sent to the respective Regional Offices of MoEF&CC by e-mail.	submitted to MOEF Regional Office through e-mail regularly. A copy of Form V and six-monthly compliance status of environmental clearance conditions were uploaded in the company's website. (www.tnpetro.com)
10	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 and at https://parivesh.nic.in/ . This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.	Complied Detail of the Environmental clearance obtained for the project was published in English & Tamil newspapers (The Financial Express and Makkal Kural on 26.09.2023) as public notice advertisements. Advertisements were submitted through mail to the Regional Office,
11	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. The consent for establishment (CTE) obtained from TNPCB CONSENT ORDER NO. 2406155711448,2406255711448, DATED: 20/01/2024. G.O from Tamilnadu Government based on Site Appraisal Committee (SAC) recommendation obtained in the month of August-2024 The date of start of the project : Feb-2024
12	This Environmental clearance is granted subject to outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.	Noted and shall be complied.



NGT case OA 256-2020 Verdict directions TPL-HCD plant

S. No	OA 256-2020 Verdict directions TPL-HCD plant	Compliance Status
1	<p>The Tamil Nadu Pollution Control Board should constitute a dedicated team to monitor the OCEMS data.</p> <p>The industries should also create an internal mechanism to closely monitor the functioning of OCEMS as well as critically analyse the data for immediate corrections and shall submit a monthly analysis report to the Tamil Nadu Pollution Control Board.</p> <p>Senior Officers of TNPCB shall conduct a monthly review with designated officers of major industries in different industrial parks</p>	<p>We will abide by the directions of the dedicated team to be constituted by TNPCB for OCEMS monitoring.</p> <p>OCEMS has been installed in M/s.Tamilnadu Petroproducts Limited (HCD Plant) on 01.09.2015.</p> <p>Internal mechanism is already adopted to closely monitor the functioning of OCEMS as well to critically analyse the data to immediately initiate necessary corrective actions, if required.</p> <p>The monthly report will be submitted to TNPCB on monthly basis.</p> <p>OCEMS data are being uploaded continuously in TNPCB / CPCB server.</p> <p>The Company commits to cooperate and provide necessary support to Senior officers of TNPCB to conduct the meeting and follow up with corrective actions if any during their review.</p>
2	<p>The CPCB should constitute a committee which may also include experts in the field of air pollution as well as water pollution to examine the existing CPCB Protocols for OCEMS and submit revised Protocols to the Tribunal within a period of 3 (Three) months.</p>	<p>We cooperate and provide necessary support to CPCB. Once the revised protocol is made available by CPCB, the Company commits to comply with the requirement.</p>
3	<p>Committee may also suggest the periodicity at which the said sensor / equipment need to be calibrated. Once the periodicity is fixed, a mechanism may be put in</p>	<p>Will be complied with the periodicity for calibration of sensors and equipment once the direction is received from the Central / State Pollution control board.</p> <p>Notwithstanding the above, the Analysers which are connected to OCEMS are already being calibrated once in six months</p>



	place to check whether the calibration of sensors /equipment is being undertaken by the industries as per the timeline fixed, failing which, necessary action may be taken including the imposition of environmental compensation.	
4	The CPCB may constitute a new committee or revive the earlier committee constituted based on directions issued in Original Application No.195 of 2016 (SZ) [Tandur Citizens Welfare Society Vs. Government of Telangana and Ors.] dated 24.08.2021 to once again examine the issue of interlocking/ alerting / alarm systems, considering the advancements in Machine learning and Artificial Intelligence, that will ensure fool proof operations of the OCEMS system.	<p>We cooperate and provide necessary support to CPCB.</p> <p>Based on the recommendations of CPCB committee the Company commits to upgrade the existing OCEMS system to meet the new requirements to ensure fool proof operation of OCEMS.</p>
5	The TNPCB is directed to verify the list of industries which are yet to install the OCEMS system. In case, some of the units have not yet been mandated to install the OCEMS system, the TNPCB is directed to issue instructions to all the units to install the OCEMS system within the shortest possible time,	<p>OCEMS has already been installed in M/s.Tamilnadu Petroproducts Limited (HCD Plant) on 01.09.2015 and its data are being uploaded continuously in TNPCB / CPCB server.</p> <p>OCEMS data are being uploaded continuously in TNPCB / CPCB server.</p> <p>We will cooperate and provide necessary support to TNPCB.</p>



	<p>failing which, appropriate action should be taken. The TNPCB is directed to report the reasons for not directing or exempting certain industries from establishing the OCEMS. Failure by TNPCB also would attract fine plus compensation.</p>											
6	<p>Industries should switchover completely to cleaner fuels including conversion of usage of liquid fuel into gaseous fuels within a stipulated period of time. During the interregnum, the industries may be directed to use low sulphur fuels till the conversion to gaseous fuels is completed</p>	<p>We wish to submit here, we switched over from Fuel Oil (FO) to cleaner fuels i.e., R-LNG / Hydrogen since 2019 other than 2nos. of backup DG which is operating only for 300hrs per year on an average.</p> <p>For 1no of EMDG (500kVA) Retrofitting of Emission control device has already been done and for other EMDG (437kVA) it is planned to install.</p>										
7	<p>Industries shall install Flue Gas Desulfurization (FGD) systems wherever it is applicable without fail before the timeline fixed by MoEF&CC without seeking extension of time.</p> <p>All the units having Electrostatic Precipitator (ESP) should upgrade to the latest generation of ESP available today within a reasonable period of time. For the up-gradation, CPCB may provide necessary guidelines.</p>	<p>Flue Gas Desulfurization (FGD) systems are required for the reduction of sulphur emissions in flue gas originating from Equipment using high sulphur fuel.</p> <p>We wish to submit here, we switched over from Fuel Oil (FO) to cleaner fuels i.e., R-LNG / Hydrogen since 2019 other than 2nos. of backup DG which is operating only for 300hrs per year on an average.</p> <p>For 1no of EMDG (500kVA) Retrofitting of Emission control device has already been done and for other EMDG (437kVA) it is planned to be installed in the during commissioning stage of the proposed project.</p> <p>For the proposed project, one additional Gas Engine generator for backup (1 No. of 750kVA) being proposed for which R-LNG will be the fuel.</p> <p>The SO₂ level after expansion has been shown below,</p> <table border="1"> <thead> <tr> <th rowspan="2">S. NO</th><th rowspan="2">Descriptions</th><th>Emission (g/s)</th></tr> <tr> <th>SO₂</th></tr> </thead> <tbody> <tr> <td>1</td><td>Before CEPI (Before 2018)</td><td>199.46</td></tr> <tr> <td>2</td><td>After CEPI (After 2018)</td><td>0.0613</td></tr> </tbody> </table>	S. NO	Descriptions	Emission (g/s)	SO ₂	1	Before CEPI (Before 2018)	199.46	2	After CEPI (After 2018)	0.0613
S. NO	Descriptions	Emission (g/s)										
		SO ₂										
1	Before CEPI (Before 2018)	199.46										
2	After CEPI (After 2018)	0.0613										



