POLLUTION IN MEDAK DISTRICT, ANDHRA PRADESH

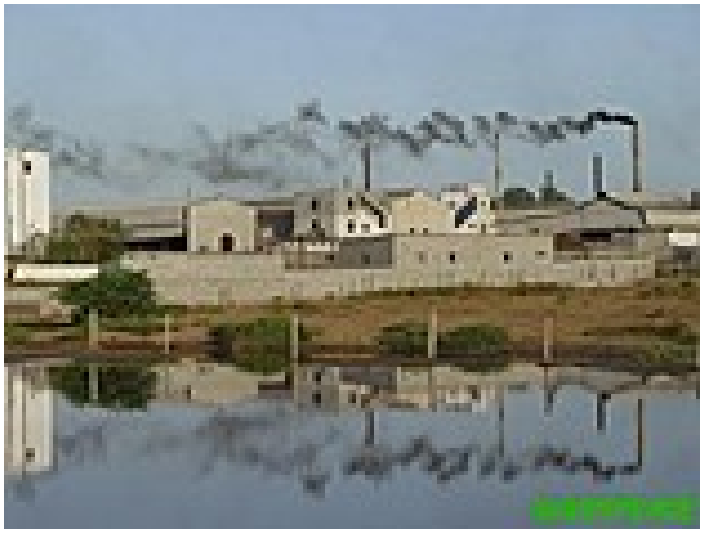
Writ Petition (Civil) No.1056/1990 (Indian Council for Enviro Legal Action & Others Vs. UOI & Others)

This Writ Petition was filed in 1990 in the Supreme Court by the Indian Council for Enviro Legal Action & Others. against the industries and the CETP managements of PETL at Pathancheru and Bolaram for the pollution of the ground water and surface water caused by the discharge of the effluents from these CETPs. Among others, the A.P. Pollution Control Board and the Central Pollution Control Board were made respondents in this case.

The Patancheru Industrial Estate was established in the year 1975 at Pathancheru in Medak district of Andhra Pradesh and is about 15 kms from Hyderabad. Bulk drugs, chemicals, textile, leather finishing industries etc. are located in this industrial estate and to take care of the effluents a common

effluent treatment plant is set up and operated by M/s. Pathancheru Envirotech Limited and has 72 member industries. The total effluent handled by the PETL is about 2860 cu m per day. To provide treatment of the industrial effluents PETL obtains domestic sewage from BHEL which is located nearby and also raw water

from Isakawagu drain and discharges the treated effluent in the Isakawagu drain which falls into Nakkawagu drain which finally discharges into Manjira river after traversing a distance of about 40 kms. Manjira River is the major source of water supply for the city of Hyderabad.



The Bolaram Industrial Estate is located in the Bolaram village in the district of Rangareddy in Andhra Pradesh and is about 35 km from Hyderabad city. The main water polluting industries in this industrial estate are the bulk drug industries. The CETP was established in this industrial estate and presently there are 25 member industries contributing to this CETP. The CETP at present is handling around 340 cu m per day of effluent. In order to homogenize and enhance the treatability of effluents domestic sewage is added. The treated effluents presently are discharged on land for plantations.

The Hon'ble Supreme Court vide its order, dated July 29, 1997 in I.A. No. 2 & 9-11 in WP (C)No. 1056/90 inter-alia directed the Central Pollution Control Board to take up the following activities :

A. CPCB was to assess the following :

i. Capacity of Common Effluent Treatment Plants (CETPs) installed at Patancheru and Bollaram;
ii. Functioning of these CETPs;
iii. Extent of treatment carried out in the CETPs;
iv. Whether the discharge from these CETPs meet the pollution control standards of CPCB;
v. Extent of the areas damaged around the industries as a result of discharge of effluent from industries;
vi. Extent of such damage;
vii. Whether individual units have complete effluent treatment plants or only primary treatment is provided to the effluents; and
viii. The quality of effluent discharged from the individual effluent treatment plants belonging to each of these industries and whether they meet the prescribed standards.

B. The Hon'ble Court further directed CPCB to suggest:

i. Steps which should be taken to restore the affected areas to their non-polluted conditions;
ii. Steps which were required to be taken for proper functioning of the two CETPs, known as `Progressive Effluent Treatment Limited' (PETL), Bollaram and `Patancheru Envirotech Limited (PETL)', Patancheru;
iii. The time frame within which these steps can be taken;
iv. CPCB to deal comprehensively the entire problem and suggest some measures as they think appropriate for rectifying the situation; and
v. CPCB, in their report, to mention about the industries which have their own effluent treatment plants, indicating whether it was a complete plant or whether it was only for primary treatment of effluents

The CPCB conducted detailed investigations in the Bollaram and Patancheru areas and submitted a comprehensive report of effluent management in Nakkawagu drainage basin to the Hon'ble Supreme Court in March 1998. Vide its report the Central Board suggested mechanism of self-regulations of member industries to Patancheru and Bollaram Common Effluent Treatment Plants. The CPCB has suggested the following inlet standards for CETP so that the effluent received in the CETP are amenable for biological treatment.

Parameters	Desirable limit (not to exceed)	Maximum Allowable Limit
COD	15000 mg/l	20000 mg/l
TDS	15000 mg/l	20000 mg/l
SS	1000 mg/l	1000 mg/l
pH	6.5 – 8.5	6.5 – 8.5

CPCB also suggested norms for the discharge of treated effluent for individual industries (large) and also the following norms for treated effluents from the CETP.

Parameters	Disposal to Nakkavaagu with cunnette system	Disposal to land for afforestation	Disposal to sewer
pH	6.5-8.5	5.5-9.0	5.5-9.0
O & G	10 mg/l	10 mg/l	20 mg/l
BOD	100 mg/l	150 mg/l	350 mg/l
TDS	3000 mg/l	3000 mg/l	-

The CPCB further dealt with the problem of disposal of the treated effluents from these CETPs and suggested the following four options and also given an Intercomparison of Various Options.

