Tamilnadu Petroproducts Limited

10th September 2024

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

Dear Sir,

Thanking you,

Sub: TPL – ECH-PO Plant - Environmental Statement (Form V) 2023–24

We herewith submit Environmental Statement (FORM - V) for the period of April 2023 - March 2024 pertaining to TPL - ECH - PO Plant for your kind reference and record.

Yours faithfully, For Tamilnadu Petroproducts Limited

N.Murugan VP- Operations

Cc: The District Environmental Engineer,
Tamil Nadu Pollution Control Board,
A/A, South Avenue Road,
Ambattur Industrial Estate,
Ambattur,
Channai, 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

FORM - V

(See Rule 14)

ENVIRONMENTAL STATEMENT FOR THE FINANCIAL YEAR ENDING THE 31st MARCH 2024

PART - A

	Name & Address of the owner/	Mr. D. Senthi kumar
	Occupier of the Industry, Operation or process.	Whole Time Director – Operation. Tamilnadu Petroproducts Limited
1		Manali Express Highway,
		Manali
		Chennai - 600 068
II	Industry Category Primary (SIC Code) Secondary Code (SIC Code)	Petrochemical ECH – Propylene oxide
	Production Capacity	Products MT/Month
Ш	1 Toddector Supusisy	Propylene Oxide 1350 MT
""		Chlorinated Organics 202.5 MT
IV	Year of Establishment	2019
V	Date of the last environmental statement submitted	27.09.2023



PART - B

WATER AND RAW MATERIAL CONSUMPTION

WATER CONSUMPTION:-

PURPOSE	m³/DAY		
	2022 – 2023	2023 – 2024	
Process	1648.0	1650.9	
Cooling	291.0	315.4	
Domestic	9.15	9.31	

PROCESS WATER CONSUMPTION:-

Name of the Products	Process water consumption per unit of product output m³ / MT			
	During the Financial year (2022 – 2023)	During the current Financial year (2023 – 2024)		
Propylene Oxide	53.08	58.77		

RAW MATERIAL CONSUMPTION:-

Name of the Raw Material	Name of the		aterial per unit of output, / MT
		During the Financial year (2022 – 2023)	During the current Financial year (2023 – 2024)
Propylene		0.876	0.877
Chlorine	Propylene Oxide	1.45	1.442
Lime		1.242	1.247

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
рН	5.5 – 9.0	7.04	
TDS			
TSS	180.5	37.33	
Chlorides (as Cl)			
Sulphates (as SO4)	1805	773.98	
BOD	180.5	17.23	Within the standards
COD	451.25	132.11	
Oil & Grease	36.1	BLQ	
Phenolic Compound	1.805	<0.005	
Fluoride	3.61	2.87	
Chromium	3.61	< 0.0045	
TRC	1.805	0.29	

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
рН	5.5 – 9.0	7.60	
TSS	2.1	0.89	Within the standards
BOD	1.4	0.39	

Emission

Stack		cribed C			Quantit		itants disc Day]	charged	Percentage of variation from
Attached to	PM	SO ₂	NOx	СО	PM	SO ₂	NOx	СО	prescribed standard with reasons.
Boiler	0.0027	0.014	0.096	0.041	0.0001	0.0012	0.0027	0.002	Within the
Chlorine Scrubber	Chlo	rine	0.00	003	Chlo	orine	0.000	0077	standards



(B) From pollution control facility	1	
ETP Sludge, MT	297.0	275.0

PART - E SOLID WASTE

	Total Quantity				
	During the Financial year (2022 – 2023)	During the current Financial year (2023 – 2024			
a) From process, MT	7965.29	7632.0			
b) Pollution control facility, MT.	Nil	Nil			
c) Quantity recycled or reutilised.	Nil	Nil			
d) Sold, MT	7965.29	7632.0			
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

0.0 MT

Composition

Used Lube Oil

Disposal practice

Disposed to SPCB authorised recycler.

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

Disposed to SPCB authorised TSDF.

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

Quantity

275 MT

Composition

ETP Sludge

Disposal practice

Disposed to SPCB authorised landfill facility.