		There is no dust collector, cyclone separator or Electrostatic Precipitator (ESP) in plant as the process and utility equipment as there is no requirement.																		
8	Industries shall install latest pollution control measures for reduction of NOx emissions, such as Selective Catalytic Reduction system / Selective Non-Catalytic Reduction system / low NOx burners with Over Fire Air (OFA) system to achieve the NOx emission standards	<p>The Nox level has been shown below,</p> <table><tr><th rowspan="2">S. NO</th><th rowspan="2">Descriptions</th><th>Emission (g/s)</th></tr><tr><th>NOx</th></tr><tr><td>1</td><td>Before CEPI (Before 2018)</td><td>30.1</td></tr><tr><td>2</td><td>After CEPI (After 2018)</td><td>0.547</td></tr></table>	S. NO	Descriptions	Emission (g/s)	NOx	1	Before CEPI (Before 2018)	30.1	2	After CEPI (After 2018)	0.547								
S. NO	Descriptions	Emission (g/s)																		
		NOx																		
1	Before CEPI (Before 2018)	30.1																		
2	After CEPI (After 2018)	0.547																		
9	All the industries discharging effluents may be directed by TNPCB to switch over to the ZLD system by granting a reasonable time frame. Only if ZLD systems are not technically feasible,ETPs/CETPs can continue	<p>There is no discharge of treated effluents into the land or any water bodies, both from existing plant and proposed project.</p> <p>Entire quantity of treated trade effluent is being recycled and reused in the TPL (ECH PO Plant) which adjacent to TPL (HCD Plant), as per consent order issued by TNPCB as vide issued under Water Act vide 2408157787803 dated 25/05/2024, valid till 31.03.2026</p>																		
10	A committee of experts in CPCB may meet periodically (preferably once in a quarter) to evaluate the advancements in pollution control equipment, especially those relating to the capture of Particulate Matter (PM), SO ₂ , NO ₂ and other toxic air pollutants. In respect of existing industries, reasonable time may be granted to the industries, taking into account the cost involved and also the compliance status of the industries.	<p>We will cooperate and provide necessary support to CPCB.</p> <p>Already, TPL (HCD Plant) has adopted latest available pollution control techniques through retrofitting of Emission control device for EMDG, conversion from FO to cleaner fuel (R-LNG/Hydrogen) in Boiler, Auto Air fuel ratio controller in Boiler, providing appropriate scrubbers in HCL synthesis unit and Waste air Dechlorination plant to ensure HCL and Cl₂ within a specified limit.</p> <p>The Particulate Matter (PM), SO₂, NO₂ and other toxic air pollutants level after expansion without APC-Low Nox Burner has been shown below,</p> <table><tr><th rowspan="2">S.NO</th><th rowspan="2">Descriptions</th><th colspan="3">Emission (g/s)</th></tr><tr><th>PM</th><th>SO₂</th><th>NO_x</th></tr><tr><td>1</td><td>Before CEPI (Before 2018)</td><td>3.1</td><td>199.46</td><td>30.1</td></tr><tr><td>2</td><td>After CEPI (After 2018)</td><td>0.038</td><td>0.0613</td><td>0.547</td></tr></table>	S.NO	Descriptions	Emission (g/s)			PM	SO ₂	NO _x	1	Before CEPI (Before 2018)	3.1	199.46	30.1	2	After CEPI (After 2018)	0.038	0.0613	0.547
S.NO	Descriptions	Emission (g/s)																		
		PM	SO ₂	NO _x																
1	Before CEPI (Before 2018)	3.1	199.46	30.1																
2	After CEPI (After 2018)	0.038	0.0613	0.547																



Low NOx burners will be installed in boiler, which will further reduce the Nox level.

Retrofitting of Emission Control Device has been done for 1no of EMDG (500kVA) and is planned for another EMDG (437kVA).

S.NO	Descriptions	Emission (g/s)		
		PM	SO2	NOx
1	Before CEPI (Before 2018)	3.1	199.46	30.1
2	After CEPI (After 2018)	0.038	0.0613	0.547

The emission levels of the other air pollutants are given in the table below.

S. NO	Descriptions	Emission (g/s)			
		CO	Cl	HCl	NH3
1	Before CEPI (Before 2018)	3.94	0.0006	0.0007	0.0011
2	After CEPI (After 2018)	0.213	0.0006	0.0007	0

The Company commits to upgrade the pollution control equipment time to time as proposed by the TNPCB committee.

11 The committee should also examine the technological advancements which are in place in other countries like installing air purifiers centrally in industrial areas as well as in urban pockets with heavy vehicular populations to reduce the pollution load.

We will cooperate and provide necessary support to CPCB/TNPCB. The industry commits to support the committee and strive to reduce the pollution load wherever possible.

12 The Expert Committee of CPCB to come out with stricter pollution norms for the industries to be established in areas earmarked for Industries as against the general norms for the establishment of

Direction issued under the scope of CPCB.

Vehicular pollution

Expected emission levels viz. Particulate Matter (PM), NO₂ and CO considering additional vehicular movement after expansion, has been shown below,



industries in areas without or with only one or two industries in an area about the size of industrial parks. In respect of new Parks to be established the CPCB may also prescribe a buffer zone around the Industrial Area/Park. The CPCB and the SPCBs should work out special norms in industrial areas factoring in vehicular pollution, fugitive emissions, flare gas emissions and also a need for having higher stack height even for non-thermal power plants

S. no	Type of Vehicle	No. of Vehicle	Emission(g/s)		
			PM	NOX	CO
1	Raw material Truck	6	0.000133	0.00613	0.0533
2	Product Truck	5	0.000111	0.00511	0.0444
Total(g/s)			0.00024	0.0112	0.0978

Fugitive emissions:

The following measures are being taken by the industry to control the fugitive emission.

Existing:

- Regular preventive maintenance of equipment, effective plant operation and continuous monitoring are being carried out. Records are being maintained.
- Chlorine and Ammonia detectors are installed at chlorine and ammonia handling areas for monitoring and to take immediate corrective and preventive actions.
- Chemicals used in the manufacturing process are stored in closed shed.
- Preventive maintenance of pumps, valves, pipelines is carried out periodically.
- To eliminate leakage & to ensure maximum sealing safety, double mechanical seals are provided in Pumps, based on Hazardous service applications.
- 1 Number of Continuous Ambient Air Quality Monitoring Station is provided to monitor Chlorine, HCl Vapour and Ammonia and monitoring data is connected to CPCB/TNPCB.

13 The CPCB should re-examine the norms for the stack height for all point sources of emissions whether significant or not to ensure that they are designed according to the Good International Industry Practice (GIIP). The stack height should be established with due consideration to emissions from all other project sources both point and fugitive. Projects which have potentially

The stack height of all point sources of emissions have been given below, which meets present CPCB Standards.

