BEFORE THE NATIONAL GREEN TRIBUNAL

SOUTHERN ZONE, CHENNAI

APPEAL NO. 14 OF 2025 (SZ)

The Chennai Petroleum Corporation Limited,

….Appellant

-Vs-

Tamil Nadu Pollution Control Board and Ors.

…Respondent

REJOINDER FILED BY THE APPELLANT – CHENNAI PETROLEUM CORPORATION LIMITED

M/s. S SARAVANAN

E KARTHIKEYAN

COUNSEL FOR APPELLANT

No. 74, II Floor, Marshalls Enclave, Marshalls Road,

Egmore, Chennai – 8

Email – saleemperson@gmail.com Ph - 9500069660

BEFORE THE NATIONAL GREEN TRIBUNAL
SOUTHERN ZONE, CHENNAI

APPEAL NO. 14 OF 2025 (SZ)

The Chennai Petroleum Corporation Limited,
Rep by its Managing Director,
New No. 536, Anna Salai,
Teynampet, Chennai – 600 018.
Tel: 044-24349833 & Email ID: vsriram@cpcl.co.in

....Appellant

-Vs-

1. Tamil Nadu Pollution Control Board,
Rep. by its Chairperson,
No. 76, Mount Salai,
Guindy, Chennai – 600 032.
Tel: 044-26880219 & Email ID tnpcbmchn@gmail.com

2. The Joint Chief Environmental Engineer (M),
Tamil Nadu Pollution Control Board,
2nd Floor,77-A, South Avenue Road,
Ambattur Industrial Estate,
Ambattur Taluk, Chennai - 600 058.
Tel: 044-26880219 & Email ID tnpcbmchn@gmail.com

3. District Environmental Engineer,
Tamil Nadu Pollution Control Board,
1st Floor, 6/1, Sri Jothi Complex,
Murugesan Street, Balavinayagar Nagar,
Arumbakkam, Chennai - 600 106.
Phone 044 23632603 & Email ID: tnpcbchennai@yahoo.in.

.... Respondents

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

REJOINDER AFFIDAVIT FILED BY THE APPELLANT

I, V.Sriram, son of M.S. Viswanathan, aged about 58 years, having office at 536, Anna Salai, Teynampet, Chennai 600018, do hereby solemnly affirm and sincerely state as follows :

1. I submit that I am officiating as the Chief General Manager (Health, Safety & Environment) in the Appellant company herein and as such I am authorised and competent to swear this affidavit on behalf of the Appellant herein and I am well aware of the facts and circumstances of the case.

2. I submit that the present Appeal has been filed seeking for the following relief :

> *"Call for the entire records pertaining to the impugned order in Proc no. TNPCB/ T6/ F.12753/ MNL/ RL/2024 dated 20.02.2025, issued by the 1st Respondent herein under Section 5 of the Environment (Protection) Act, 1986 which is impugned in the present appeal and set aside the same."*

3. I submit that Appeal filed in the subject matter by the Appellant may be read as a part and parcel of this present rejoinder affidavit.

4. I submit this present rejoinder is being filed to reply to the Reply Affidavit filed by the Respondents dated 03.09.2025 and the same is as follows :

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
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Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

PARA WISE REPLY :

5. I submit that the averments made in Para 1-8 are all matters of record and require no reply and are admitted to the extent as it relates to the Appellant.

6. I submit that the allegations and averments made in Para 9 of the Reply, are all false and vehemently denied. It is denied that the oil spill originated from the facility due to heavy rain from Cyclone Michaung and is factually incorrect since the Respondent Board has not furnished any substantial evidence and has miserably failed to identify the source of the oil spill.

7. It is submitted that during the rains caused by cyclone Michaung on 3rd and 4th Dec. 2023, the water level inside the refinery was managed with the existing systems. However, the water level increased significantly, after the rain stopped on 4th Dec. 2023 (evening), due to the release of surplus water from Poondi & Puzal reservoirs, which resulted in inundation both inside and outside the refinery and also the entire Manali Industrial area. When the flood water receded from 5th Dec. 2023 (late night), a complaint was received from the Ennore creek area regarding the oil spill. Subsequently, the Hon'ble National Green Tribunal (NGT) initiated a Suo Motu case (180 of 2023) on 7th Dec. 2023.

8. It is submitted that the Appellant replied to the Show Cause Notice that CPCL has a robust storm water system and this system handled rainfall effectively. Further it was intimated that the continuous release of water from the Poondi & Puzhal reservoirs in the outside canal led to an increase in levels in the Manali Industrial Area. CPCL had informed the State authorities of the extremely dangerous levels of water, due to the reservoirs' opening, creating severe flooding (upto 3 to 4 feet), which has never been experienced in Manali Industrial Area.

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9. It is submitted that in a normal scenario, the excess surface run-off water from refinery is connected to Buckingham Canal for handling the water during heavy rains via Storm water drain. However, the refinery experienced unprecedented flooding of upto 3 to 4 feet, which occurred due to large water release from reservoirs.

10. It is submitted that Manali & Ennore industrial area has more than 25 major petrochemical / chemical industries, workshop & carriages. Also, in the Manali industrial belt, there are various oil marketing terminal, lube blending plants, Railway loco shed, which handle furnace oil, lube oil etc. All these industries were inundated during the flood due to Michuang cyclone and subsequent release of surplus water from nearby reservoirs, surface oil would have been washed away from any or many of these industries.

11. Therefore, the oil spill was not attributable to any operational failure or negligence by CPCL but was a direct consequence of widespread floods caused by the Poondi & Puzhal reservoirs' discharge and hence the statement by TNPCB is factually incorrect.

12. With respect to the averments made in para 10, it is submitted that the Appellant had submitted a full compliance report to the TNPCB in response to the directions dated 11.01.2024.

13. With respect to the averments and allegations made in Para 11, the oil quantity estimation of 517 tonnes calculated by IIT-M (an agency engaged by the TNPCB) is vehemently denied as false and incorrect.

14. It is submitted that the Appellant had submitted a reply on 05.12.2024 to the show cause notice issued by TNPCB where the following was submitted :

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SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
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चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

a. Cyclone Michaung brought incessant rain in the Manali area, which started on the evening of 3rd Dec'23 and ceased around 18.00 hrs on 4th Dec'23. The water level increased significantly in Manali industrial area on 05th Dec'23 due to release of surplus water from reservoirs and reached maximum level at 19.00 hrs on 05th Dec'23 when there was no rain.

b. Further, there are around 25 big Chemical, Petrochemical industries and several hundreds of small units functioning in Manali and Ennore area and it is a fact that, oil was found in the upstream area of CPCL unit also. All the industries in the Manali area were severely impacted by flooding due to this natural calamity. Hence, levying Environmental compensation on CPCL alone is not acceptable, despite the best efforts taken by CPCL to restore normalcy in Ennore area as a responsible corporate citizen.

c. In addition to the above, IIT-M report findings have not been conducted in a scientific way in estimating the quantity. There are several discrepancies in arriving at the quantity & source identification. As the methodology adopted by IITM is not proper, the consequent estimated quantity is abnormally high and hence is not acceptable.

d. To further support the above argument, IIT's satellite imaging comparison of Ship collision incident between MT Dawn Kanchipuram and MT Maple, near Ennore Port occurred in Jan 2017 resulted in around 223.5 KL (178.8 MT) of oil spill which was spread across an area of 190 KM2 and had adversely impacted more that 60 KM of the coastline. The above quantity is consistent with NCSCM report of 242 KL (194 MT) oil spill based on the comprehensive study carried out by NCSCM.

e. On the other hand, in the Dec'23 Ennore oil spill incident, Indian Coast Guard (ICG) has reported that the spread of oil spill is restricted to a maximum of 20 KM2. Further, no complaint was received from coastline.

