



Tamilnadu Petroproducts Limited

26th September 2023

TPL\ECH-PO\FORM-V\2023

To.
The Joint Chief Environmental Engineer,
Tamil Nadu Pollution Control Board,
→ 950/1, Poonamalle High Road,
Arumbakkam,
Chennai- 600 106.

Dear Sir,

Sub: TPL – ECH-PO Plant - Environmental Statement (Form V) 2022– 23

We herewith submit Environmental Statement (FORM – V) for the period of April 2022 - March 2023 pertaining to TPL – ECH – PO Plant for your kind reference and record.

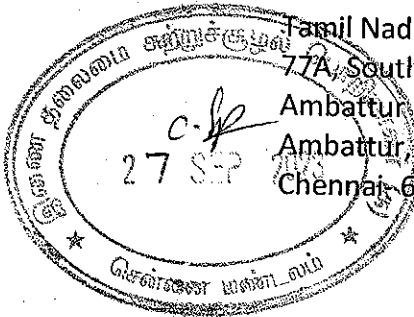
Thanking you,

Yours faithfully,
For Tamilnadu Petroproducts Limited

R.M.Raghunathan
AVP (Services)



Cc: The District Environmental Engineer,
Tamil Nadu Pollution Control Board,
77A, South Avenue Road,
Ambattur Industrial Estate,
Ambattur,
Chennai- 600 058.



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

TPL – ECH – PO Plant

FORM - V

(See Rule 14)

**ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR
ENDING THE 31st MARCH 2023**

PART - A

I	Name & Address of the owner/ Occupier of the Industry, Operation or process.	Mr. D. Senthikumar Whole Time Director – Operation. Tamilnadu Petroproducts Limited Manali Express Highway, Manali Chennai - 600 068	
II	Industry Category Primary (SIC Code) Secondary Code (SIC Code)	Petrochemical ECH – Propylene oxide	
III	Production Capacity	Products	MT/Month
		Propylene Oxide	1350 MT
		Chlorinated Organics	202.5 MT
IV	Year of Establishment	2019	
V	Date of the last environmental statement submitted	22.09.2022	

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TPL – ECH – PO Plant

PART - B

WATER AND RAW MATERIAL CONSUMPTION

WATER CONSUMPTION:-

PURPOSE	m ³ / DAY	
	2021 – 2022	2022 – 2023
Process	1682.2	1648.0
Cooling	295.5	291.0
Domestic	8.5	9.15

PROCESS WATER CONSUMPTION:-

Name of the Products	Process water consumption per unit of product output m ³ / MT	
	During the previous Financial year (2021– 2022)	During the current Financial year (2022 – 2023)
Propylene Oxide	52.07	53.08

RAW MATERIAL CONSUMPTION:-

Name of the Raw Material	Name of the Product	Consumption of raw material per unit of output, MT / MT	
		During the previous Financial year (2022– 2022)	During the current Financial year (2022 – 2023)
Propylene	Propylene Oxide	0.861	0.876
Chlorine		1.454	1.45
Lime		1.270	1.242

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PART - C

POLLUTION DISCHARGED TO ENVIRONMENT / UNIT OF OUTPUT
(Parameter as specified in the consent issued.)

Treated Trade Effluent :-

Pollutants	Prescribed Quantity of pollutants discharge (Kg/Day)	Quantity of pollutants discharged (Kg/Day)	Percentage of variation from prescribed standard with reasons
pH	5.5 – 9.0	7.14	Within the standards
TDS	----	----	
TSS	180.5	36.95	
Chlorides (as Cl)	----	----	
Sulphates (as SO ₄)	1805	46.86	
BOD	180.5	10.53	
COD	451.25	89.35	
Oil & Grease	36.1	BLQ	
Phenolic Compound	1.805	<0.0075	
Fluoride	3.61	1.86	
Chromium	3.61	< 0.0045	
TRC	1.805	<1.50	

Treated Sewage Effluent *

Pollutants	Prescribed Quantity of pollutants discharge (Kg/Day)	Quantity of pollutants discharged (Kg/Day)	Percentage of variation from prescribed standard with reasons
pH	5.5 – 9.0	8.00	Within the standards
TSS	2.1	1.21	
BOD	1.4	0.14	

Emission

Stack Attached to	Prescribed Quantity of pollutants discharge [T/Day]				Quantity of pollutants discharged [T/Day]				Percentage of variation from prescribed standard with reasons.
	PM	SO ₂	NO _x	CO	PM	SO ₂	NO _x	CO	
Boiler	0.0027	0.014	0.096	0.041	0.0003	0.0039	0.008	0.002	Within the standards
Chlorine Scrubber	Chlorine		0.0003		Chlorine		0.000001		