S. NO	Point Source of emission	Actual Stack Height (m)	CPCB Norms (m)
1	Fusion Plant	25	Above building height
2	Boiler 4 TPL + 9TPH	33	30
3	EMDG 500 kVA	8	7.47
4	EMDG 437 KVA	8	7.18
Process stack			
5	WAD	16	Above building height
6,7	HCl - Unit 1 & 2	18	Above building



	significant fugitive sources of emissions can be directed to have special measures to reduce the same				height
		8	HCl - Unit 3	18	Above building height
		9	Hydrogen Plant	12	Above building height
		10	Fusion Plant	20	Above building height
		The industry commits to make necessary improvements as suggested by CPCB, in future.			
14	We also notice from the reports of the Joint Committee and Tamil Nadu Pollution Control Board that there are certain gaps in the pollution control measures adopted by the six industries and certain directions were issued by the Tamil Nadu Pollution Control Board to the respective industries along with certain suggestions for improvement. We do not wish to repeat those directions and suggestions, except to state that the Tamil Nadu Pollution Control Board should fix a specific deadline for compliance with the directions and adoption of the suggestions. The Tamil Nadu Pollution Control Board should file a periodical compliance report once in 6 (Six) months before this Tribunal	The Joint committee suggestions have been complied. We will cooperate and provide necessary support TNPCB. The industry commits to support the Tamil Nadu Pollution Control Board and strive to reduce the pollution load.			



15	The environmental compensation imposed following due process should be collected and utilized by the Tamil Nadu Pollution Control Board for the conversion of the existing roads in the Manali Industrial areas into concrete roads to minimize the dust emissions from the vehicular population	We are meeting the requirements with respect to emission and effluent treatment and reuse and Environmental compensation has not been demanded from TPL- HCD plant.																				
16	We are of the view that in areas where multiple industries are established, the CPCB may consider increasing the requirement of greenbelt area and increasing the density of tree population. In case of constraints of land, the industries may be permitted to create greenbelt in the areas adjacent to the industries including in private lands. However, it should be made mandatory that the periphery of the industries have a thick green cover with the tallest growing native trees	<p>HCD plant green belt details: Green belt details as follows:</p> <table><tr><th>S.No</th><th>Green belt details</th><th>Area in Acres</th><th>% of greenbelt area</th><th>No Of trees</th></tr><tr><td>1</td><td>Green belt within the plant premises</td><td>5</td><td>15.06</td><td>5000</td></tr><tr><td>2</td><td>Green belt adjacent to the premises — *Polymer plant</td><td>9*</td><td>27.11</td><td>9000</td></tr><tr><td>3</td><td>Total green belt area</td><td>14</td><td>42.18</td><td>14000</td></tr></table>	S.No	Green belt details	Area in Acres	% of greenbelt area	No Of trees	1	Green belt within the plant premises	5	15.06	5000	2	Green belt adjacent to the premises — *Polymer plant	9*	27.11	9000	3	Total green belt area	14	42.18	14000
S.No	Green belt details	Area in Acres	% of greenbelt area	No Of trees																		
1	Green belt within the plant premises	5	15.06	5000																		
2	Green belt adjacent to the premises — *Polymer plant	9*	27.11	9000																		
3	Total green belt area	14	42.18	14000																		
17	We also direct that TNPCB/CPCB should also mandate that industrial parks/areas shall have only concrete roads with three to four rows of tree plantations	We will abide and support.																				



	to act as a buffer for trapping air pollutants	
18	<p>It is recommended to create a corpus fund which shall consist of deposit of minimum 01% of the annual turnover from all the companies located in the Manali complex for the restoration of any affected area after the orders passed by the Tribunal. The said corpus fund shall be operated jointly by the Chief Secretary, Government of Tamil Nadu and the Additional Chief Secretary, Department of Environment, Forest and Climate Change and shall utilise for restoration of the environment and for constructing RCC roads in the entire affected area as per the decision taken by the said Committee. The said fund may be called as „Manali Environmental Relief Fund”.</p>	<p>The industry agrees for the proposal. However, the creation of funds and modality of utilising the fund are to be frozen by Chief Secretary, Govt of Tamilnadu and Other Govt officials.</p> <p>The industry commits to abide by the requirements once the Corpus fund is created and procedures developed.</p>





Tamilnadu Petroproducts Limited

Ref: TPL – HCD/EC/2023

05th Oct- 2023

To
The Director
Integrated Regional Office
Ministry of Environment, Forest & Climate Change
First Floor, Additional Office Block
Shastri Bhavan, Haddows Road
Nungambakkam, Chennai – 600 006.

Dear Sir

Sub: TPL-HCD Plant - Intimation of EC granted – Newspaper publication – Reg.
Ref: EC Identification No: EC23A013TN173796 - File No. J-11011/20/99-IA-II(I)
dated 18.09.2023.

We wish to inform you that the Ministry of Environment, Forest & Climate Change (MOEFCC) has granted Environmental Clearance (EC) for the Expansion of Caustic Soda production capacity from 150 TPD to 250 TPD by bipolar membrane cell process in the existing Heavy Chemicals Division Plant (HCD Plant), Manali, Chennai - 600068 vide EC Identification No: EC23A013TN173796; File No. J-11011/20/99-IA-II(I) dated 18.09.2023.

To comply with one of conditions stated in the EC, Public Notice advertisements in English & Tamil were published in the two local newspapers viz 'The Financial Express' and 'Makkal Kural' on 26.09.2023.

Copies of the EC and Public Notice advertisements (English & Tamil) are attached as Annexure for your kind reference and record.

Thanking you

Yours faithfully
For Tamilnadu Petroproducts Limited

D. Senthikumar
Whole Time Director

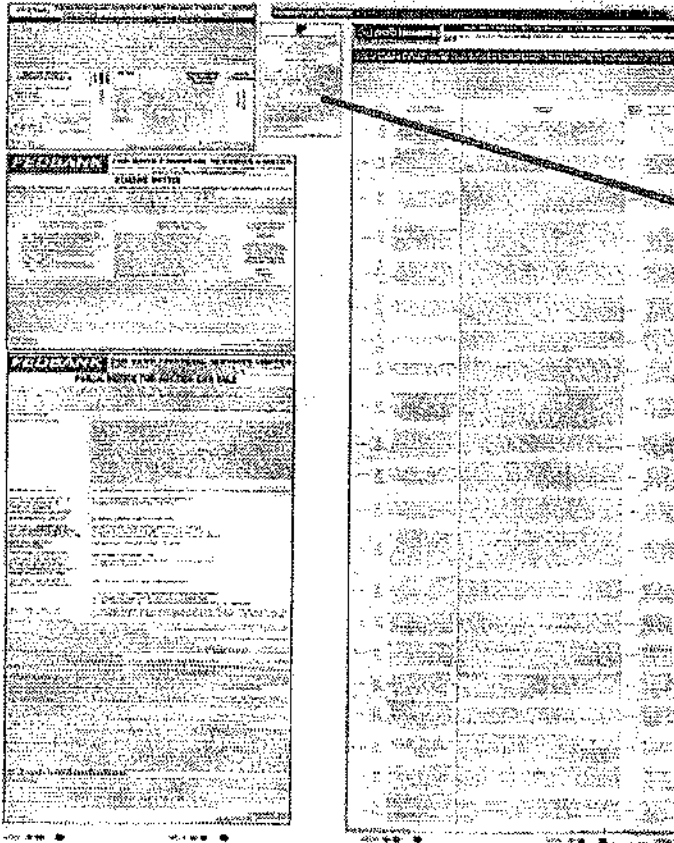


Regd. Office & Factory :

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



English Newspaper-Financial Express dated 26.09.2023.