4. Hazardous Waste Category No: Schedule 1, S.No: 33.1 – Discarded Empty Barrels

a) Quantity

1.01 MT

b) Composition

Empty barrel

c) Disposal practice

Sent to authorised recycler

PART - G

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

- ✓ Migrated to cleaner fuel in Boiler from FO to R-LNG .Regasified Liquefied Natural Gas (R-LNG) It is being used as fuel in Boiler resulted in reduction in emission load.
- ✓ Energy consumption reduction achieved, with installation of an additional heat exchanger to recover waste heat.
- ✓ Energy savings realized through various initiatives: 1) Replacing existing light fixtures with high-efficiency LED fixtures, and 2) De-rating of pumps
- ✓ 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, NOx, 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

 Mandate issued to CSIR-NEERI for ZLD feasibility study for maximum utilization of treated effluent.

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.
- ▶ Be a socially responsible entity, we have been maintaining the green belt area of around 15.14 acres which is developed during 2022-23 at Morai village, Pandeswaram village and Grandlyon villages, Tiruvallur District
- Mission LiFE -Lifestyle of Environment." awareness programme conducted for employees and their declarations have received towards LiFE action points.

PRODUCTION

April 2023 to March 2024

S.No	PRODUCTS	2023- 2024
1	Propylene Oxide, MT	12269.00
2	Chlorinated Organics, MT	2119.0