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TPL – ECH – PO Plant

Ambient Air Quality

No	Parameter, $\mu\text{gm} / \text{m}^3$	Prescribed standard,	Concentration of Pollutants	Percentage of variation from prescribed standard with reasons
1	Particulate Matter, PM_{10} , $\mu\text{gm} / \text{m}^3$	100	47.38	Nil
2	Particulate Matter, $\text{PM}_{2.5}$, $\mu\text{gm} / \text{m}^3$	60	18.96	Nil
3	Sulphur Dioxide, $\mu\text{gm} / \text{m}^3$	80	12.18	Nil
4	Oxides of Nitrogen, $\mu\text{gm} / \text{m}^3$	80	22.18	Nil
5	Carbon Monoxide, (8 hr avg) $\mu\text{gm}/\text{m}^3$	2000	< 50	Nil
6	Lead, $\mu\text{gm} / \text{m}^3$	1.0	BDL	Nil
7	Ozone, $\mu\text{gm} / \text{m}^3$	180	11.12	Nil
8	Ammonia, $\mu\text{gm} / \text{m}^3$	400	6.11	Nil
9	Benzene, $\mu\text{gm} / \text{m}^3$	5.0	BDL	Nil
10	Benzo (a) pyrene , ng / m^3	1.0	BDL	Nil
11	Arsenic, ng / m^3	6.0	BDL	Nil
12	Nickel, ng / m^3	20.0	BDL	Nil

PART - D

HAZARDOUS WASTE

(As specified under Hazardous Wastes/ Management and Handling Rules, 2008)

	Total Quantity	
	During the previous Financial year (2021– 2022)	During the current Financial year (2022 – 2023)
(A) From Process		
Used Spent Oil, MT	1.0	2.0
Waste Oil, MT	0.0	0.0
(B) From pollution control facility		
ETP Sludge, MT	295.0	297.0

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**PART - E
SOLID WASTE**

	<i>Total Quantity</i>	
	<i>During the previous Financial year (2021– 2022)</i>	<i>During the current Financial year (2022 – 2023)</i>
a) From process, MT	9310	7965.29
b) Pollution control facility, MT.	Nil	Nil
c) Quantity recycled or reutilised.	Nil	Nil
d) Sold, MT	9310	7965.29
e) Disposed.	Nil	Nil

PART - F

Please specify the characterisation (in terms of composition and Quantum) of Hazardous as well as Solid waste and indicate disposal practice adopted for both these categories of wastes).

1. Hazardous Waste Category No: Schedule 1, S.No: 5.2 - Used / Spent Oil

Quantity : 2.0 MT
Composition : Used Lube Oil
Disposal practice : Disposed to SPCB authorised vendors.

2. Hazardous Waste Category No: Schedule 1, S.No: 5.1 – Waste Oil

Quantity : 0.0 MT (DG Not in operation)
Composition : Oil with water.
Disposal practice : Used as Fuel in TPL heater.

3. Hazardous Waste Category No: Schedule 1, S.No: 35.3 – ETP Sludge

Quantity : 297 MT
Composition : ETP Sludge
Disposal practice : Disposed to SPCB authorised landfill facility.

PART - G

Impact of the Pollution abatement measures taken as conservation of natural resources and the cost of production.

- ✓ Regasified Liquefied Natural Gas (R-LNG) is being as fuel in Boiler replacing furnace oil resulted in reduction in emission load.

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TPL – ECH – PO Plant

- ✓ Tertiary Treated Reverse Osmosis (TTRO) water from Chennai Metro Water Supply and Sewerage Board is being used instead of Metro water thus by achieving reduction of effluent generation and fresh water conservation.
- ✓ Rejects from LAB - RO Plant and treated effluent from HCD plant are being utilised in process as fresh water conservation measure.
- ✓ Cooling Tower blowdown and part of water treatment plant regeneration effluent is being utilised in the process as a water conservation measure.
- ✓ Entire quantity of treated effluent from sewage treatment plant is utilised for gardening and cooling tower make up water.
- ✓ Continuous Ambient Air Quality Monitoring station is provided for monitoring PM_{2.5}, PM₁₀, Chlorine and VOC in ambient air and monitoring data has been uploaded to TNPCB server.
- ✓ Online Continuous Emission Monitoring System (OCEMS) along with data uploading facility is provided in the stack attached to Boiler for the parameter PM, SO₂, NO_x, and CO and monitoring data has been connected to TNPCB server.
- ✓ Online Continuous Monitoring System (OCEMS) is provided in the stack attached to Chlorine Scrubber for Chlorine parameter and monitoring data has been connected to TNPCB server.
- ✓ Online Continuous Effluent Monitoring System (OCEMS) is provided for monitoring pH, Flow meter, TSS, BOD and COD in the ETP – treated effluent outlet and monitoring data has been connected to CAC, TNPCB.
- ✓ Online flow meters are provided at inlet to ETP and Inlet to Process from LAB - RO Reject & HCD - Treated effluent and monitoring data has been connected to TNPCB for continuous monitoring.