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SRIRAM VISHWANA[illegible]IAN
मुख्य महाप्रबंधक (स्वास्थ्य, [illegible] व पर्यावरण)
Chief General Ma[illegible]ager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

f. The above comparison clearly indicates that the 517 MT quantity of oil estimated by IIT-M is far from reality and lacks any factual basis.

15. It is submitted that the IIT report is fundamentally flawed relying on baseless assumptions and unscientific methodologies instead of verifiable data. The report has many discrepancies on top of these assumptions which are enumerated below. These flaws render the report's conclusions scientifically unsound and unacceptable as a basis for any action.

a. Oil quantity estimation – High Value of Total Petroleum Hydrocarbon (TPH) in sediments
b. Oil quantity estimation based on extrapolation of abnormal TPH value
c. Incorrect data validation and source identification
  i. Quantity assessment from open tanks for 417 Tons which are not used for storage of petroleum product
  ii. Assuming 395 tons recovered oily water as 100% oil
d. Inappropriate source identification of treated water and rainwater pond
e. Incomplete Assessment regions
f. Missing comprehensive investigation
g. Missing out to investigate other Manali & Ennore industries
h. Oil quantity estimation – Unreasonable quantity
i. Oil quantity estimation – based on assumptions and not on scientific way
j. Wrong information on Mangroves

I. Discrepancy # 1: Oil quantity estimation – High Value of Total Petroleum Hydrocarbon (TPH) in sediments

a. The calculations used to estimate the Oil spill are unscientific. The report's conclusions are based on flawed analysis. Oil, being a lighter

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चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड

material than water, will float on water. Even as per IITM, Oil density is 800 g/lit which is much less than the density of water, which is 1000 g/lit. Even though oil in the water layer is 11.54 KL (IIT report page No: 29), the claim of 487.12 KL (IIT report page No: 26) of oil in soil sediment in the river is absolutely incorrect statement in the report.

b. Percolations down to the earth thro' water by floating oil is not feasible. Quantum of oil in soil/ sediments reported in the report could not be possible. As flood recedes floating oil would have been carried over along with water in B canal / K river and cannot settle under water.

c. Analysis of TPH content in water & soil sediment by different government / reputed agencies like National Centre for Coastal Research (NCCR), IITM, The Energy and Resources Institute (TERI) and National Institute of Oceanography (NIO) is furnished below.

	Water in mg/Litre		**Sediment**	
	As reported	**Standardized to Milli gram / Litre**	**As reported**	**Standardized to milli gram/Kg**
TNPCB* (17.12.23-28.12.23)	0.217-2.458 Milli gram/Litre	0.217 - 2.458	-	-
NCCR (19.12.23)	27.77 – 1008 µg/ Litre (NCCR report	0.0277-1.008	100 – 1000 Micro gram / gram) (NCCR report page no 16)	100 - 1000

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Chief General Manager (HSE)
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	page no 15)			
IIT (21.12.23)	0.28 g/L – 7.21 g/L (IIT report page no 24)	280-7210	13.6 -46.5 gram / Kg (IIT report page no 24)	13,600-46,550
TERI (28.12.23)	0.2-3.9 (TERI report page no 9)	0.2-3.9	5.84-47.34 (TERI report page no 35)	5.84 - 47.34
NIO (10.01.24)	0.025-2.11 (NIO report page no 28)	0.025-2.11	0.63– 1.83 Milli gram/gram) (NIO report page no 29)	630-1830

*TNPCB filed the values in NGT on 27.02.2024

d. The above table clearly depicts sample analysis is completely wrong and resulted in exorbitantly higher TPH values for water & sediments and are 46 – 136 times higher than NCCR results. TPH in water estimated by other agencies such as NIO, TERI and TNPCB are far lesser.

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SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुर[illegible] पर्यावरण)
Chief General Manager (HSE)
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e. Further, the sediments TPH values of 13,600 – 46,550 mg/Kg has been taken as the basis for estimating the oil quantity of 517 MT and is exorbitantly high, erroneous & misleading.

II. Discrepancy # 2: Oil quantity estimation based on extrapolation of abnormal TPH value

a. In the calculations used to derive the volume of Oil contamination, the average of the lowest (ie 13.6 g/kg) and the highest (46.55 g/kg) was taken for calculation.

b. TPH concentration was measured at 7 locations and the average of highest to lowest values (ave of 13.6 - 46.55 = 30) of all is considered for all 7 places. This is the crudest and most unscientific method to arrive at the quantity and is deprived of any logical basis

c. As per the Indian Coast Guard, the oil quantity of 11.6 KL (10 MT) was found in inland water.

III. Discrepancy # 3: Incorrect data validation

In order to validate the quantity, the report has indicated a quantity thro' open tanks (417 Tons) of CPCL and removed oily sludge (395 Tons). (IIT report page No: 36) Both figures are demonstrably incorrect.

IV. Discrepancy # 3a : Quantity assessment from open tanks for 417 Tons which are not used for storage of petroleum product

a. The statement in the IIT-M report on assessment of open tanks is reproduced below. (IIT report page No: 2)

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"An assessment of the open tanks in M/s CPCL premises indicated that 417 tonnes of oil could have been stored before flooding which is much less than 912 tonnes of oil estimated. This mismatch suggests that the flood induced release from the open tanks may not have been the sole reason of the oil spill. Other possibilities could be breach of oil from enclosed storage tanks of CPCL premises"

b. The calculations made in the report are done without verifying the facts and figures. The report claims 417 tonnes of oil were stored in 30 tanks on CPCL premises, and the same is a grave error. The IIT-M team without conducting any physical verification used Google Maps and incorrectly identified tanks belonging to neighboring Companies as CPCL tanks.

c. IIT-M has miserably failed to study the source identification. Without ascertaining the actual boundaries of CPCL, IIT-M team browsed thro' google map and marked the open water reservoir/ tanks of neighbouring companies as CPCL tanks. A total of 13 tanks out of 30 tanks cited in the report are not located in the CPCL's premises and do not belong to CPCL. Further, other tanks mentioned in the report, as belonging to CPCL, are primarily used for storing water only and are not used for storing petroleum products.

d. The details of 30 tanks accounted from the other units & CPCL is given below:

Tank ID	Latitude	Longitude	Open tank Area sq.m	Location of the tank	CPCL's tank usage
0	13.1585	80.2839	3241	CPCL	ETP I surge pond (Not in use now)