7 x 4

IP

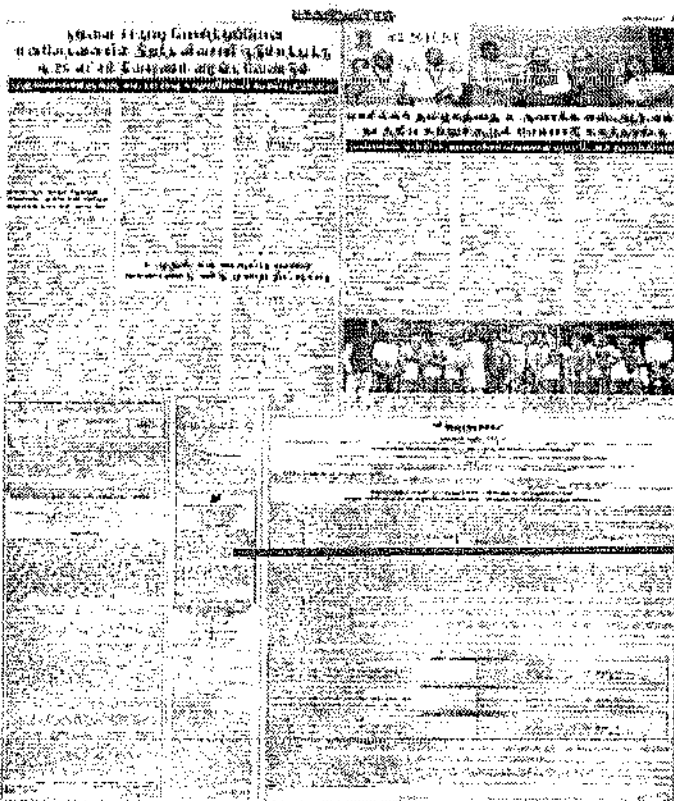
Tamilnadu Petroproducts Limited
 Regd. Office & Factory: Manali Express Highway,
 Manali, Chennai-600 068, Telefax: 044-25945500
 CIN: L23200TN1984PLC010031
 Website: www.inpetro.com
 E-mail: secy-legal@inpetro.com

PUBLIC NOTICE

This is to inform you that the Ministry of Environment, Forest and Climate Change, New Delhi has accorded Environmental clearance for the Expansion of Caustic Soda production capacity from 150 TPD to 250 TPD by bipolar membrane cell process in the existing Heavy Chemicals Division Plant (HCD Plant) Manali, Chennai - 600068 vide their letter No.J-11011/20/99-IA-II(I) dated 18.09.2023.

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 Ministry of Environment, Forest and Climate Change at <https://parivesh.nic.in>.

Place : Chennai - 600068
 Date : 25.09.2023
 Dy. General Manager - HR



7 x 4

IP

தமிழ்நாடு பெட்ரோபுரடக்ட்ஸ் லிமிடெட்
 பதிவு அலுவலகம் - துறை: மானலி எக்ஸ்பிரஸ் ஹைவே,
 மானலி, சென்னை-600 068
 இடம்: L23200TN1984PLC010031
 தொலைபேசி எண்: 044-25945500
 வலைத்தளம்: www.inpetro.com
 மின்னஞ்சல்: secy-legal@inpetro.com

பொது அறிவிப்பு

தமிழ்நாடு பெட்ரோபுரடக்ட்ஸ் லிமிடெட், மானலி, சென்னை 600068ல் அமைந்துள்ள ஹெவ் கெமிக்கல்ஸ் பிரிவு (HCD) ஆலையில் காஸ்டிக் சோடா 150 டன் தின உற்பத்தியிலிருந்து 250 டன் தின உற்பத்தி அளவிற்கு காஸ்டிக் சோடா உற்பத்தி விரிவாக்கத் திட்டத்திற்கு மத்திய சுற்றுச்சூழல், வனம் மற்றும் காப்பாற்றலை மாற்றம் அமைச்சகம், புது தில்லி, சுற்றுச்சூழல் அனுமதி வழங்கியுள்ளது. (J-11011/20/99-IA-II(I) தேதி 18.09.2023).

மேற்படி விரிவாக்கத் திட்டத்திற்கான சுற்றுச்சூழல் அனுமதி கீழ்க்கண்ட தகவல் தமிழ்நாடு மாநில கட்டுப்பாடு வாரியம் / கமிட்டி அனுமதி வழங்கியுள்ளது. மேலும் தகவலுக்கான தகவல் மத்திய சுற்றுச்சூழல், வனம் மற்றும் காப்பாற்றலை மாற்றம் அமைச்சகத்தின் இணையதளத்திலும் (<https://parivesh.nic.in>) காணலாம்.

இடம்: சென்னை - 600068
 தேதி : 25.09.2023
 துணை பொது மேலாளர் - மனிதவளம்

Tamil Newspaper-Makkal Kural dated 26.09.2023.





TAMILNADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

From

To

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

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

Lr.No.TNPC Bd/DEL-MNL/Air Survey/F. No.73/2024-25, Dt. 19.08.2024

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/F.No.73/2024-25 dt. 17.04.2024
2. Your Lr.No.TPL/Payment-AAQ monitoring 24-25/HCD dt:29.05.2024
3. Cash Receipt No.160 dt.29.05.2024 Rs.1,27,200/-

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 (HCD), Manali Express Highway, Manali, Chennai – 68 on **25.07.2024** with invoice for Rs.1,27,200/- (Rupees One lakh Twenty Seven Thousand and Two Hundred 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. 29/AAQS/2024-25

Date: 19.08.2024

1. Name of the Industry : **M/s. TPL (HCD),**
2. Address of the Industry : **Manali Express Highway, Manali, Chennai - 68.**
3. Date of Survey : **25.07.2024**
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 (°C)	Min	Max	Relative Humidity (%)	Min	Max
	29	34		58	72
Weather Condition	Partially Cloudy		Rain Fall (mm)	Nil	
Predominant Wind Direction	WSW-ENE		Mean Wind Speed (km/hr)	13.2	

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 adjacent to Canteen	NE	100	2.0	38	88	17	23	<0.1
2	On top of platform near CPP	E	50	2.0	--	78	15	20	<0.1
3	On top of platform near salt yard (Gate No 5)	SE	100	2.0	-	72	13	18	<0.1
4	On top of CP station – platform near scarp yard	SW	100	2.0	26	68	11	14	<0.1
5	On top of platform near NaOH Tank	W	75	2.0	--	70	12	15	<0.1
6	On top of the fire hydrant pump house	NW	100	2.0	--	74	14	19	<0.1

