



TAMIL NADU POLLUTION CONTROL BOARD

Report on the inspection carried out by the Technical team to ascertain the cause of the recent oil leak in the Ennore Creek Area as per G.O.(Ms) No.178 Environment, Climate Change and Forests (EC3) Department dated 10.12.2023:

Preamble:

During routine inspection by Tamil Nadu Pollution Control Board (TNPCB) it was identified that "heavy traces of oil being found in the rainwater which has affected the nearby areas. It was also observed by TNPCB, spreading of oil in the waters of Buckingham Canal and consequently reaching the Ennore Creek, which stick on the vessels/ boats used by the fishermen thereby affecting their activities, causing financial loss to the fishermen community".

Following this, a team of officials from TNPCB inspected the said area and during inspection oil slick was found all along the southern bank of Buckingham Canal up to Ennore Creek. It was noticed that oil slick stretches were found spread from the unit M/s. CPCL to Ennore creek upto a distance of 11km.

In order to ascertain the cause of the recent oil leak in the Ennore Creek area, the Environment, Climate Change and Forests (EC3) Department, Government of Tamil Nadu constituted a Technical team vide G.O.(Ms) No.178 dated 10.12.2023 with following Experts / officers to find out the cause of the oil leak in the Ennore Creek area.

1. Thiru R.Kannan, Member Secretary, TNPCB - Chairman
2. Dr.G.Saravanan, Principal Scientist, Chennai Zonal Centre, CSIR NEERI - Member.
3. Ms.H.D.Varalaxmi, Scientist -E & Regional Director, Regional Directorate, Central Pollution Control Board, Chennai – Member
4. Thiru V. Kumar, Commandant, Indian Coast Guard – Member

5. Prof V.T.Perarasu, Department of Chemical Engineering, Anna University Chennai – Member.

In this regard, the committee inspected the entire premises of M/s CPCL in particular, the storm water drainage system & its storage ponds, Petcoke processing area, ETP area, sludge storage tanks, sludge bioremediation process area and crude storage area during inspection, the following observations were made.

1. The storm water collection pond A was inspected and it was observed that there is a provision to pump the storm water to collection Pond C and there is an outlet leading to Buckingham canal. Under normal circumstances, the Pond A storage water is pumped into ETP, however, it is pumped outside the premises into Buckingham canal during heavy rains. Though, there is an oil water separator provided, as the level of storm water raises above the pond level, there seems to be an over flow which can reach the Buckingham canal along with huge quantity of floating oil.
2. This could be found evident from the traces of oil on the shrubs, roads, side walls located in and around the Pond A area. There is a surge pond located adjacent to Pond "A" where lot of oil spillages were noticed and cleaning operation was under progress. Though this pond is reported to be not in use, the stagnated water in this pond with high oil content could have been overflowed into Buckingham canal from M/s CPCL premises.