PART - H

Additional investment proposal for environment protection including abatement of pollution

ZLD (Zero Liquid Discharge) feasibility study for the effluent treatment plant has been initiated with NEERI.

PART - I

Any other Particulars for improving the Quality of the Environment

- ***Green Belt Development:*** 1500 nos of Trees saplings were planted inside and outside of the factory premises.

W. S.

PRODUCTION

April 2022 to March 2023

S.No	PRODUCTS	2022- 2023
1	Propylene Oxide, MT	13391.0
2	Chlorinated Organics, MT	2352.0

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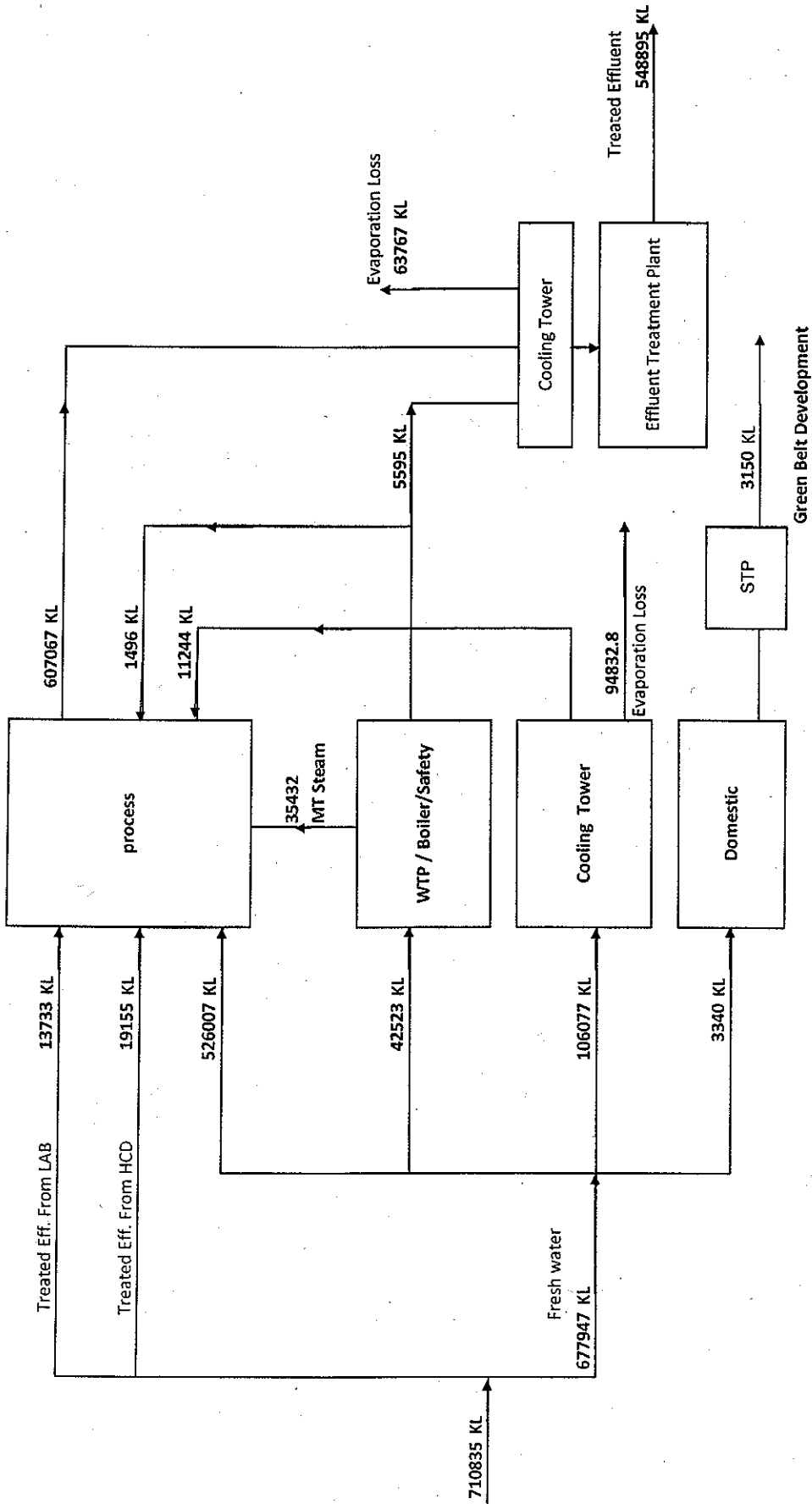
WATER CONSUMPTION