Option I : In this option, large industries should treat their effluent to bring down BOD to 1000 mg/l and following norms of TDS, COD, SS as discussed earlier discharge their effluent to CETP. CETP would will also receive the effluent from SSI units meeting the norms of COD & TDS and should collect sewage from local areas/sewer network. CETP must achieve the sewer standard and discharge treated effluent to main sewer which leads to sewage treatment plant.

Option II : In option II, the same rule for option I was applicable to industries both large and small, alongwith collection of sewage. However, instead of disposal to sewer, CETP effluent would be discharged to land for afforestation, under this option.

Option III : The same proposition with respect to the provision of industrial effluent at individual level as sewage collection from local area holds good, but here CETP effluent disposal to Isakavaagu/Nakkavaagu with cunnette system was suggested.

Option IV : In this option, large industries were allowed to discharge into Isakavaagu/Nakkavaagu with a stringent limit of BOD 300 mg/l, COD 250 mg/l and TDS 2100 mg/l. Of course, the drains have to be provide with cunnette. Incase of SSI, effluent would be treated at CETP and discharged to Isakavaagu/Nakkavaagu drain.

Note :

- Cunnette system would provide sufficient velocity with aeration due to turbulance all along the drain. Cunnette also ensure prevention of infiltration/seepage to the groundwater,

- Operation and maintenance of cunnette should be done by CETP Authority;
- While discharging to Nakkavaagu drain with the assumptionof 20 to 30% dilution available, the resultant BOD was expected to be 70 to 80 mg/l of the mixed water in drain which would further come down to 30 mg/l before meeting the Manjira river due to self purification; and
- With the above dilution factor, the TDS was expected to be 2500 mg/l, which would further be diluted in the Manjira river.

Inter-comparison of Various Options:

Intercomparison of various options dictates that Option I provides the maximum certainty. Moreover, this ensures less vigilance. This also helps Nakkavaagu to be free from any abuse. Such is the case with Option II, but in such a situation, groundwater monitoring has to be made. But Option II, is the cost-effective system. In Option III, wastewater has to be discharged to Isakavaagu/Nakkavaagu, not directly but with cunnette system. In this case, chances of foul play by any inidividual industry cannot be ruled out. Option IV has one inherent difficulty that large industry has to meet stringent standard. The chances of violation are very high. In options III and IV, Nakkavaagu cannot be free from effluent. Strict vigilance is also required. The overall comparison of Option III and IV may be more cost-effective in comparison to Option II. It is also observed that in case of Option I, dilution available will be around 40 times, which in future, will increase to around 60 stimes. Transferring of effluent (3 mld) from one basin to another, will not alter hydraulic load of the basin.

The Hon'ble Supreme Court inter-alia further directed the Central Pollution Control Board and A.P.Pollution Control Board to jointly recommend measures short-term, mid-term and long-term to contain water contamination of Isakavaagu and Nakkavaagu, and ensure satisfactory functioning of the CETPs at Patancheru and Bollaram and restore the affected areas to normal conditions. In compliance of these directions, a joint action plan was submitted to the Hon'ble

Supreme Court. The Option I as mentioned above was finally agreed to be implemented and the PETL management had already deposited Rs.2 crores with Hyderabad Water Supply & Sewage Disposal Board and a time schedule has already been drafted for laying of the pipeline connecting PETL with K & S main. In the meantime NGOs from Musi river basin had raised objections to the proposed laying of the pipeline as they claim that Musi is already heavily polluted and transfer of the effluents from the CETP at Bollaram and Patancheru will further aggravate the problem.

At present the Amberpet Sewage Treatment Plant has only primary treatment and secondary treatment is non-existant. Unless, the Amberpet Sewage Treatment Plant is upgraded and provided with secondary treatment which consists of biological treatment system, the treated effluent from CETP should meet the standards stipulated for disposal into inland surface waters. If the sewer standards are to be followed for discharge of the treated effluents from CETP, the Amberpet Sewage Treatment Plant needs to be upgraded to provide the secondary biological treatment system.

It was submitted for consideration of the Hon'ble Supreme Court that the upgradation of Amberpet Sewage Treatment Plant be taken up simultaneously alongwith the laying of the pipelines from CETPs for discharge of the effluents from CETP into K&S main so that both the systems are ready more or less at the same time.

That the treated effluents from CETP with a TDS levels of a maximum of 10,000 mg/l, when discharged into public sewer, to K&S main, are expected to achieve a dilution of about 1:75 (considering the volume of treated effluents from the CETP as 3 MLD and the sewage received at Amberpet-STP as 225 MLD). By such dilution, the TDS levels in the combined effluent will be brought within the acceptable level of 2,100 mg/l for disposal into inland surface water or on land for irrigation.

At present, TDS limit of 15,000 mg/l for inlet of CETP was required to be met by the industries. However, in order to reduce the TDS load on CETP and consequently on STP and at the receiving water body/land, the industries were required to reduce the TDS in a phased manner. By the time, the discharge of treated effluent from CETP into the public sewer was materialized through laying of 18km pipe line and as well as the STP was augmented, the industries contributing to CETP should reduce the TDS levels upto 10,000 mg/l. This should be followed by further reduction of TDS levels upto 5000 mg/l in another 3 years from then.

The Hon'ble Court after hearing the matter on 10.10.2001 finally directed that further proceedings in the matter would be monitored by the Andhra Pradesh High Court. The High Court would ensure the implementation of the orders passed by the Hon'ble Supreme Court and would deal the Writ Petition as well as Application filed therein in accordance with the law.