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1	**13.1747**	**80.278**	**2547**	**TPL**	**Outside CPCL**
2	13.1590	80.2821	812	CPCL	ETP-4 API oil separator
3	13.1592	80.2826	1192	CPCL	ETP-1 – Pit (Not in use) Above ground
4	13.1596	80.2825	8032	CPCL	ETP I POND A (Storm pond storing water without any oil)
5	13.1644	80.274	9008	CPCL	Raw water reservoir (East of DCU)
6	13.1648	80.2809	1599	CPCL	Refinery III Fire water pond (West)
7	13.1647	80.2814	3473	CPCL	Refinery III Fire water pond (East)
8	13.1654	80.2816	527	CPCL	DM Plant effluent water storage
9	13.1700	80.2829	9645	CPCL	REF III STORM POND
10	**13.1719**	**80.2802**	**6544**	**TPL**	**Outside CPCL**
11	**13.1764**	**80.2762**	**3424**	**TPL**	**Outside CPCL**
12	**13.1757**	**80.281**	**795**	**TPL**	**Outside CPCL**
13	**13.1754**	**80.2807**	**1493**	**TPL**	**Outside CPCL**
14	**13.1723**	**80.2766**	**5096**	**MPL-I**	**Outside CPCL**
15	**3.1714**	**80.2832**	**483**	**IAL**	**Outside CPCL**
16	**13.1713**	**80.2837**	**129**	**IAL**	**Outside CPCL**
17	**13.1751**	**80.2836**	**341**	**IAL**	**Outside CPCL**
18	**13.1749**	**80.2836**	**326**	**IAL**	**Outside CPCL**
19	**13.1761**	**80.2752**	**509**	**TPL**	**Outside CPCL**
20	**13.1711**	**80.2819**	**714**	**IAL**	**Outside CPCL**
21	**13.1717**	**80.282**	**491**	**IAL**	**Outside CPCL**
22	13.1637	80.2716	3241	CPCL	Coke Pit

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23	13.1476	80.2802	3820	CPCL	Pond E (Storm pond storing water without any oil)
24	13.1514	80.2821	6529	CPCL	Pit for storing sludge East
25	13.1518	80.2813	8236	CPCL	ETP II Guard Pond (Treated water storage and not oil)
26	13.1528	80.2826	3799	CPCL	Pit for storing sludge East
27	13.1576	80.2836	1454	CPCL	ETP I aerator (Not in use)
28	13.1529	80.282	2857	CPCL	Pit for storing sludge North
29	13.1541	80.2818	4702	CPCL	Pond C (Storm pond storing water without any oil)

Figure 34 (IIT report page No: 34) and Table 9 (IIT report page No: 35) of the report identified 30 open tanks are inside CPCL through google earth. The report has taken open water reservoirs of CPCL, & also the tanks of neighboring industries as open tanks of CPCL which itself is false.

e. Tank ID Nos. 1,10,11,12,13,14,15,16,17,18,19,20 & 21 totalling 13 tanks are not in CPCL premises. The report stated that 12 open tanks discharged Oil (417 tons) into the Stormwater canals (IIT report page No: 2 & 36). IIT has taken open water reservoir of neighbouring industry & also CPCL Raw water reservoir, Fire water ponds, water plant water tank, building etc.as oily water storage tanks of CPCL which is not acceptable.

f. Though the report has mentioned the open tanks present in neighbouring industry but it has missed out to investigate the oil escape

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from these neighbouring industries. In similar way, IIT-M should have checked the open storage tanks of all other industries before drawing up the conclusion.

g. IIT-M has assumed 10 mm oil layer thickness in all the 30 reservoirs, without any basis. Further, the quantity is estimated from the reservoirs which store water (and not oil) and most of the reservoirs do not belong to CPCL. In view of the above discrepancies, 417 MT estimated oil quantity is baseless & unacceptable.

h. In CPCL, no open tanks are used to store petroleum products. No industry would store petroleum products in open tanks as it is unsafe. Further, open storage of petroleum products & Crude oil is not permitted as per Oil Industry Safety Directorate (OISD) & Petroleum and Explosives Safety Organization (PESO). In addition to the above, open storage of petroleum products will lead to evaporation loss, resulting in VOC emissions as well and are not safe. ESA & PESO audits are being carried out at regular intervals for checking the integrity of the Oil refineries.

i. CPCL would like to reiterate that there is no tankage or pipeline failure, and the integrity of the system is intact at CPCL. Entire Hydrocarbon system in Refineries is being handled in closed system with all safety features in place.

V. Discrepancy # 3b : Assuming 395 tons recovered oily water as 100% oil

a. The IIT-M report has indicated that the basis for 395 MT of oily sludge is from "The Hindu Bureau" (IIT report page No: 6) and it clearly reveals the fact that in the absence of reliable data, IIT-M has taken this information from News journal, without verifying the veracity of the data. In fact, the quantity of 395 MT is the oily water collected from the Ennore Creek area

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during the oil spill incident. The IIT-M report has considered this quantity as 100% oil and used it for validating their data. During the initial period, the oily water received from the Ennore creek area was having thin layer of oil at the top, whereas the drums received after 2-3 days had water only. The same was witnessed and recorded by TNPCB officials. During the oil spill incident, CPCL collected the following materials containing oil in the stretch from Ennore Creek area under the supervision of TNPCB & state authorities. CPCL treated this oily water & recovered the oil amounting to only 2.29 MT. Hence, such a huge quantity of 395 MT is not reasonable and is a gross exaggeration and scientifically indefinable.

VI. Discrepancy # 4: Inappropriate source identification of treated water and rain water pond

a. IIT-M report indicated that oil deposits from M/s CPCL's guard pond and storm water drain ponds were released on the flood plains of Kosasthaliyar river and into Buckingham canal. The above is without any evidence or basis. (IIT report page No: 5)

b. CPCL would like to add that the Guard ponds are treated effluent storage ponds, having more than 2 meters height. Guard pond water is free of oil and is used for Fire water system. TNPCB is also testing Guard pond water regularly & the results indicate that there was no oil in Guard pond water. Also, Storm ponds are meant for collecting the rain water from Refinery area. Hence, the leakage of oil deposits from M/s CPCL's guard ponds and stormwater drain ponds is hypothetical.

VII. Discrepancy # 5: Incomplete Assessment regions

a. IIT-M report has categorised the assessment regions to three stretches (IIT report page No: 10, 11 & 12)

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i. Downstream from Ennore Thermal Power Station (ETPS) to Creek
ii. Midstream from Ennore Thermal Power Station (ETPS) to Manali High Road Bridge
iii. Upstream of B Canal from Manali High Road to Kodungaiyur

b. Even though entire Manali and Ennore industrial area were inundated IIT has not verified the other industries. While it is mentioned that Upstream of B Canal from Manali High Road to Kodungaiyur was inundated with flood water, IIT-M report has not furnished the analysis or the upstream results of Kodungaiyur area.

c. TNPCB has submitted to NGT on 09.12.23 that oil traces were observed at Upstream of CPCL. It may be noted that oil presence in upstream of B canal originates from other upstream industries, domestic sewage and anthropological activities & hence should not be attributed to CPCL.

VIII. Discrepancy # 6: Missing comprehensive investigation

a. Ennore creek is the confluence of K river and B canal. Both treated and untreated sewage is reaching the Ennore creek thro' B' canal. The Energy and Resources Institute (TERI) analyzed the sediments samples from upstream of CPCL up to Ennore creek in B canal. TPH content of the sediments shows 11.46 to 18.7 mg/Kg at the upstream of CPCL and 6.9 to 19.8 mg/Kg at Ennore creek and subsequently reduces to 5.74 to 5.84 mg/Kg near sea mouth.

b. TERI has clearly pointed out that the meagre TPH values in the upstream of B' canal water and sediment are due to anthropogenic sources of pollutants.

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चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली/Manali, चेन्नै/Chennai - 600 068.

c. On the other hand, IIT-M team has not carried out any analysis for the cause of TPH in sediments. Also, it did not consider the impact of domestic sewage and anthropological activities for the TPH value. IIT-M have not checked TPH value in the upstream of Tondaiyarpet in B canal to compare with Ennore creek as carried out by TERI.

d. The report has failed to comprehensively study the issue and blinkers to one direction. Though CPCL is not responsible for the oil Spill, as a responsible corporate citizen, CPCL has mobilised resources from all over India and joined hands with state authorities & completed the clean up activities in a span of 2 weeks (by 20.12.2023).