April 2022 to March 2023

MONTH	CONSUMPTION, KL					TOTAL CONSUMPTION
	PROCESS			COOLING	DOMESTIC	
	Fresh water	Treated Eff from HCD	Treated Eff from LAB			
Apr-22	48034	1601	1160	9350	258	60403
May-22	44904	1685	1181	9548	301	57619
Jun-22	49062	1639	1149	9235	298	61383
Jul-22	46611	1641	1119	9568	257	59196
Aug-22	47952	1638	1130	8977	236	59933
Sep-22	43232	1616	1118	9156	284	55406
Oct-22	51540	1671	1139	9057	295	63702
Nov-22	46678	1620	1106	8996	305	58705
Dec-22	46393	1500	1163	8002	288	57316
Jan-23	45479	1486	1178	8142	274	56559
Feb-23	47371	1485	1109	8001	269	58235
Mar-23	51274	1573	1181	8045	275	62348
	568530	19155	13733	106077	3340	710835
	601418			106077	3340	710835



ECH - PO - WATER BALANCE FOR THE PERIOD FROM APRIL 2022 to MAR 2023

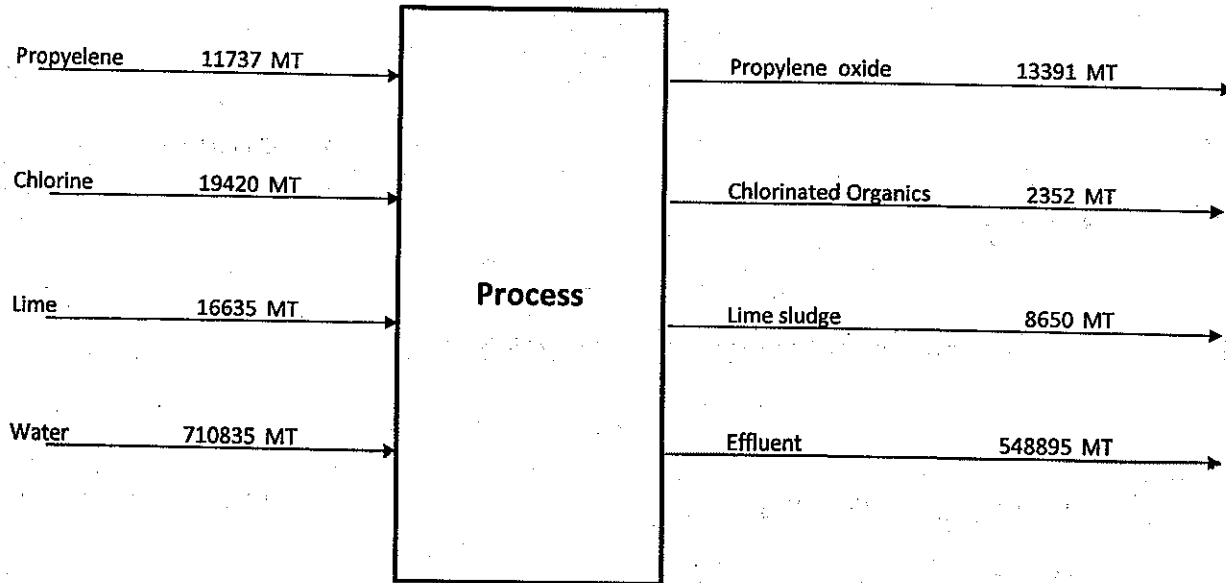


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Raw Material Consumption		
<i>April 2022 to 2023</i>		
S.No	Raw Material	2022-2023
1	Propylene ,MT	11737
2	Chlorine,MT	19420
3	Lime ,MT	16635



PO MATERIAL BALANCE FOR THE PERIOD FROM APRIL 2022 to MAR 2023



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