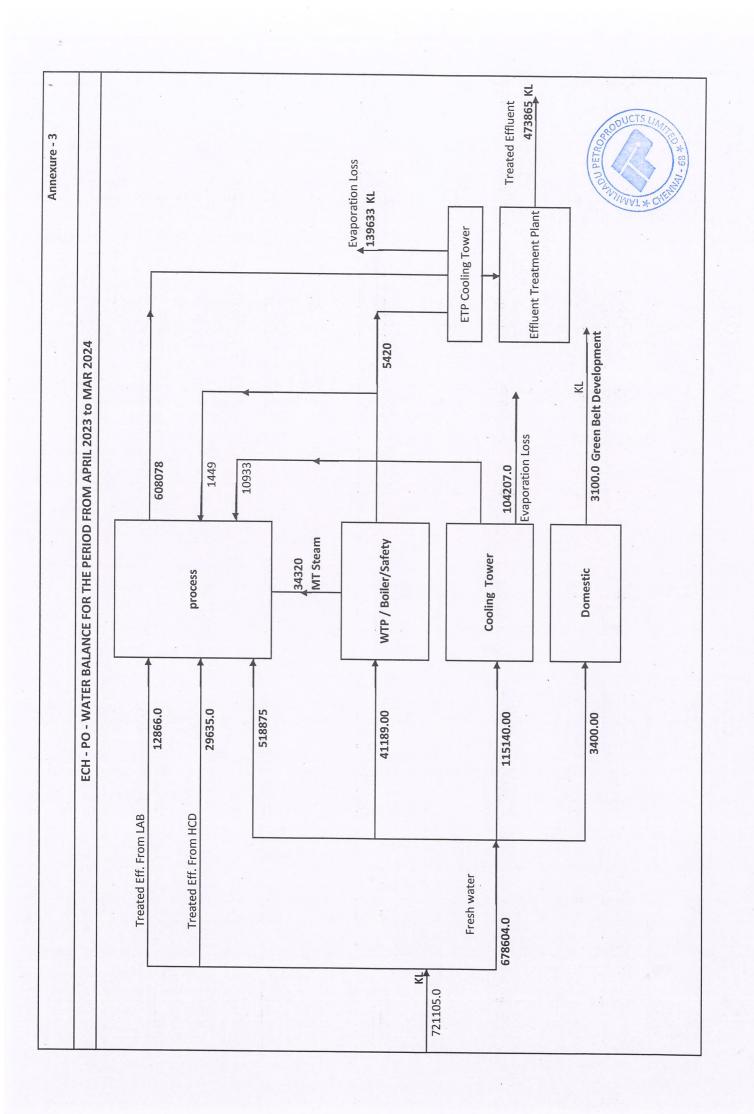


WATER CONSUMPTION

April 2023 to March 2024

MONTH		CON	ISUMPTION,	KL		
		PROCESS				TOTAL
	Fresh water	Treated Eff from LAB	Treated Eff from HCD	COOLING	DOMESTIC	CONSUMPTION
Apr-23	48185	1087	2557	9791	258	61878
May-23	51952	1080	2497	9584	301	65414
Jun-23	56183	1078	2536	9979	298	70074
Jul-23	44438	1142	2497	9303	257	57637
Aug-23	52076	1194	2538	9728	236	65772
Sep-23	51774	1103	2576	9902	284	65639
Oct-23	51492	1153	2516	9806	295	65262
Nov-23	24789	1042	2530	9824	305	38490
Dec-23	15531	650	1117	7780	220	25298
Jan-24	55511	1169	2630	9917	288	69515
Feb-24	55260	1090	2943	9779	320	69392
Mar-24	52874	1077	2698	9747	338	66734
	560065	12865	29635	115140	3400	721105
	141	602565		115140	3400	721105



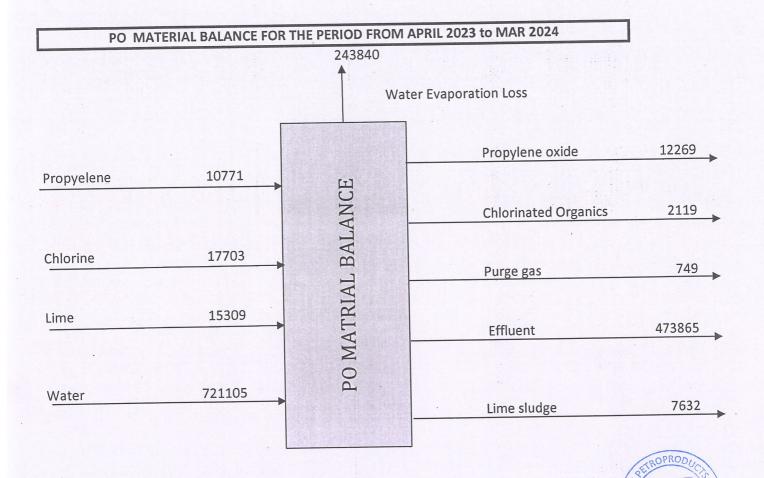


RAW MATERIAL CONSUMPTION

April 2023 to March 2024

CNI	RAW MATERIAL	2023 - 2024
S.No		10771.29
1	Propylene, MT	
2	Chlorine, MT	17702.70
		15309.05
3	Lime, MT	





TPL Plants-MISSION LiFE-Awareness program

2023-2024

Type of the Event (Action/Awareness/Both)	MISSION LiFE-Awareness program
Date of the Event	22/05/2023
Place of the Event	Tamilnadu Petroproducts Limited Manali Express Highway Manali, Chennai-600068
Description of the Event (50 words maximum)	We have conducted Environment Awareness Program on "Mission LiFE -Lifestyle of Environment."
Number of Participants attended the event	39 employees were participated
Geotagged Photos (5 Nos & Max 1 mb each photo in jbg, jepg, png format)	Photos with Geo tagged in JPG format are attached
Description for Photos (10 words maximum) Common for all photos	TPL -Mission LiFE program photos
Videos (Max 5 mb, mp4, mkv format)	TPL -Mission LiFE video is attached
Description for Videos (10 words maximum)	TPL -Mission LiFE pledge video
Have the participants taken the Mission LiFE Pledge?	Yes, Mission LiFE Pledge taken by all employees.





T.P.L., Manali, Chennai, Tamil Nadu 600068, T.P.L., Manali, Chennai, Tamil Nadu 600068, India India

22 May 2023



22 May 2023 02:57 PM



District Environmental Laboratory, Manali

From

To

Dr. P. Vijayalakshmi, M.Sc., Ph.D., Deputy Chief Scientific Officer, (Adl Charge) District Environmental Laboratory, Manali Tamil Nadu Pollution Control Board, 950/1, Poonamallee High Road, Arumbakkam, Chennai-106

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

Lr.No.TNPC Bd/DEL-MNL/Air Survey/F. No.81/2023-24, Dt. 27 12:2023

Sir,

Sub: Furnishing of Report of Analysis of Ambient Air Quality / Stack Monitoring / Ambient Noise Level Survey – Reg.