IX. Discrepancy # 7: Missing out to investigate other Manali & Ennore industries

a. The report stated that the flood levels of the Kosasthalaiyar River rose to 5 to 6 ft above the Buckingham Canal bund level (IIT report page No: 2) causing the entry of oil and water into the adjoining residential areas of Ernavoor and Sathyamoorthy Nagar. IIT water level study using ultrasonic type meters during the flood period also indicates the increase in level of 1.5 meters to 2 meters.

b. IIT-M report has also mentioned that the oil slick at Ennore is Furnace oil or slop oil and missed out to investigate the oil slippage from other Manali entities. Manali & Ennore industrial area has more than 25 major petrochemical / chemical industries, workshop & carriages. Also, in the Manali industrial belt, there are various oil marketing terminal, lube blending plants, Railway loco shed, which handle furnace oil, lube oil etc. All these industries were inundated during the flood due to Michuang cyclone and subsequent release of surplus water from nearby reservoirs, Surface oil would have been washed away from any or many of these

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd

industries. IIT-M has not made any attempt to identify the source and miserably failed to account the other Manali Industries.

c. During inundation, the entire Manali Industrial belt was severely affected and forced to shut down their units. While other Manali Industries have taken time for restoration, CPCL has kept one refinery in operation and other two refineries were restarted on 10.12.2023 in order to meet energy demand of Tamil Nadu & neighboring states. This demonstrates the system's integrity of CPCL.

X. Discrepancy # 8: Oil quantity estimation – Unreasonable quantity

a. The report has estimated the oil quantity in the range from 517 – 2097 MT (IIT report page No: 33) based on the wrongly analysed TPH which is inappropriate. The report estimated the oil quantity without any scientific basis and the protocol for the calculation is not shared.

b. On the other hand, 3 reputed institutes have conducted an independent study and their findings are summarised below:

i. Indian Coast Guard (ICG) has carried out oil quantity estimation as per the protocol. This method encapsulates the colour of water & oil sheen and the area of spread for the computation of oil quantity, which is an internationally recognised procedure. The total quantity of oil spill was 11.6 KL as per ICG in Ennore creek area.

ii. IIT Oceanography, conducted an independent study based on Satellite Imaging and estimated the oil spill quantity from Manali industrial area to Ennore creek, including the residential / adjacent area, as 20.53 KL (16.4 T) on 7th Dec. 2023.

iii. One more IIT team (Petroleum Engineering) conducted satellite image study and the quantum of oil assessed in the Buckingham

श्रीराम विश्वनाथन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)

canal, Kosasthalaiyar river and nearby area shows spillage of 18.1 KL (14.48 T) which is consistent with ICG & IIT – Ocean Engineering oil estimation.

c. Based on three independent studies of IIT Oceanography, IIT – Petroleum Engineering & Indian Coast Guard, the average oil spill quantity is in the range of 9.3 – 16.4 MT as against IIT-M report of 517 MT. IIT-M report has far too many assumptions in their calculations, which are highly subjective & not scientific. Such a huge quantity of oil spill is not plausible.

XI. Discrepancy # 9: Oil quantity estimation – based on assumptions and not on scientific way

a. Report has considered several assumptions without any basis while finalizing the quantity.

Assumption 1 : TPH values of samples collected from hot spots were extrapolated to the entire area for the estimation of oil quantity in sediments. (IIT report page No: 26)

Assumption 2 : IIT-M report has assumed uniform thickness of 0.1 mm for the entire residential and industrial area which is unscientific. (IIT report page No: 30).

Assumption 3 : Further, depth of oil estimation in pool is assumed as 1 mm without measuring the thickness and applied uniformly to entire area. (IIT report page No: 28)

Assumption 4 : The report arbitrarily considered 10,000 sq.m of oil pool in mangrove area & another 10,000 sq.m of oil pool near pipelines without proper justifications. The report assumed a uniform oil thickness of 1mm all over the area. (IIT report page No: 28)

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

Assumption 5 : Area calculated is based on the oil marking height & the length of the mangrove tree area and is unscientific as the mangroves will have branches & space between trees etc. The report considered the whole area like wall and arrived at the area. (IIT report page No: 32)

Assumption 6 : The report has assumed 0.01 mm oil thickness in the mangrove area. (IIT report page No: 32)

Assumption 7 : Assumption of oil layer of 10 mm without any basis in open reservoir tanks such as Fire water ponds, water plant regeneration water tank, building etc. is beyond imagination (IIT report page No: 36)

XII. Discrepancy # 10: Wrong information on Mangroves

a. The competent authority i.e., the Wildlife department of Tamil Nadu Forest has very clearly submitted in the NGT and the same was acknowledged by NGT vide order dated 21.12.23 and is furnished below.

> "It is stated that a special team of wildlife officers comprising of forest range officers etc., inspected the site and are taking remedial measures for affected avifauna. According to the team, there are no dead birds found."

b. Principle Chief Conservator of Forest in his memo filed in NGT on 25.03.2024 confirmed that there are no causalities of Mangrove. NGT also recorded the same in its order dated 02.04.2024

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

3) The Chief Conservator of Forests, Chennai Circle, Chennai has stated in the report that there are no causalities of mangroves till date and continuous monitoring and assessment is being carried out for the healthy survival of the mangroves.

Yours faithfully,

Encl: as above

Principal Chief Conservator of Forests and Member Secretary, Tamil Nadu State Wetland Authority & Chief Mission Director Green Tamil Nadu Mission (FAC)

16. With respect to the averments made in Para 12 of the Reply, it is submitted that the Appellant has not done any Environmental damage. Though the oil spill is not attributable to CPCL, as a responsible corporate citizen, CPCL stepped into restoration activities in consultation with state Government Authorities, the Tamil Nadu Forest Department and the Tamil Nadu Pollution Control Board (TNPCB) authorities. 128 boats and 512 manpower on a daily basis were engaged for cleaning activity. Containment booms of around 1500 meters were installed at various locations in Ennore creek. Six Nos of oil skimmers were deployed for oil slick removal activities. Around 35,000 Nos of absorbent pads and 500 meters of absorbent booms were also used. The absorbent booms and pads were used to absorb the residual oil traces from the water. Shore areas were also cleaned. The restoration activity in the Ennore creek was carried out on a war footing basis and the work was completed on 20.12.2023. The Mangrove area was cleaned / pruned as per the advice of Tamil Nadu Forest Department. Subsequently bioremediation of the Mangrove area was carried out by using Herbal Nano bio dispersant on the advice of TNPCB thro' National Institute of Oceanography (NIO) Goa in Jan'24. This work was also completed as on 31.01.2024.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

17. It is submitted that CPCL has incurred an expenditure of approximately Rs. 30 Crore on the above said clean-up activities and community support, including contribution of money to the fisherman community in Ennore Creek area.It may also be noted that CPCL has paid Rs 1.4 Cr to TNPCB for the study caried out by IIT-M.

18. With respect to the averments and allegations made in Para 13 of the Reply, it is submitted that CPCL had submitted and replied to the Board that Cyclone Michaung brought incessant rain in the Manali area , which started on 3rd Dec'23 evening and ceased around 18.00 hrs on 04th Dec'23. The water level increased significantly in the Manali industrial area on 05th Dec'23 due to the release of surplus water from reservoirs and reached a maximum level at 19.00 hrs on 05th Dec'23 when there was no rain. All the industries in the Manali area were severely impacted by flooding, due to this natural calamity and this flooding needs to be considered an event of Force Majeure.

