JOINT REPORT ON MONITORING OF COMMON EFFLUENT TREATMENT PLANT (CETP) VAPI INDUSTRIAL AREA, GUJARAT

(Based on information/data of GPCB, RO, Vapi & M/s VGEL, Vapi –April 2020-June2020)

1.0 BACKGOUND

Hon'ble National Green Tribunal, Principal Bench, New Delhi passed an order on 11.01.2019 in Original Application (OA) NO. 95 of 2018 in the matter of Aryavart Foundation Vs. M/s Vapi Green Enviro Ltd. (CETP, Vapi) & Ors. The matter was regarding discharge of untreated/partially treated trade effluent by more than 500 industrial units in Vapi industrial cluster into River Damanganga, non-compliances of the industries, CETP Vapi and pollution causing threat to aquatic life in River Damanganga & in the Arabian Sea.

In the said matter, as per the para no. 55 (iv) of the order dated 11.01.2019, it was directed to CPCB to undertake jointly with GPCB extensive surveillance and monitoring of CETP at regular interval of three months and submit its report to the Tribunal.

In this regard first round, Second Round, Third, Fourth & Fifth round of joint monitoring were carried out by CPCB and GPCB on 12.02.2019, 20.05.2019, 13.08.2019, 15.11.2019 & 25.02.2020 and the detailed reports were submitted to Hon'ble NGT, Principle Bench, New Delhi.

GPCB Regional Office being local office at Vapi carried out monitoring of CETP during April 2020 to June 2020, wherein officials of CPCB, Regional Directorate Vadodara could not associate due to COVID-19 Pandemic Situation. However, this status report has been jointly prepared based on the information, monitoring results provided by GPCB, RO, Vapi and CETP-M/s VGEL, Vapi.

2.0 OBSERVATIONS & FINDINGS:

- As per the data provided by CETP- M/s VGEL, Vapi, minimum, maximum and Average flow (month wise) is given in following **Table- 1.**

Table-1 Inlet & Outlet Flow at CETP-M/s VGEL Vapi
(Monthly Average)

Month	Flow (m3/day)					
	Inlet			Outlet		
	Minimum	Maximum	Average	Minimum	Maximum	Average
Jan-2020	47464	54424	52655	48004	54007	52407
Feb-2020	48431	54185	52363	48045	53985	52009
Mar-2020	18310	52894	41784	18224	52766	41622
Apr-2020	**18580**	**40684**	**28013**	**18490**	**40222**	**27717**
May-2020	34675	48343	42888	34118	48125	42794
Jun-2020	43934	54932	50473	44170	54667	50195

It is observed that in the month of April 2020, the inlet as well as outlet flow was low i.e. 28 MLD at Inlet and 27.7 MLD at the outlet due to lockdown wrt Covid-19 pandemic which was almost half the design capacity (55 MLD). Further, it increases i.e. 42.8 MLD and 50.4 MLD in May and June 2020 respectively due to unlock process and operation of more industries. CETP was operational during lockdown period. CMEE & Spray Dryer were intermittently operated in April 2020.

- GPCB carried out visits-cum-monitoring in the month April 2020 (three times), May 2020 (two times) and June 2020 (three times). The analysis results of monitoring carried out by GPCB at Inlet & Out let of CETP are given in following **Table-2.**

Table-2- Analysis results of monitoring carried out by GPCB at CETP
(Month of April-2020 to June-2020)

Sampling Date	BOD		COD		NH3-N		pH		SS	
	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet	Inlet	Outlet
GPCB standards	**400**	**30**	**1000**	**250**	**50**	**50**	**6.5-8.5**	**6.5 -8.5**	**300**	**100**
06-04-2020	267	27	975	228	43.62	40.13	7.91	7.39	118	56
25-04-2020	250	23	920	212	42	40	7.72	7.01	132	44
30-04-2020	205	26	879	215	45	42	6.81	6.61	142	66
19-05-2020	215	28	**1081**	241	**52.9**	44.6	8.09	7.62	262	78
23-05-2020	288	26	**1049**	242	**57.3**	46.17	7.38	7.44	132	48
03-06-2020	295	**32**	**1086**	**261**	46.56	44.66	7.69	7.44	84	62
22-06-2020	215	29	956	240	38.07	34.62	7.77	7.43	98	72
29-06-2020	368	**34**	**1211**	**272**	**58.46**	47.11	8.02	7.87	**550**	96