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

[Signature]
Deputy Chief Scientific Officer
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

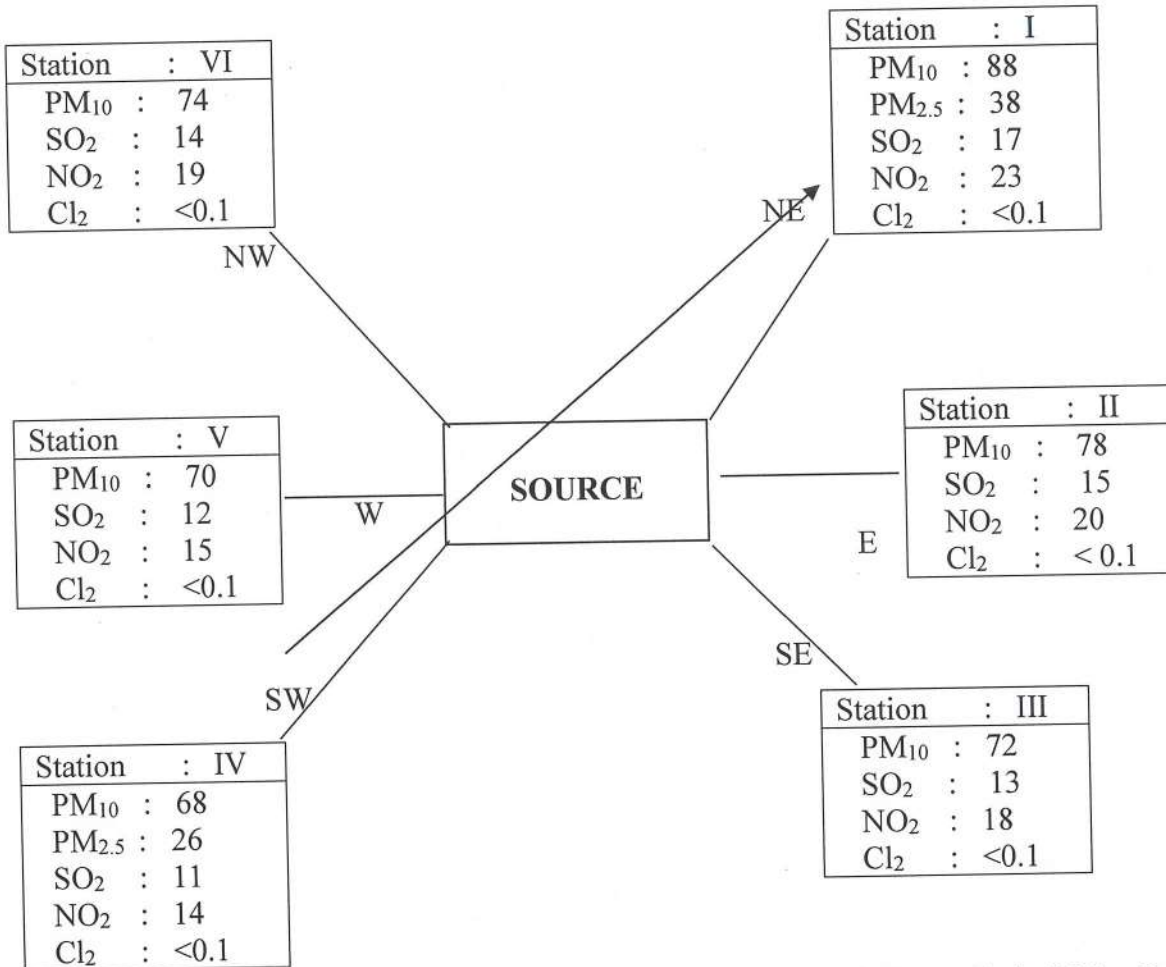
AMBIENT AIR QUALITY SURVEY

Schematic Diagram Showing Location of Sampling

Report No. 29/AAQ/SM/2024-25

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

Date of Survey : 25.07.2024



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)	13.2
Weather Condition	Partially Cloudy
Rainfall	Nil

[Signature]
19/8/24

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. 29/ SM/2024-25

Date: 19.08.2024

1. Name of the Industry : **M/s. TPL (HCD),**
2. Address of the Industry : **Manali Express Highway, Manali, Chennai – 68**
3. Date of Survey : **25.07.2024**
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	HCl
1	DG-500 KVA	Diesel	527	23.3	855	26	26	311	--	--
2	Boiler Thermax	LNG	486	17.6	44801	2	BDL	74	--	--
3	Waste Air Dechlorination Plant	--	309	18.1	4514	2	--	--	4	--
4	HCl Scrubber	--	311	17.9	1113	2	--	--	--	3

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


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Tamil Nadu Pollution Control Board
Manali



TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Manali

Stack Details

Report No.29/AAQ/SM/2024-25

1. Name and Address of the Industry : **M/s. TPL (HCD)**
Manali Express Highway, Manali, Chennai – 68
2. Date of Survey : 25.07.2024

Sl. No.	Particulars	1	2
1.	Stack attached to	DG	Boiler
2.	Details of process stack	DG 500 KVA	Boiler
3.	Height from G Level in (m)	8	33
4.	Diameter in (m)	0.15	1.2
5.	Port hole height from Ground Level or bends or ducts in (m)	7	20
6.	Fuel Used (with % Sulphur content)	Diesel	LNG
7.	Fuel Consumption rate per hr (mention units)	80 Litre / hr	97.22 m ³ /hr
8.	Type of Stack and capacity	Round	Round
9.	Production on 25.07.2024	Caustic soda Lye-126.5 MT, HCL-90 MT, Bottled Hydrogen-0.334 MT	
10.	APC Measures provided	Stack provided	Stack provided
11.	APC functional status	Functioning	Functioning
12.	Ambient temp in °K	304	304
13.	Temp of flue gas in °K	527	486
14.	Velocity of flue gas in m/sec	23.3	17.6
15.	Volume of flue gas sampled in m ³	1.017	1.003
16.	Gaseous Discharge rate per day in Nm ³ /hr	855	44801



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



TAMILNADU POLLUTION CONTROL BOARD
District Environmental Laboratory, Manali

Stack Details

Report No.29/AAQ/SM/2024-25

1. Name and Address of the Industry : **M/s. TPL (HCD)**
Manali Express Highway, Manali, Chennai – 68
2. Date of Survey : 25.07.2024