19. Further, there are around 25 big Chemical, Petrochemical industries and several hundreds of small units functioning in Manali and the Ennore area and it is a fact that, oil was found in the upstream area of the CPCL unit also. This conclusively proves that there were other sources which contributed to the oil spill. Hence, levying the entire Environmental compensation on CPCL is therefore unjustifiable and not acceptable, despite the best efforts taken by CPCL to restore normalcy in Ennore area as a responsible Corporate citizen.

20. In addition to the above, the IIT-M report findings have not been conducted in a scientific way in estimating the quantity. There are several discrepancies in arriving at the quantity & source identification. As the methodology adopted by IITM is not proper, the consequent estimated quantity is abnormally high and hence is not acceptable.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली/Manali, चेन्नै/Chennai - 600 068.

21. With respect to the averments made in Para 14, it is submitted that TNPCB has selectively filed only a part of CPCL's objection and has, with prejudice, ignored the substantive evidence and other crucial points highlighted by CPCL and hence it is an incomplete submission suppressing crucial facts submitted by CPCL.

22. With respect to the averments and allegations made in Para 15, it is submitted that the Socio Economic Damage Cost and Environmental Damage Cost have been computed based on the estimated oil spill quantity of 517 MT, which is derived from the flawed IIT-M Report, (derived from a high TPH value of 30,000 mg/kg), which is abnormally high due to unscientific assumptions and gross discrepancies in the report as stated in Sl.No: 15.

23. CPCL has submitted M/s TERI report to this Hon'ble Tribunal in Sep-2024 and the salient points are given below:

a. The site investigation findings showed that there were no significant oil slick or visible contamination in and around the study area

b. Based on the overall water, sediment, plant and fish quality analysis of study area, it is inferred that the anthropogenic sources of pollutants contributed to water and sediment quality of study area from Buckingham canal up to Ennore Creek, including backwater of the Kosasthalaiyar river

c. The reported level of contamination of various pollutants in water and sediments is mainly from domestic wastewater released into Buckingham canal, over a period of time

d. The sample analysis revealed that there is no significant deposition accumulation of petroleum hydrocarbons in water, sediment, plants and fish

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली/Manali, चेन्नै/Chennai

e. The reported oil slick has not had any significant impact on the hio-diversity of the waterbodies and nearby areas

24. Additionally, CPCL has submitted Two independent expert study reports from IIT- Oceanography & IIT – Petroleum Engineering on 21.03.25, wherein the oil quantity is estimated as only 14.48 MT & 16.4 MT respectively. These reports use credible, internationally recognised methodologies, using satellite imaging analysis. Additionally, M/s TERI has also carried out impact assessment study and their TPH values in the sediments, in the range of 5.8 – 47.3 mg/kg, are very low compared to IIT-M report

The summary of these reports is as given below:

EXECUTIVE SUMMARY OF IIT – PETROLEUM ENGINEERING REPORT

A. *Based on the review of the IITM Civil Engineering report, National Centre for Coastal Research (NCCR), National Institute of Oceanography (NIO), The Energy and Resources Institute (TERI) and Tamil Nadu Pollution Control Board reports observations and comments by IITM Petroleum Engineering team are given below:*

1. *Total Petroleum Hydrocarbon (TPH) content in water is very high in IIT Madras CE report (280 – 7210 mg/lit) compared to TNPCB, NCCR, NIO & TERI reports (0.0277 – 3.9 mg/lit). This may be due to random sampling. (Pl refer page No.: 17 of this report)*
2. *Total Petroleum Hydrocarbon (TPH) content in sediments is very high in IITM-CE report (13,600 – 46,550 mg/Kg) compared to NCCR, NIO and TERI reports (5.84 – 1830 mg/Kg). Oil estimation by IITM-CE using such higher TPH values in sediments resulted in huge quantity of oil. This is due to extrapolation of TPH content, taking sample at few concentrated locations and*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

applying the same for the entire area. Refer assumption 1 in page no. 29 of this report (Pl refer page No.: 17 & 18 of this report)

3. *Oil being a lighter component /low density, tends to float over the surface of water. Settling & percolation of oil in the sediment requires longer duration. TPH value of IITM CE report in the range of 13,600 – 46,550 mg/Kg is unrealistic. (Pl refer page No.: 17 & 18 of this report)*
4. *The effects due to preexisting TPH values due to urban runoff, domestic discharge and also through other anthropogenic activities have not been considered in the IITM-CE report*
5. *Estimation of oil quantity using TPH values of NIO, NCCR & TERI is around 0.34 to 12.9 Tons of oil (Pl refer page No.: 18 & 19 of this report) and the values of these reports are consistent with the present oil estimation through satellite image study viz. 14.48 MT. (pl refer page No 35 of this report). However, wide variance is observed in estimation of oil quantity by IITM – CE report (517 MT).*

   517 MT of oil in sediments is a case of over-estimation, arrived due to higher TPH value reported in the IITM CE report. TPH value has been taken at certain concentrated locations and extrapolated for the entire area. Oil quantity estimated on this basis is not an appropriate method.

   On the other hand, Satellite image captures oil quantity (14.48 MT) based on the thicknesses spread across the area. Oil estimation based on the Spatial Distribution will be more accurate
6. *IITM-CE report has identified 30 Nos of open reservoirs as the main source of oil spill. Based on the field visit to CPCL and google map coordinate study it is confirmed that 13 open reservoirs are not inside CPCL and belong to other companies. (Pl refer page No.: 20 - 21 of this report)*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068

7. *Out of 30 open reservoirs, IITM-CE pointed out 12 reservoirs as the main source of oil spill. However, it may be noted that:*
    - *2 of these reservoirs are outside CPCL and belong to other companies.*
    - *8 reservoirs are used as raw water reservoirs, storm ponds, Guard Pond, Fire water ponds for storing oil free water only*
    - *2 reservoirs are above ground and are used for storing sediments.*
8. *Apart from the above, IITM-CE report has considered numerous assumptions, as listed below and are not based on true measurements, as detailed in this report.*
    - *Assumption 1: TPH content estimated in discrete points was considered as average TPH and used to calculate oil quantity for the entire area (IITM CE report page No: 26).*
    - *Assumption 2: Uniform thickness (0.1 mm) was assumed for entire residential and industrial area without any basis. (IITM CE report page No: 30).*
    - *Assumption 3: Depth of oil estimation in pool was assumed as 1 mm without any measurement and applied uniformly to all the area. (IITM CE report page No: 28)*
    - *Assumption 4: 10,000 sq.m of oil pool was arbitrarily considered in mangrove area and another 10,000 sq.m of oil pool near pipelines.*
    - *Assumption 5: Area calculated based on the oil marking height & length of the mangrove tree area, is unscientific as the mangroves will have branches & space between trees etc. The report considered the whole area like a wall and arrived at the area. (IITM - CE report page No: 32)*
    - *Assumption 6: The report has erroneously assumed 0.01 mm oil thickness over the mangrove trees. (IITM - CE report page No: 32)*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd

- *Assumption 7: Assumption of oil layer of 10 mm without any basis in open reservoir tanks. (IITM - CE report page No: 36).*

Oil estimation based on such assumptions would always leads to erroneous value.