(NOTE: Except pH, all other results expressed in mg/l)

It is observed that the CETP is not meeting with **inlet norms** in terms of COD in four monitoring and NH_3-N in three monitoring out of eight monitoring. The non-compliance of COD inlet norm was observed during the monitoring on 19.05.2020, 23.05.2020, 03.06.2020 & 29.06.2020 and NH_3-N on 19.05.2020, 23.05.2020 & 29.06.2020.

It is observed that the CETP is not meeting with **outlet norms** in terms of COD and BOD in two monitoring out of eight monitoring. The non-compliance of COD & BOD observed during the monitoring on 03.06.2020 & 29.06.2020 where the values of BOD marginally exceeds BOD outlet norm.

- Stock of High COD effluent for Common Multiple Effect Evaporator (CMEE) and High TDS effluent Spray Dryer and waste (ETP Sludge and Spray Dryer Salt) generated at CETP noted by visiting team are given in following Tables (**Table-3 & Table-4**). It is observed from **Table-4-** that waste- ETP Sludge & Spray Dryer Salt has been disposed to TSDF, GIDC, and Vapi. In earlier visits, huge stock of waste was observed in the CETP premises.

Table-3, Stock of Effluent for CMEE and Spray Dryer

Date of Visit	CMEE Stock(KL)	Spray Dryer Stack(KL)
06.04.2020	1250	950
25.04.2020	1800	1700
30.04.2020	1480	1468
19.05.2020	2150	1920
23.05.2020	2350	1675
03.06.2020	2800	1900
22.06.2020	2750	1854
29.06.2020	2430	1487

Table-4 Stock of waste stored in CETP premises

Date of Visit	ETP Sludge (MT)	Spray dryer Salt (MT)
06.04.2020	8000	380
19.05.2020	500	240
23.05.2020	460	120
03.06.2020	300	130
22.06.2020	1500	780
29.06.2020	2500	875

- The OCEMS values of inlet and outlet of CETP noted during the GPCB visits are given in the following table:

Table-5 OCEMS values during GPCB visits

	Date	COD (mg/l)
Inlet	19.05.2020	449.88
Inlet Norm-COD-1000 mg/l	23.05.2020	707.44
	22.06.2020	426.88
	29.06.2020	**1242**
Outlet	19.05.2020	249
Outlet Norm- COD-250 mg/l	23.05.2020	**278.92**
	22.06.2020	226.05
	29.06.2020	219.06

During the four out of eight visits of GPCB, OCEMS was not in operation and values noted for four visits are mentioned in above **Table-5**. It is observed from OCEMS values that only once out of four noted values exceeds the inlet and out let norm for COD.

- GPCB has issued closure direction under section-33 (A) of the Water (P & CP) Act 1974 vide letter dated 24.05.2019 to M/s VGEL (CETP) Vapi and amended further on 11.06.2019 which subsequently revoked from time to time with latest revocation order on 23.12.2019 which was valid up to three months from date of issue of order i.e.

22.03.2020. GPCB extended the validity of revocation order up to 30.06.2020 due to Covid-19 pandemic situation with common office circular dated 30.03.2020, and further under consideration at GPCB for needful.

3.0 CONCLUSION -

Due to lockdown with reference to Covid-19 pandemic, most of the industries were not in operation during last week of March 2020 and in the month April 2020 except essential industries and therefore quantum of wastewater reaching to CETP was less @ 28 MLD (monthly average) as against capacity of 55 MLD. CETP was found to be complied with reported parameters- pH, BOD, COD and NH_3-N during the monitoring in the month-April 2020.

It is observed that CETP was not meeting with inlet norms in terms of COD in four monitoring and NH_3-N in three monitoring out of total eight monitoring carried out in the quarter (April-June 2020), respectively whereas CETP was not meeting with Outlet norms in terms of COD and BOD in two monitoring out of eight monitoring. The CETP needs to regulate the discharge of member units to meet the inlet standard, proper operation and up-gradation of treatment system for meeting with outlet norms.

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