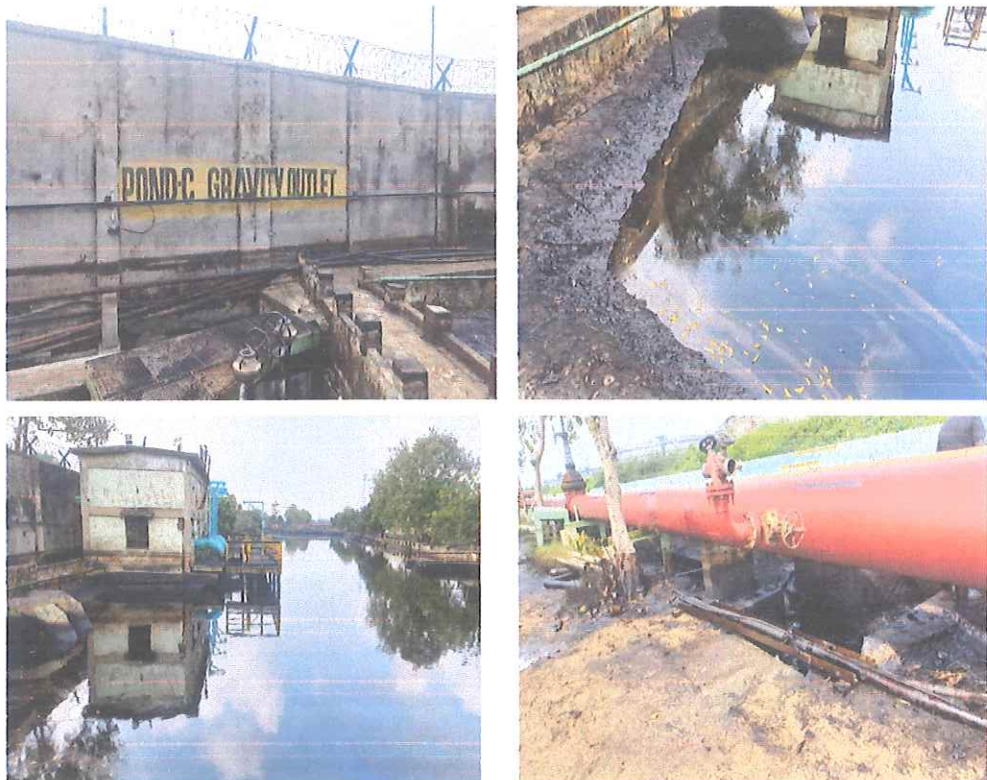


Oil spill observed around Storm water collection Pond A



Surge pond and drain opposite to surge pond

3. During inspection of the Pond "C", it was noticed that there is a provision to pump out the water for further treatment in the ETP for reuse. However, there is also a provision, where the water stored in the pond shall directly reach the Buckingham Canal. There are also possibilities that oil may be directly flowing out when the level of water is raised more than the brim level of the pond.



Oil slick observed near Pond C and its surroundings

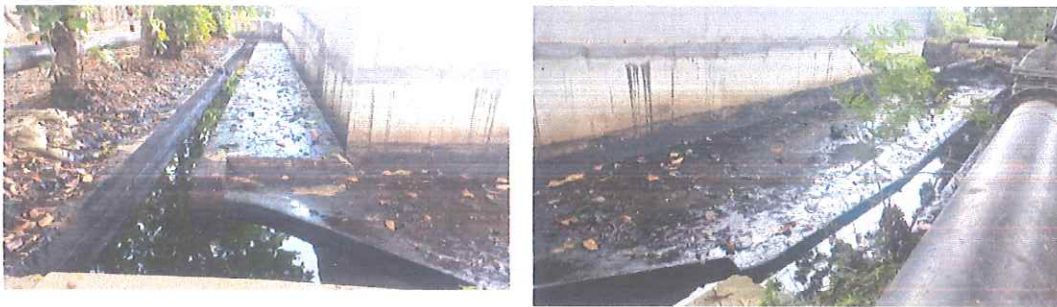
4. In Pond "D" also, there is a provision to pump out the storm water for further treatment in ETP for reuse. Here also there are possibilities of oil mixed water may be directly flowing out from the premises when the level of water is raised more than level of the pond.
5. In the ETP and MTF (Mandatory Tank Farm) areas, where Pond "E" is located which has also got pumping facility to discharge into the Buckingham Canal. Thick layer of oil found in the drainage area and pipe lines reveal that huge quantity of oil could have found its way to the Buckingham canal.



Drain leading to Buckingham Canal which was cleaned before inspection by CPCL

6. There is a sludge storage tank where the tank bottom sludge are brought and stored. From this sludge, oil is removed through centrifugal system for further reuse and the remaining sludge is sent for bioremediation. During inspection, it was found that there occurred an overflow which could have carried oil along with thick oil sludge to the Buckingham canal. Though this tank is situated in higher elevation, there is no proper protection to contain the overflow from during rainy days; overflow from this tank is joining the storm water drain which leads eventually to Buckingham Canal.





Oil Sludge storage tanks and its surrounding area

7. The bio remediation of oil sludge operation is also carried out in an open area without any roof which might have also added further discharge of oil content into the Buckingham canal.
8. During inspection of Buckingham canal, there were no traces of oil found in the upstream side of M/s CPCL, whereas oil deposits are found continuously in the banks of Buckingham canal in the downstream of M/s CPCL storm water outlet points. There was flow in the Buckingham canal which was also carrying oil traces in the downstream of M/s CPCL discharge points.



Oil Slick observed on side walls of Buckingham canal

From the above observations, the committee has come to a conclusion, that because of the huge quantity of oil used and the inadequate storm water management and storm water storage ponds, it is evident that oil has leaked from M/s. Chennai Petroleum Corporation Ltd. into the Buckingham canal which has reached the Ennore Creek.



Oil slick deposited in Ennore creek

The cleanup operation carried out by M/s CPCL in the Ennore creek was also inspected by the committee and found that the magnitude of the cleaning is very low when compared to the level of cleaning operations to be undertaken for the removal of oil in the Buckingham canal and Ennore creek.

Seven teams comprising of Engineers from TNPCB inspected the remaining industries in Manali area on 11.12.2023 to ascertain the discharge of oily substances during the heavy rains. It was ascertained that one Engineering Industry by Name M/s Toshiba – JSW was found to have not properly handled the waste oil/used oil which could have also caused small discharge into Buckingham Canal. This shall be thoroughly investigated by the TNPCB to initiate action against the unit if there is any violations.

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