B. *Observation and findings of estimation of oil quantity & comparison of 2017 ship collision incident through satellite images are furnished below.*

1. *Based on the satellite image of 29th Jan 2017, it is confirmed that the 2017 oil spill, caused by a collision near the Ennore port, resulted in a dense oil slick extending over 197 KM^2 and impacting more than 60 KM of coastline with a volume of approximately 223.5 cubic meter (178.8 MT)*
   This is consistent with the established reports of 194 MT from published articles and confirms that Satellite based estimation methodology, as a suitable and reliable tool.
2. *On similar lines, Satellite image estimation was carried out for 2023 oil spill. Based on the satellite image of 6th Dec 2023, oil spill triggered by cyclone Michaung affected 1.81 KM^2 in the stretch from Manali Industrial Area to Ennore Creek area. The quantum of oil assessed through the satellite image in the Buckingham canal, Kosasthalaiyar river and nearby area shows spillage of 18.1 cubic meters (14.48 metric Tons).*
3. *Extent of spillage & quantity assessed through satellite image above clearly indicates that the quantum of oil spill in ship collision incident occurred in Jan 2017 is much higher than Dec'23 incident.*

C. *Observation and findings of GPR study on tank integrity.*

1. *IITM-CE Department have indicated that breach of oil from storage tanks could be one of the source of oil spill. (page No.:*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

36 of IITM-CE Report).

In order to ascertain the Integrity of the Tanks, Five critical Tanks were chosen on random basis for the GPR study. Based on tank integrity study using GPR (in Tanks 106, 119, 121, 801 & 802) carried out by IIT – PE, the structural integrity remains sound, with no signs of material degradation.

2. *Physical verification of the tanks and scrutiny of Maintenance & Inspection (M&I) records of storage tanks maintained by CPCL revealed that all the tanks are in good condition.*

In conclusion, the following inference are drawn:

A. *TPH values of IITM CE report are abnormally high and resulted in higher estimation of oil quantity. Further source validation was not also reflecting real scenario*

B. *Based on the analysis of satellite images in 2017 & 2023 & the field survey carried out, it is concluded that the quantum of oil spill is estimated to be 18.1 cubic meters (14.48 metric tonnes).*

C. *CPCL tanks are intact and there are no oil leaks observed from the tanks.*

EXECUTIVE SUMMARY OF IIT – OCEAN ENGINEERING REPORT

1. *The image acquired on 19th November 2023, prior to the oil spill, was analysed to establish baseline conditions of the study area. This pre-spill image (Refer page no: 13), showed no traces of oil contamination, with natural features such as water bodies and surrounding vegetation appearing in their typical spectral characteristics.*
2. *Satellite observations on 7th Dec, 2023 image revealed the oil spill quantity from Manali industrial area to Ennore creek including the residential / adjacent area is 20.53 M^3 (16.4 T). (Refer page no: 15). The oil volume was calculated by multiplying the oil thickness in each pixel by the pixel's coverage area. The combination of oil*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

fraction, thickness, and volume maps offers a comprehensive understanding of the spill's magnitude and distribution, enabling informed decision-making for mitigation and remediation efforts.

3. *The 26th Dec, 2023 post-mitigation image was examined to evaluate the effectiveness of the clean-up operations. The oil volume image (Refer page no: 16) showed no visible traces of oil, suggesting successful removal.*
4. *Oil typically floats on water due to its lower density, and when an oil spill occurs, the oil tends to remain on the water surface rather than settling down to the channel bed and requires longer period for settling.*
5. *The TPH estimates from the ground based discrete sediment samples are highly biased. Extrapolation of such TPH values from discrete samples to arrive oil quantity for the entire area would lead to erroneous results.*
6. *Present sediment analysis at upstream of Manali Industrial area reveals TPH concentration in the range of 1-5 mg/Kg and downstream is 1 to 30 mg/Kg (Refer page no: 35 and 36). This is in line with similar study submitted by Barath kumar et al., in Aug 2023 & NCCR.*
7. *The persistent presence of TPH in the channel bed sediments is likely due to the continuous discharge of urban runoff, municipal waste, oil releases from fishing boats and commercial/industrial discharges into the Buckingham Canal and Ennore creek.*
8. *No visible oil traces were observed on the water surface during the field survey.*
9. *The flood inundation map was generated during the cyclonic rainfall event, with flow contributions from the Puzhal and Poondi Lakes, in addition to precipitation across the region.*
    - *The entire catchment area experienced continuous precipitation and runoff flows, resulting in flow depths significantly exceeding the capacity of the Kosasthalaiyar river.*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd

- *This caused the overflow of the water from the canal to the adjoining areas and led to the reverse flow of water in the canal segments during high tide.*
- *The continuous precipitation, surface runoff and flows coming from Poondi and Puzhal Lakes increased the water volume and depth in the river and canal, leading to the reversal and overflow of water from the canal to the adjoining areas (70000 cusec approx. in K-river).*

25. Further, the critical observations on the IIT 2nd report is furnished below:

1. *IIT 2nd report observed TPH value at upstream of CPCL / Manali Industries*

TNPCB has submitted in their report on 7th Dec 2023 that oil presence was observed in the upstream of CPCL. (page no 3 of IIT-Oceanography report).

CPCL is again reiterating that the TPH value at Ennore creek is mostly due to anthropogenic sources like sewage wastewater and solid waste dumps.

CPCL has submitted M/s TERI report on 09.09.24 to this Hon'ble Court and the findings of M/s TERI is reproduced below.

- *The Physico-Chemical analysis of water, sediment, plant and fish samples collected from Buckingham canal, Ennore Creek and Kosasthalaiyar river revealed that the Anthropogenic sources like sewage wastewater and solid waste dumps contributed in the occurrence of pollution in the water and sediment quality.*
- *The reported contamination of various pollutants in water and sediments is mainly from domestic wastewater released into*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड

Buckingham canal over a period of time
- (Page no 8 of TERI Report)

Study carried out by IITM Petroleum Engineering and IITM Oceanography also confirms the above and is furnished below.

IITM Petroleum Engineering:

The effects due to pre-existing TPH values due to urban runoff, domestic discharge and also through other anthropogenic activities have not been considered in the IITM-CE report (page no 4 of the IITM Petroleum Engineering report

IITM- Oceanography:

Present sediment analysis at upstream of Manali Industrial area reveals TPH concentration in the range of 1-5 mg/Kg and downstream is 1 to 30 mg/Kg. The persistent presence of TPH in the channel bed sediments is likely due to the continuous discharge of urban runoff, municipal waste, oil releases from fishing boats and commercial/industrial discharges into the Buckingham Canal and Ennore creek. (page No 3 of IITM Oceanography report)

In the first IITM report submitted by TNPCB on 09.09.2024, did not consider neither the effect of anthropogenic activities nor checked the TPH value in the upstream of CPCL. However, the IITM during their 2nd report, checked the TPH value in the upstream of CPCL and the same was submitted to this Hon'ble NGT on 28.02.2025 by TNPCB.

As per the report, the TPH value of water and sediments in Buckingham canal upstream of CPCL is furnished below. (Page no 14 & 16 of 2nd IIT report furnished by TNPCB)

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

Same ID & Location	Impact Zone	Water TPH g/L	Sediment TPH g/Kg	
		June 2024	June 2024	Oct 2024
L20 13.141573 & 80.278587	Near CPCL Premises - B' canal (Upstream of CPCL)	1.64±0.11	16.41 ±7.00	12.24 ± 1.33
Other B' canal area	d/s of CPCL	0.33 to 6.49	0.34 to 23.04	22.31 to 30.44

a) TPH value in water & sediment at upstream of CPCL is almost 50 to 60% of TPH observed in downstream of CPCL.
b) The above clearly indicates that the TPH value at Ennore creek was due to anthropogenic sources like sewage wastewater and solid waste dumps.
c) Higher value at downstream of TPH may be due to deposits of anthropogenic sources over the period of time.