Sl. No.	Particulars	3	4
1.	Stack attached to	Chlorine Scrubber	HCl Scrubber
2.	Details of process stack	Waste Air Dechlorination Plant	HCl
3.	Height from G Level in (m)	16	18
4.	Diameter in (m)	0.3	0.15
5.	Port hole height from Ground Level or bends or ducts in (m)	14	16
6.	Fuel Used (with % Sulphur content)	--	--
7.	Fuel Consumption rate per day (mention units)	--	--
8.	Type of Stack and capacity	Round	Round
9.	Production on 25.07.2024	Caustic soda Lye-126.5 MT, HCL-90 MT, Bottled Hydrogen-0.334 MT	
10.	APC Measures provided	Scrubber	Scrubber
12.	APC functional status	Functioning	Functioning
13.	Ambient temp in °K	303	304
14.	Temp of flue gas in °K	309	311
15.	Velocity of flue gas in m/sec	18.1	17.9
16.	Volume of flue gas sampled in m ³	1.021	1.000
17.	Gaseous Discharge rate per day in Nm ³ /hr	4514	1113


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Tamil Nadu Pollution Control Board
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TAMIL NADU POLLUTION CONTROL BOARD

District Environmental Laboratory, Manali

STACK MONITORING SURVEY – Additional details

Report No. 29/ SM/2024-25

Date: 19.08.2024

1. Name of the Industry : **M/s. TPL (HCD)**
2. Address of the Industry : Manali Express Highway, Manali, Chennai – 68
3. Date of Survey : 25.07.2024
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.	DG-500 KVA	Working	Sampling Done	--
2.	Boiler Thermax	Working	Sampling Done	--
3.	Waste Air Dechlorination Plant	Working	Sampling Done	--
4.	HCl Scrubber	Working	Sampling Done	--


19/8/24

**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. 29/ NLS/2024-25**Date:** 19.08.2024

1.	Name of the Industry	M/s. TPL (HCD)	
2.	Address of the Industry	Manali Express Highway, Manali, Chennai - 68	
3.	Date of Survey	25.07.2024	
Category		RL	Land use Classification
Type of Survey		Ambient/Source	Time of Survey
Meteorological conditions		Calm/Windy/Rainy	
			Industrial
			Day
			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 – 15.30

Report of Noise Level Monitoring

Sl No	Location	Duration (min)	Distance (M)	Direction	Sound Level – dB (A)		
					Leq	Min	Max
1	Near Canteen	10	180	NE	58.8	56.2	71.4
2	Near CPP	10	60	E	57.6	54.5	68.8
3	Near Salt Yard (Gate No.5)	10	120	SE	60.7	56.1	72.6
4	Near Scarp Yard	10	120	SW	59.1	56.3	71.9
5	Near Pump Room	10	100	NW	67.6	60.3	75.2

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 (HCD)
2. Pollution Category : Red Large
3. Date of A.A.Q. Survey : 25.07.2024
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 : 6
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	88	68	100
	PM _{2.5}	38	26	60
2.	<u>GASEOUS</u> <u>POLLUTANTS:-</u>			
	(i) SO ₂	17	11	80
	(ii) NO ₂	23	14	80

II. STACK MONITORING:-

1. Total No. of Stacks Monitored : 4
2. No. of Stacks in which Pollutants level
Exceeded the Boards standards : Nil

20/7/24
19/8/24

**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. 29/AAQ/SM/2024-25**

Bill No.	29/2024-25
Date	19.08.2024

To
M/s. TPL (HCD),
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/F.No.73/2024-25 dt. 17.04.2024

3. Your Lr.No.TPL/Payment-AAQ monitoring 24-25/HCD dt:29.05.2024

4. Cash Receipt No.160 dt.29.05.2024 Rs.1,27,200/-

Sl. No.	Description	Rate (Rs.)	No. of Stations/ Stacks	Amount (Rs.)
1.	SAMPLING CHARGES: (i) Ambient Air Quality monitoring PM ₁₀ (ii) Source Emission Monitoring (PM, SO ₂ , NO _x etc.,) (iii) Ambient Air Quality monitoring PM _{2.5}	3500 13,100 3500	6 4 2	21,000 52,400 7,000
2.	ANALYTICAL CHARGES: (i) Ambient Air Samples PM ₁₀ , SO ₂ , NO ₂ & Cl ₂ (each Rs. 1050/-) (ii) Ambient Air Samples PM _{2.5} (iii) Source Emission Samples PM, SO ₂ , NO _x , Cl ₂ & HCl (each Rs.1050/-) (iv) Source Emission sample (PM & Cl ₂ Only)	4200 1800 3150 2100	6 2 2 2	25,200 3,600 6,300 4,200
3.	AMBIENT NOISE MONITORING CHARGES: (i) For first 5 stations	1400	5	7,000
Transportation charges				500
Total				1,27,200
Vide O/o. DEE/AMB Our CR.No. 160 dated : 29.05.2024				1,27,200
Balance				Nil


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



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TEST REPORT
NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)
ADDRESS : Manali Express Highway,
Manali, Chennai - 600 068.
Sample Ref No : SAS/AS/320/09
Sample Rep No : 320/09
Date of Sampling : 25.09.2024
Reporting Date : 01.10.2024
Sampling Location : Boiler House
Sample Description : Ambient Air Monitoring
Sample Drawn By /Date : SAS/25.09.2024
Received On : 25.09.2024
Analysis Commenced On : 25.09.2024
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	42.10	60
2	Respirable Particulate Matter (IS 5182 Part 23-2012	µg / m ³	74.20	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	16.50	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	17.20	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	18.60	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	23.60	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	116.30	-

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 600 043
A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/321/09
Sample Rep No : 321/09

Date of Sampling : 25.09.2024
Reporting Date : 01.10.2024

Sampling Location

: Near Fabrication Yard

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/25.09.2024

Received On

: 25.09.2024

Analysis Commenced On

: 25.09.2024

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%

SI.No	PARAMETERS	PROTOCOL	UNIT	RESULT	NAAQS*
1	Particulate Matter (PM _{2.5})	Envirotech Manual	µg / m ³	37.50	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	68.40	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	12.40	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	14.60	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	16.50	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	24.50	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	106.0	-

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 (HCD PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/322/09

Date of Sampling : 25.09.2024

Sample Rep No : 322/09

Reporting Date : 01.10.2024

Sampling Location

: Near WAD

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/25.09.2024

Received On

: 25.09.2024

Analysis Commenced On

: 25.09.2024

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	32.0	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	10.90	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	11.80	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	18.60	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	12.32	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	68.35	-

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 (HCD PLANT)

ADDRESS

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/323/09

Date of Sampling : 25.09.2024

Sample Rep No : 323/09

Reporting Date : 01.10.2024

Sampling Location

: Near CPP

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/25.09.2024

Received On

: 25.09.2024

Analysis Commenced On

: 25.09.2024

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	35.10	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	64.20	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	10.20	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	18.60	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	11.98	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	58.47	-

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 (HCD PLANT)

ADDRESS

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/324/09

Date of Sampling : 25.09.2024

Sample Rep No : 324/09

Reporting Date : 01.10.2024

Sampling Location

: Near Salt Yard

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/25.09.2024

Received On

: 25.09.2024

Analysis Commenced On

: 25.09.2024

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	33.10	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	64.20	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	10.20	80
4	Nitrogen Dioxide (NO ₂)	IS 5182 Part 6-2012	µg / m ³	11.40	80
5	Ozone (O ₃)	IS 5182 Part 9-1974 R.2009	µg / m ³	18.50	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	23.30	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	63.98	-