Ref: 1. This office Lr.No. TNPCB/DEL/MNL/AAQS/SM/NLS/VOC/F.No.81/2023-24 dt.07.08.2023

2. Your Lr.No..Nil dt. 29.08.2023

3. Cash Receipt No.253 dt.01.09.2023 Rs.1,05,550/-

I am herewith sending the Report of Analysis of Ambient Air Quality / Stack Monitoring / Ambient Noise Level Survey conducted in the vicinity of your industry on M/s. TPL (ECH), Manali Express Highway. Manali, Chennai - 68 on 13.10.2023 with invoice for Rs.1,05,550/- (Rupees One Lakh Five Thousand Five Hundred and Fifty only) towards the above survey / analytical charges, and the same has been adjusted vide reference (3) cited.

Kindly acknowledge the receipt of the above without fail.

Deputy Chief Scientific Officer, (A/C)
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, Ambatrur for favour of kind information please.

3. Copy to file.



District Environmental Laboratory, Manali

AMBIENT AIR QUALITY SURVEY - Report of Analysis

Report No. 41/AAQS/2023-24

Date: 27.12.2023

1. Name of the Industry

M/s. TPL (ECH),

2. Address of the Industry

Manali Express Highway, Manali, Chennai - 68.

3. Date of Survey

13.10.2023

4. Duration of Survey

8 Hours / 24 hours

5. Category

6. Land use classification

Red / Orange / Green – Large / Medium / Small Industrial / Commercial / Residential / Sensitive

Meteorological Conditions

Ambient	Min	Max	Relative	Min	Max
Temperature (⁰ C)	25	26	Humidity (%)	66	89
Weather Condition	Partial!	y Cloudy	Rain Fa!l (mm)	N	il
Predominant Wind Direction	SE -	-NW	Mean Wind Speed (km/hr)	14	4

Ambient Air Quality Survey Results

S1.	Location U 99 *		nce *	* I GL		Pollutants Concentration (microgram / m ³)				
No.		Direction *	Distance (m)*	Height Form G (m)	PM 2.5	PM 10	SO_2	NO ₂	Cl ₂	
1	On top of platform near CP Station II	NE	150	3.0		62	11	14	<0.1	
2 .	On top of platform near Propylene Oxide Filling Point	E	280	3.0		58	10	16	<0.1	
3	On top of platform near STP (Gate No 5)	SE	700	3.0	18	56	12	18	<0.1	
4	On top of platform near ERC - Building (Gate No 3)	SW	200	3.0		64	13	16	<0.1	
5	On top of platform near Flare Area	NW	240	3.0	24	78	15	21	<0.1	

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

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



District Environmental Laboratory, Manali

AMBIENT AIR QUALITY SURVEY

Schematic Diagram Showing Location of Sampling

Report No. 41/AAQS/2023-24

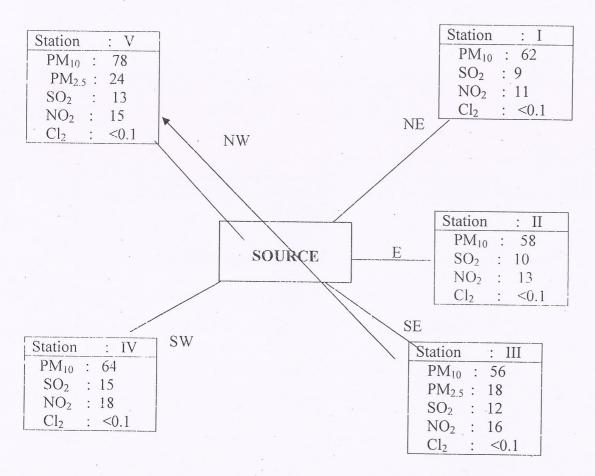
Name and Address of the Industry

: M/s. TPL (ECH)

Manali Express Highway, Manali, Chennai – 68.