2. Higher values of TPH reported in IITM 1st and 2nd report

In the 1st report, IITM reported higher TPH value of water and sediments. CPCL already raised this issue of reporting of higher TPH value to the court on 24.01.25 comparing with TNPCB, NIO, NCCR, and TERI reports. In the 2nd report also IITM reported higher TPH values. CPCL has requested IIT oceanography to check the TPH value of sediments at upstream and downstream of CPCL / Manali Industries.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

Comparative statement is furnished below.

Reports		*Upstream of CPCL in g/Kg*	*Downstream of CPCL in g/Kg*
IIT 2nd report submitted by TNPCB	*June 2024*	*16.41 ±7.00*	*0.34 to 23.04*
	Oct 2024	*12.24 ± 1.33*	*22.31 to 30.44*
Present IIT oceanography report	*March 2025*	*0.001 to 0.005*	*0.001-0.030*

a) *It is also submitted that the sediment TPH value at upstream and downstream reported are much higher than the value of IIT oceanography report. IIT oceanography report TPH values are in consistent with other reports submitted by NIO, TERI, NCCR & TNPCB.*

b) *In similar way, IIT reported higher values in their 1st report, and this resulted in higher oil quantity estimation of 517 MT of oil quantity.*

From the above, there is an element of doubt on the integrity of report submitted by IIT-M (both 1st & 2nd) & requires further investigation.

3. *IIT 2nd report not commented on lower TPH value of other reports Neither IIT 2nd report nor TNPCB has commented on the reports of TNPCB, NCCR, NIO and TERI TPH values. which are much lower and resembles the research work carried out by Bharath et all and NCCR submitted in Aug, 2023.*

4. *IIT 2nd report not commented on source identification*

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

In the report submitted to Hon'able NGT on 24.01.25, discrepancies in the source identification by IIT 1st report was brought to the notice of NGT. (submitted to Hon'ble NGT). Out of 30 Nos of open reservoirs, 13 do not belong to CPCL. Out of the 12 open reservoirs pointed out by IITM-CE report as the main source of oil spill, 2 reservoirs are outside CPCL and the balance reservoirs are also used as raw water reservoirs, storm ponds, Guard Pond, Fire water ponds for storing oil free water only.

26. The 2nd report submitted by IITM to TNPCB is silent on the 30 reservoirs which were identified in the 1st report as the source of oil escape. Thus IIT-M confirms that the source identification is not trustworthy since there is no evidence to substantiate their statement.

27. Other observations in 2nd IIT report

a. Oil thickness assumptions were based on visual observations, and they were very conservative. (Page no 9)

The field verification data would differ from person to person and is highly subjective. Perception by different agencies / persons will vary widely. Taking thickness value based on visual inspection is illogical.

b. IIT-M – 2nd report (Page no 9) mentioned that : "Any variation in estimates is due to the complexity and scale of oil dispersion in the environment"

This is the disclaimer given in the 2nd IIT report which clearly indicates that the oil estimation is subjective and is based on perception.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली/Manali, चेन्नै/Chennai - 600 068

c. IITM admits that sample were taken from hotpots at various locations. (Page no 12),

"Soil samples were collected up to 4 feet deep, covering the hotspots where oil contamination was observed" and " The random sampling claim is inaccurate, as our samples were collected from identified hotspots, ensuring that contamination was systematically assessed across multiple locations" .

IITM is clearly stating that they have taken samples from oil concentrated points mentioned as hot spots. Taking samples at hot spots and applying the values in other areas would have resulted in huge oil quantity estimation.

d. IIT-M 2nd report explicitly states that several factors were excluded from the final estimate, such as floating oily sludge removed by CPCL's cleanup measures prior to our study (393 tonnes) (IIT 2nd report)

IITM states that 393 MT of oily sludge removed by CPCL is from "The Hindu Bureau" (IITM report page No: 6 of IIT 1st report) and it clearly reveals the fact that in the absence of reliable data they have taken from the News journal without verifying the veracity of the data.

The quantity of 395 MT is the oily water collected from the Ennore Creek area during the oil spill incident. The report has anonymously consider this quantity as 100% oil and used it for validating their data. The oily water from Ennore creek was removed using vacuum sucker which sucks both oil and water and thro' manual mode. During the initial period, the oily water received from the Ennore creek area was having thin layer of oil

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

at the top whereas the drums received after 2-3 days had water only. While receiving TNPCB officials also witnessed & recorded the above. During the oil spill incident, CPCL collected the above referred materials containing oil in the stretch from Ennore Creek area under the supervision of TNPCB & state authorities CPCL treated this oily water & recovered the oil amounts to 2.29 MT only.

28. It is submitted that the TNPCB report is totally silent on the presence of 50-60% of oil concentration in the upstream of CPCL as mentioned in the IIT-M 2nd report (engaged by TNPCB). It appears that TNPCB has conveniently ignored this in favour of them for reasons best known to them.

29. With respect to the averments made in Para 16, it is submitted that CPCL filed an appeal in the Hon' NGT, precisely because the oil spill is not attributable to CPCL alone. As established above, there are around 25 big/small industries in the Manali area that were also affected by the floods. The reasons for the appeal are detailed in Sl.Nos. 11 & 15, which expose the fundamental flaws in TNPCB's case.

30. Further, as a responsible corporate citizen, CPCL has mobilised resources from all over India and joined hands with state authorities & completed the clean-up activities, in a span of 2 weeks

31. It is submitted that the averments made in Para 17 are false and denied and that TNPCB has failed to prove that the source of the oil spill is from CPCL to substantiate the application of "Polluter Pays Principle". Since CPCL has not been involved in any Environmental damage and is not the source of the spill, the Environmental Compensation is not acceptable.

32. With respect to the averments and allegations made in Para 18 of the Reply, it is submitted that TNPCB's claim that CPCL is the sole source is

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

factually incorrect and ignores the ground reality. It is submitted that Cyclone Michaung brought incessant rain, which started on 3rd Dec'23 evening and ceased around 18.00 hrs on 04th Dec'23. It is to be noted that CPCL is having a robust storm water system & effluent treatment system and this system handled rainfall effectively. The unprecedented flooding, caused by external factor (due to opening of Poondi and Puzhal Water Reservoirs), is the central issue. In previous instances of heavy rains and cyclones like Vardah, Nivar & 2015 floods, CPCL has demonstrated its capability to handle very heavy rain fall. However, the water level increased significantly on 05.12.2023 at 19.00 hrs due to release of surplus water from reservoirs and reached maximum level, even when there was no rain. All the industries in the Manali area (around 25 big industries and hundreds of small units) were severely impacted by flooding. The extent of flooding was unprecedented and has never been experienced by Manali Industrial belt. The flood water from outside area entered the entire Manali Industrial Belt. While receding, the flood waters would have carried traces of surface oil into Buckingham Canal.

33. It is submitted that CPCL is the mother industry supplying petroleum feedstock as raw material to the downstream industries in Manli Industrial belt. However, CPCL cannot be attributable for the oil let out from other industries.