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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ISO 9001:2015 Certified Laboratory**



TEST REPORT

NAME OF INDUSTRY
ADDRESS

: TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/325/09

Sample Rep No : 325/09

Sampling Location

Date of Sampling : 25.09.2024

Reporting Date : 01.10.2024

: Near Main Gate

Sample Description

: Ambient Air Monitoring

Sample Drawn By /Date

: SAS/25.09.2024

Received On

: 25.09.2024

Analysis Commenced On

: 25.09.2024

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	31.10	60
2	Respirable Particulate Matter (PM ₁₀)	IS 5182 Part 23-2012	µg / m ³	63.20	100
3	Sulphur Dioxide (SO ₂)	IS 5182 Part 2 -212	µg / m ³	8.90	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	15.60	180
6	Lead (Pb)	IS 5182 Part 22-2009	µg / m ³	BDL (DL=0.002)	1
7	Carbon Monoxide (CO) (1 Hour)	IS 5182 Part 10-1999 R.2009	mg/m ³	BDL (DL=0.05)	4
8	Ammonia (NH ₃)	Indophenol Method	µg / m ³	18.50	400
9	Arsenic (As)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	6
10	Nickel (Ni)	IS 5182 Part 22-2009	ng / m ³	BDL (DL=2.0)	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	78.20	-

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 (HCD PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/326/09

Date Of Sampling : 25.09.2024

Sample Rep No : 326/09

Reporting Date : 01.10.2024

SAMPLED ON

: 25.09.2024

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)	PROTOCOL
1	Flue Gas Temperature	184	°C	-	IS:11255
2	Flue Gas Pressure	2.80	mm Hg	-	IS:11255
3	Flue Gas Velocity	3.40	m / s	-	IS:11255
4	Volume of Gas Discharged	10,680	Nm ³ / hr	-	IS:11255
5	Particulate Matter (PM)	8.0	mg / Nm ³	10(MAX)	IS:11255
6	Sulphur- di- oxide (SO ₂)	12.80	mg / Nm ³	50(MAX)	IS:11255
7	Nitrogen Dioxide (NO ₂)	72.0	mg / Nm ³	350(MAX)	IS:11255
8	Carbon – di - oxide (CO ₂)	4.50	%	-	IS:13270
9	Carbon Monoxide (CO)	47.50	mg / Nm ³	150 (MAX)	IS:13270
10	Oxygen (O ₂)	9.0	%	-	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**

A. Kaviyarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY

: TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)

ADDRESS

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/326/09

Date Of Sampling : 25.09.2024

Sample Rep No : 326/09

Reporting Date : 01.10.2024

SAMPLED ON

: 25.09.2024

STACK IDENTIFICATION NO

: Boiler Chimney

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 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)	µg/Nm ³	SOP-SAS-010:2024

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 (HCD PLANT)
Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/327/09

Date Of Sampling : 25.09.2024

Sample Rep No : 327/09

Reporting Date : 01.10.2024

SAMPLED ON

: 25.09.2024

STACK IDENTIFICATION NO

: DG Stack- 500KVA

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)	PROTOCOL
1	Flue Gas Temperature	385	°C	-	IS:11255
2	Flue Gas Pressure	5.80	mm Hg	-	IS:11255
3	Flue Gas Velocity	6.72	m / s	-	IS:11255
4	Volume of Gas Discharged	1680	Nm ³ / hr	-	IS:11255
5	Particulate Matter (PM)	64.0	mg / Nm ³	75 (max)	IS:11255
6	Sulphur- di- oxide (SO ₂)	22.50	mg / Nm ³	-	IS:11255
7	Nitrogen Dioxide (NO ₂)	96.50	mg / Nm ³	710 (max)	IS:11255
8	Carbon – di - oxide (CO ₂)	2.50	%	-	IS:13270
9	Carbon Monoxide (CO)	32.95	mg / Nm ³	150 (max)	IS:13270
10	Oxygen (O ₂)	12.0	%	-	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/327/09
Sample Rep No : 327/09
SAMPLED ON
STACK IDENTIFICATION NO
PITOT TUBE CONSTANT
AMBIENT TEMPERATURE
GAS VOLUME SAMPLED

TEST REPORT

: TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)
Manali Express Highway,
Manali, Chennai - 600 068.
Date Of Sampling : 25.09.2024
Reporting Date : 01.10.2024
: 25.09.2024
: DG Stack- 500KVA
: 0.1951
: 38° C
: 400 liters

Discipline- Chemical

Sl. No	PARAMETERS	RESULT	UNIT	Limit as per Ministry Of Environment and Forests Notification, 09.06.2002 (MOEF) (mg/m ³)	Limit as per TNPCCB	PROTOCOL
1	Non Methane Hydrocarbons	BDL (DL : 0.1)	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**

A. Kaviarasi
Verified & Authorized By

A.Kaviyarasi - Technical Manager



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TEST REPORT

NAME OF INDUSTRY : TAMILNADU PETROPRODUCTS LIMITED (HCD PLANT)
ADDRESS : Manali Express Highway,
Manali, Chennai - 600 068.
Sample Ref No : SAS/AS/328/09 **Date Of Sampling** : 25.09.2024
Sample Rep No : 328/09 **Reporting Date** : 01.10.2024
SAMPLED ON : 25.09.2024
STACK IDENTIFICATION NO : CI Scrubber - WAD
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	2.0	SOP-SAS-014:2024

BDL – Below Detectable Limit ; DL – Detection Limit

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 (HCD PLANT)

Manali Express Highway,
Manali, Chennai - 600 068.

Sample Ref No : SAS/AS/329/09

Date Of Sampling : 25.09.2024

Sample Rep No : 329/09

Reporting Date : 01.10.2024

SAMPLED ON

: 25.09.2024

STACK IDENTIFICATION NO

: Hcl Scrubber – Hcl Plant

PITOT TUBE CONSTANT

: 0.1951

AMBIENT TEMPERATURE

: 38° C

GAS VOLUME SAMPLED

: 400 liters

SI.No	PARAMETERS	UNIT	RESULT	Test Method
1	HCL Vapour	Mg/Nm ³	1.5	SOP-SAS-014:2024

BDL – Below Detectable Limit ; DL – Detection Limit

End of Report

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TEST REPORT

Sample Ref No. :SAS/W/330/09	Report No. :330/09
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/25.09.2024 Customer's Reference :Letter dated on 25.09.2024 Sample Mark : ETP- Inlet	Received On : 25.09.2024 Commenced On : 25.09.2024 Completed On : 01.10.2024

Sl. No	PARAMETERS	Unit	RESULTS	TEST METHOD
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

for **SANTHOME ENVIRO SERVICES**


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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:0.1)	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