Date of Survey

: 13.10.2023



Note: All the values are expressed in $\mu g/m^3$ and restricted to sampling period of 8 hrs/24hrs

Meteorologica	al Conditions:
Predominant Wind Direction	SE - NW
Wind Speed (Km/hr)	14
Weather Condition	Partially Cloudy
Rainfall	Nil

Deputy Chief Scientific Officer,(A/C)

District Environmental Laboratory



District Environmental Laboratory, Manali

STACK MONITORING SURVEY -- Report of Analysis

Report No. 41/AAQS/2023-24

Date: 27.12.2023

1. Name of the Industry

M/s. TPL (ECH),

2. Address of the Industry

Manali Express Highway, Manali, Chennai – 68

3. Date of Survey

13.10.2023

4. Type of Industry

Coal/Chemical/Sugar/Paper & Pulp/

Power plant / Textile Processing

Stack Monitoring Survey Results

S1.	Sl.	pa		dw	in (rate hr	Pollutants (mg/Nm ³)			
No.	Stack attached to	Fuel used	Stack .Temp	Velocity in (m/ sec)	Discharge rate In Nm³/hr	PM	SO_2	NO _x	Cl ₂	
1	Boiler 12.5 T	LNG	440	11.74	9604	4		38		
2	Vent Gas Scrubber		312	10.66	846	2		DO	4	

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



District Environmental Laboratory, Manali

1. Name and Address of the Industry:

M/s. TPL (ECH)

Manali Express Highway, Manali, Chennai – 68

2. Date of Survey

13.10.2023

Sl. No.	Particulars	1	2		
1.	Stack attached to	Boiler	Vent gas scrubber		
2.	Details of process stack	Boiler 12.5T	Vent gas scrubber		
3.	Height from G Level in (m)	47.4	30.0		
4.	Diameter in (m)	0.65	0.17		
5.	Port hole height from Ground Level or bends or ducts in (m)	20.35	13.25		
6.	Fuel Used (with % Sulphur content)	LNG			
7.	Fuel Consumption rate per hr (mention units)	0.15 KL/hr			
8.	Type of Stack and capacity	Round	Round		
9.	Production on 13.10.2023	Propylene Oxide – 46.018 MT			
10.	APC Measures provided	Automatic Air/Fuel ratio	Scrubber		
11.	APC functional status	Functional	Functional		
12.	Moisture content in %	7.5			
13.	Ambient temp in °K	303	303		
14.	Temp of flue gas in °K	440	312		
15.	Velocity of flue gas in m/sec	11.74	10.66		
16.	Volume of flue gas sampled in m ³	1.001	1.003		
17.	Gaseous Discharge rate per day in Nm³/hr	9604	846		
18.	Combustion efficiency %				

District Environmental Laboratory, Manali

STACK MONITORING SURVEY - Additional details

Report No. 41/SM/2023-24

Date: 27.12.2023

1. Name of the Industry

M/s. TPL (ECH)

2. Address of the Industry

Manali Express Highway, Manali, Chennai – 68

3. Date of Survey

13.10.2023

4. Type of Industry

Coal/Chemical/Sugar/Paper & Pulp/

Power plant / Textile Processing

Stack Monitoring Additional details

Sl. No.	Details of stack mentioned in the Air Consent order	Details of stack available and in working condition	Details of stack for which stack Emission sampling have been done	Justification for the left out of stack Emission Sampling
1.	Boiler 12.5T	Working	Sampling Done	
2.	Vent Gas Scrubber	Working	Sampling Done	



District Environmental Laboratory, Manali

AMBIENT/SOURCE NOISE LEVEL SURVEY - Report of Analysis

Report No. 41/ NLS/2023-24

Date: 27.12.2023

1.	Name of t	he Industry	M/s. T	PL (ECH)				
2.	Address of the Industry Man		Manali	Manali Express Highway, Manali, Chennai - 68				
3.	Date of Su	ırvey	13.10.2	13.10.2023				
	gory	RL		Land use Classification	Industrial			
		Ambient/S	ource	Time of Survey	Day			
Mete	Meteorological conditions			Calm/Windy/Rainy	Windy			

Logging Parameters

Instrument Used	l C	CESVA Model SC310		Serial No	T243103
		10 Minutes each point N		Measuring Range	50-110 dB(A)
Weighting	" A"	Peak	"C"		FAST
Sound Incidence		Weighting RANDOM		Time in hrs	14.00 15.00