34. It is submitted that the Respondent's statement that oil from other industries also belongs to CPCL is incorrect since CPCL's responsibility ends once the product (feedstock) is supplied to the boundary of the respective neighbouring companies such as MPL, TPL, KPL, CETEX etc

35. With respect to the allegations and averments made in Para 19 of the Reply, it is submitted, as stated above with respect to the discrepancies, the Respondent Board has acknowledged that the IIT-M report is based on general perception and information derived from Google Maps. CPCL firmly

श्रीराम विश्वनाथन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
...Petroleum Corporation Limited
...ली / Manali चेन्नै / Chennai - 600 068.

believes that a report founded on such flimsy and unverified grounds, rather than on scientific evidence and field verification, cannot possibly serve as a valid or legal basis for estimating such a significant Environmental Compensation. CPCL has also checked through google map and identified that most of the tanks given in IIT-M report as source of oil does not belong to CPCL. The Environmental Compensation levied by TNPCB is therefore unfounded.

36. With respect to the allegations and averments made in Para 20, it is submitted that the Respondent Board has arbitrarily disregarded the findings of multiple reports from IIT-Oceanography, IIT- Petroleum Engineering, and the Indian Coast Guard. It is submitted that the findings & major discrepancies identified by CPCL in the IIT-M (engaged by TNPCB) report given in Sl. No.15 were not considered by TNPCB.

37. It is submitted that further TNPCB has not considered the facts presented by CPCL during our reply dated 05.12.24 and has arbitrarily decided to levy the Environmental Compensation based on the perception-based IIT-M report, which is not acceptable.

38. It is submitted that TNPCB has also not provided either any material evidence or scientific justification for disregarding the credible reports of other experts from IIT, Indian Coast Guard. This demonstrates a clear and prejudiced approach of TNPCB in handling the oil spill incident.

39. With respect to the averments made in Para 21, it is submitted that CPCL reiterates its non-acceptance of the flawed findings of the IIT-M (engaged by TNPCB) report for the reasons given in Sl.No. 15. Furthermore, TNPCB's admission that it prefers to accept the IIT-M findings, despite acknowledging it varies substantially from the other reports, is untenable. A liberal approach to environmental protection cannot justify the use of factually incorrect and scientifically unsound data.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

40. With respect to the averments made in Para 22, it is submitted that the Respondent Board has failed to understand the fact that the oil water mixture volume of 2,20,040 litres and the quantity of oil laden soil of 663.5 MT are not entirely oil.

41. It is submitted that all the oily water drums were witnessed by TNPCB and the top layer alone was having oil during the first week and in the subsequent weeks oil traces could be seen. CPCL recovered the oil by processing in ETP separately and the quantum of oil observed was around 2.73 KL (2.3 MT) only.

42. It is submitted further, that the quantity of oil in the soil was calculated based on the oil content in each truck and was found to be 0.84 KL (0.72 MT). Thus without knowing the fact, TNPCB is giving incorrect information regarding the oil quantity.

43. It is submitted that CPCL's scientific analysis confirmed that the actual oil recovered was only 2.3 MT from the water and 0.32 MT from the soil, hence the TNPCB's statement is irrelevant and misleading.

44. With respect to the averments made in Para 23 of the Reply, it is submitted that TNPCB's theory about how oil reached the sediments is speculative and contradicted by scientific experts. As the report of IIT – Oceanography clearly states that:

"Oil typically floats on water due to its lower density, and when an oil spill occurs, the oil tends to remain on the water surface rather than settling down to the channel bed and requires longer period for settling"

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली / Manali, चेन्नै / Chennai - 600 068.

45. Further, the presence of oil in the upstream of CPCL, as confirmed by the IIT-M 2nd report, confirms the contribution of pre-existing oil as one of the reasons for the presence of oil in the sediments.

46. Additionally, since the oil content in sediments reported by other experts differs significantly from the IIT-M findings, the analysis methodology used by IIT-M needs to be reviewed. Also, CPCL has submitted the details of the discrepancies in the 30 reservoirs, before this Hon'ble Tribunal.

47. With respect to the averments and allegations made in Para 24, it is submitted that the assertion by TNPCB that environmental science does not follow a cause-effect relationship is a vague, inconsistent and unscientific statement, intended to evade scrutiny of their flawed report. Technological advancements in science have made it possible to accurately assess the quantum of an oil spill using satellite imaging.

48. It is submitted that IIT-Oceanography, IIT – Petroleum Engineering are two reputed wings of IIT-Madras who have carried out similar oil spill studies globally in the past. CPCL engaged them for an independent assessment and their oil spill estimates is 14.48 MT & 16.4 MT respectively, based on the satellite imaging.

49. It is submitted that on the other hand, IIT-M report has arrived an estimate of 517 MT, relying on perception & google maps, which in turn resulted in incorrect identification of tanks, not belonging to CPCL. IIT-M oil spill estimate is highly flawed, due to various assumptions & discrepancies in their report.

50. It is submitted that further, IIT-M 2nd report has reported 50-60% of oil concentration in the upstream of CPCL. This oil content cannot be attributed to CPCL and led to a higher estimation of oil quantity by IIT-M.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड

It appears that TNPCB has conveniently ignored this aspect in recent affidavit.

51. With respect to the allegations made in Para 25, it is submitted that TNPCB's claim that 15 days was adequate time to respond is unreasonable. As the assessment of the oil spill quantity requires considerable time for extensive field sampling, satellite image analysis and detailed scientific analysis, it cannot be completed in a short period. CPCL submitted a comprehensive counter to IIT-M report (commissioned by TNPCB) in March 2025. TNPCB's justification for not accepting the factual information based on timing is therefore unacceptable.

52. It is submitted that on the other hand, TNPCB has not submitted their water & sediment sample analysis report since March 2025 to date.

53. It is submitted further that IIT-M (engaged by TNPCB) has submitted the 2nd report by February 2025 only, with the statement of presence of 50-60 % of oil in the upstream of CPCL. CPCL submitted its comprehensive counter, backed by experts' reports in March 2025.

54. With respect to the averments and allegations made in Para 26, it is submitted that CPCL's actions have been focused on restoring public trust through tangible and swift remediation efforts, as detailed in Sl.No.16. The damage to any party's image is not caused by the levying of an arbitrary penalty, but by failure to conduct a fair and scientific investigation into the incident's true cause.

55. With respect to the allegations and averments made in Para 26, it is submitted that CPCL reiterates that it has not caused any environmental damage. The legal framework for Environmental compensation requires a clear demonstration of both the violation and the resulting damage. TNPCB has failed to establish either in this subject matter.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.

56. With respect to the allegations and averments made in Para 27, it is submitted that despite the fact that CPCL is not responsible for the oil spill incident, TNPCB's directive to remit a disproportionate Environmental Compensation is unacceptable. The said demand is based entirely on the factually incorrect and scientifically baseless details provided in the IIT-M report and other irrelevant factors.

57. It is submitted that this Appellant reserves its right to file additional rejoinder if any at later stage.

Under the above circumstances, it is humbly prayed that this Hon'ble Court may be pleased to take on record the present rejoinder and allow the above Appeal No. 14 of 2025 (SZ) and thus render justice.

श्रीराम विश्वनादन
SRIRAM VISHWANATHAN
मुख्य महाप्रबंधक (स्वास्थ्य, सुरक्षा व पर्यावरण)
Chief General Manager (HSE)
चेन्नै पेट्रोलियम कॉर्पोरेशन लिमिटेड
Chennai Petroleum Corporation Ltd.
मणली/Manali, चेन्नै/Chennai

Solemnly affirmed at Chennai *
On this the 28th day of October, 2025 * **BEFORE ME**
And signed his name in my presence. *

FIYAZ AHMED (2278/21)
No. 225, Law Chambers,
Madras High Court, Chennai-104