A. Kaviyarasi
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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	BDL (DL:0.1)	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	BDL (DL:0.1)	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	7.0	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	6.0	IS 3025 P.45 1993
45	Chemical Oxygen Demand(COD)	mg/l	58.0	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	38,500	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	BDL (DL:0.1)	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:0.1)	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	<1.0	IS 3025 P.39 2021
52	pH value @25°C	mg/l	5.80	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	BDL (DL:0.1)	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	BDL (DL:0.1)	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	BDL (DL:0.1)	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	BDL (DL:1.0)	IS 3025 P.29 1986
58	Temperature	°C	27.0	IS 3025 P.09 1984
59	Total dissolved solids @ 180°C	mg/l	64,900	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	BDL (DL:1.0)	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	55.0	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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TEST REPORT					
Sample Ref No. :SAS/W/331/09			Report No. :331/09		
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/25.09.2024 Customer's Reference :Letter dated on 25.09.2024 Sample Mark : ETP - Outlet			Received On : 25.09.2024 Commenced On : 25.09.2024 Completed On : 01.10.2024		
Sl. No	PARAMETERS	Unit	RESULTS	Tolerance limits for Treated Outlet as per TNPCB	TEST METHOD
Discipline: Chemical					
Pesticides					
1	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					
A. Kavit 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
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

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
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)	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

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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:0.005)	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	BDL (DL:0.1)	5	IS:3025 P.34 1988 R.2009
41	Ammonical Nitrogen as NH ₃ -N	mg/l	BDL (DL:0.1)	50	IS:3025 P.34 1988 R.2009
42	Bio-Chemical Oxygen Demand (BOD) 3 days @ 27°C	mg/l	6.0	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	BDL (DL: 0.01)	-	IS 3025 P.45 1993
45	Chemical Oxygen Demand(COD)	mg/l	42.0	250	IS 3025 P.58. 2006
46	Chloride as Cl ⁻	mg/l	9,400	-	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	BDL (DL:0.1)	2	APHA 24 th Edn :2023 4500 D'F

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for SANTHOME ENVIRO SERVICES

A. Kanti
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:0.1)	-	IS 3025 P.26 2021
50	Hexavalent Chromium as Cr6+	mg/l	BDL (DL:0.05)	1.0	IS 3025 P.52 2003
51	Oil and grease	mg/l	<1.0	10	IS 3025 P.39 2021
52	pH value @25°C	mg/l	8.17	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	BDL (DL:0.1)	5.0	APHA 24 th Edn :2023 4500 P-B,D
55	Residual Sodium Carbonate	mEq/L	BDL (DL:0.1)	NA	IS: 11624 1986
56	Sulphate as SO ₄ ²⁻	mg/l	BDL (DL:0.1)	1000	IS 3025 P.24 1986
57	Sulphide as S ₂ ²⁻	mg/l	BDL (DL:1.0)	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	18,500	-	IS 3025 P.16 1984
60	Total Kjeldahl Nitrogen as N	mg/l	BDL (DL:1.0)	100	IS:3025 P.34 1988 R.2009
61	Total suspended Solids @105°C	mg/l	10.0	100	IS 3025 P.17 1984

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for SANTHOME ENVIRO SERVICES

A. Kaviyarasi
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A.Kaviyarasi - Technical Manager



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TEST REPORT

Sample Ref No. :SAS/W/332/09		Report No. :332/09	
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 :Customer25.09.2024 Customer's Reference : Letter Dated on 25.09.2024 Sample Mark : Bore Well Water -1		Received On :25.09.2024 Commenced On :25.09.2024 Completed On :01.10.2024	
Sl. No	PARAMETERS	RESULTS	TEST METHOD
1	Mercury(mg/l)	BDL (DL=0.0005)	APHA 24 th Edn :2023 3500-Hg
MICROBIOLOGICAL EXAMINATION			Acceptable Limits (Max)
1	Faecal Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
2	Total Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
Note :- MPN-Most Propable Number, <2 is considered as Absent			
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		End of Page 1	



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TEST REPORT

Sample Ref No. :SASW/333/09		Report No. :333/09	
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 :Customer25.09.2024 Customer's Reference : Letter Dated on 25.09.2024 Sample Mark : Bore Well Water -2		Received On :25.09.2024 Commenced On :25.09.2024 Completed On :01.10.2024	
Sl. No	PARAMETERS	RESULTS	TEST METHOD
1	Mercury(mg/l)	BDL (DL=0.0005)	APHA 24 th Edn :2023 3500-Hg
MICROBIOLOGICAL EXAMINATION			Acceptable Limits (Max)
1	Faecal Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
2	Total Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
Note :- MPN-Most Propable Number, <2 is considered as Absent			
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TEST REPORT

Sample Ref No. :SAS/W/334/09		Report No. :334/09	
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 :Customer25.09.2024 Customer's Reference : Letter Dated on 25.09.2024 Sample Mark : Bore Well Water -3		Received On :25.09.2024 Commenced On :25.09.2024 Completed On :01.10.2024	
Sl. No	PARAMETERS	RESULTS	TEST METHOD
1	Mercury(mg/l)	BDL (DL=0.0005)	APHA 24 th Edn :2023 3500-Hg
MICROBIOLOGICAL EXAMINATION			Acceptable Limits (Max)
1	Faecal Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
2	Total Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
Note :- MPN-Most Propable Number, <2 is considered as Absent			
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TEST REPORT

Sample Ref No. :SAS/W/335/09	Report No. :335/09
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 :Customer25.09.2024 Customer's Reference : Letter Dated on 25.09.2024 Sample Mark : Bore Well Water -4	Received On :25.09.2024 Commenced On :25.09.2024 Completed On :01.10.2024

Sl. No	PARAMETERS	RESULTS	TEST METHOD
1	Mercury(mg/l)	BDL (DL=0.0005)	APHA 24 th Edn :2023 3500-Hg
MICROBIOLOGICAL EXAMINATION			Acceptable Limits (Max)
1	Faecal Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml
2	Total Coliform (MPN/100ml)	<2	IS 1622 : 1981 Absent/100ml

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

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A.Kaviyarasi - Technical Manager



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TEST REPORT				
Sample Ref No. :SAS/W/336/09		Report No. :336/09		
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 :Customer25.09.2024 Customer's Reference : Letter Dated on 25.09.2024 Sample Mark : Bore Well Water -5		Received On :25.09.2024 Commenced On :25.09.2024 Completed On :01.10.2024		
Sl. No	PARAMETERS	RESULTS	TEST METHOD	
1	Mercury(mg/l)	BDL (DL=0.0005)	APHA 24 th Edn :2023 3500-Hg	
MICROBIOLOGICAL EXAMINATION				Acceptable Limits (Max)
1	Faecal Coliform (MPN/100ml)	<2	IS 1622 : 1981	Absent/100ml
2	Total Coliform (MPN/100ml)	<2	IS 1622 : 1981	Absent/100ml
Note :- MPN-Most Probable Number, <2 is considered as Absent				
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TPL-CER Activities: Smart classroom provided to Village's School



TPL-CER Activities: Rest room & waiting shed provided at Sathankadu



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.