Report of Noise Level Monitoring

SI		on a	9	n n	Sound Level – dB (A)			
No	Location	Duration (min)	Duration (min) Distance (M) Direction	L_{eq}	Min	Max		
. 1	Near CP Station II	10	150	NE	58.4	56.8	70.1	
2.	Near Propylene Oxide Filling Point	10	280	Е	56.0	52.0	58.0	
3	Near STP (Gate No.5)	10	700	SE	61.2	56.0	65.5	
4	Near ERC Building (Gate No 3)	10	200	SW	64.8	60.8	69.5	
5	Near Flare Area	10	240	NW	57.9	56.7	60.4	

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

Deputy Chief Scientific Officer,(A/C)
District Environmental Laboratory
Tamil Nadu Pollution Control Board

Manali



District Environmental Laboratory, Manali

INFERENCE REPORT ON A.A.Q.S./ S.M.

1. Name of Industry

M/s. TPL (ECH)

2. Pollution Category

: Red Large

3. Date of A.A.Q. Survey

13.10.2023

4. Predominant Wind Direction

: SE-NW

5. Weather condition

: Partially Cloudy

STATUS OF POLLUTANTS LEVEL

I. <u>AMBIENT AIR QUALITY</u>:-

1. Total No. of A.A.Q. stations monitored

: 5

2. No. of A.A.Q. stations in which Pollutants

Level exceeded the Boards standards

: Ni!

Maximum and Minimum values of Pollutants Level observed:

SI.	POLLUTANT	Values in microgram/m ³		BOARD's STANDARD	
No.		Maximum	Minimum	(As per consent order)	
1.	PM ₁₀ PM.2.5 <u>GASEOUS</u> <u>POLLUTANTS:-</u>	78 24	56 18	100 60	
	(i) SO ₂	15	10	80	
	(ii) NO2	21	14	80	

II. STACK MONITORING:-

1. Total No. of Stacks Monitored

2

2. No. of Stacks in which Pollutants level

Exceeded the Boards standards

: Nii



District Environmental Laboratory, Manali

BILL

Report No. 41/AAQ/SM/2023-24

Bill No.	41/2023-24		
Date	27.12.2023		

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

Ref: 1. B.PMs.No.6 Dt.31.03.2009.

- 2. This office Lr.No. TNPCB/DEL/MNL/AAQS/SM/NLS/VOC/F.No.81/2023-24 dt.07.08.2023
- 3. Your Lr.No..Nil dt. 29.08.2023
- 4. Cash Receipt No.253 dt.01.09.2023 Rs.1,05,550/-

Sl. No.	Description	Rate (Rs.)	No. of Stations/ Stacks	Amount (Rs.)		
1.	SAMPLING CHARGES:					
	(i) Ambient Air Quality monitoring PM ₁₀	3500	5	17,500		
	(ii) Source Emission Monitoring (PM, SO ₂ , NO _x etc.,)	13100	2	26,200		
	(iii) Ambient Air Quality monitoring PM _{2.5}	3500	2	7,000		
2.	ANALYTICAL CHARGES: (i) Ambient Air Samples PM ₁₀ , SO ₂ , NO ₂ , Cl ₂ (each Rs. 1050/-)	4200	5	21,000		
	(ii) Source Emission Samples PM, SO ₂ , NO _x , Cl ₂ (each Rs.1050/-)	3150	1	3.150		
	(iii) Source Emission samples (PM & Cl ₂)mbient Air Samples PM _{2.5}	2100	1	2,100		
	(iv) Ambient Air Samples PM _{2.5}	1800	2	3600		
3.	AMBIENT NOISE MONITORING CHARGES:					
×	(i) For first 5 stations	1400	5	7,000		
Transportation Charges						
Total						
Received Vide SBI Bank DD No.476384 dated :28.08.2023 Our CR.No. 147287 dated 15.02.2022						
LESS: Excess amount of TVOC analytical charges will be deducted in the demand of the next survey.						
Balance to be adjusted						

Deputy Chief Scientific Officer,(A/C)