CENTRAL POLLUTION CONTROL BOARD
ZONAL OFFICE (SOUTH)
BENGALURU

Monitoring Report of M/s Rubber Park India (P) Ltd, Common Effluent Treatment Plant, Valayanchirangara P.O, Ernakulam, Kerala

1.	Name/ address of CETP/ company		M/s Rubber Park India (P) Ltd, Common Effluent Treatment Plant, Valayanchirangara P.O, Ernakulam – 683556, Kerala
2.	Area occupied by CETP (plot area)		2.38 Acres
3.	Total no. of staff (including operational & skilled persons)		06 nos.
4.	Contact person (Name, Designation, and Contact No, FAX, e mail)		Sh. Biju P. Poulose, Manager 0484 – 2655538, 2655548 mc@rubberparkindia.org
5.	Status of CETP		operational
6.	Consent & Authorization		Applied on 13.03.2012
7.	Industrial area/estate (s) connected to CETP		Rubber Park India (P) Ltd
8.	Type of industries in the connected industrial areas		
	Industrial area/estate	Type of industries	Number of industries
	Rubber Park	Rubber & Rubber wood based	37
	Number of member industries of CETP		13 nos.
9.	Method of collection of effluent (pipeline/tanker)		Tankers. 8no. Tankers per day having capacity of 12 m^3
10.	Details of flow meters		No flow meters
11.	Treatment capacity Design flow of CETP		250 KLD 10.42 m^3/hr
12.	Wastewater treated Average flow reaching CETP		80 – 90 KLD 3.75 m^3/hr
13.	Wastewater if bypassed in CETP from treatment:		No

14.	Treatment units and dimensions			
	Name of the unit	**Numbers**	**Dimension in m**	**Capacity, m^3**
	Equilisation Tank	1	10 x 10 x 2.5	250
	Flocculation Tank	1	2 x 2 x 2	7.2
	Primary Clarifier	1	5.6 dia x 2 ht	42.5
	Bio Tower	2	5.8 x 7 x 1	
	Settling Tank	1	3.3 dia x 2.5 ht	21.4
	Aeration Tank	1	6 x 6 x 3	108
	Secondary Clarifier	1	4.3 dia x 2.5 ht	36.3
	Chlorination Contact Tank	1	3.25 x 3.25 x 2	21.10
	Sludge drying Bed	6	4 x 4 x 0.9	-
	Dual Media Pressure Sand filter	1	1 dia x 1.5 ht	-
	Carbon Filter	1	1 dia x 1.5 ht	-
15.	Details of chemicals used			
	Name of chemical		**Quantity**	
	Hydrated Lime		13 kg/day	
	Ferrous Chloride		3 kg/day	
	Bleaching Powder		3 kg/day	
16.	Primary sludge management system • Primary sludge generation rate • Number & capacity of sludge drying beds • Primary sludge disposal		0.05 tons/day 4 nos. & 16 Sq m each Sent to TSDF M/s Kerala Enviro Infrastructure Limited	
17.	Excess Biological Sludge Management System • Excess Biological Sludge generation • Number & capacity of sludge drying beds • Excess Biological Sludge Disposal		0.005 tons/day 2 nos. & 16 Sq m each Sent to TSDF M/s Kerala Enviro Infrastructure Limited	
18.	Conveyance system for disposal of treated wastewater		Pipeline	
19.	Method of Treated wastewater disposal		Land.	
20.	Capital cost		Rs 63,03,937/-	
21.	Operational cost		Rs 2, 29, 155/-	
22.	Inspection Team		Sh. R. Rajkumar, Sc C Sh. Deepesh V, SSA Sh. S. Seenivel Raj, JLA	
23.	Date of Inspection		20/08/2014	

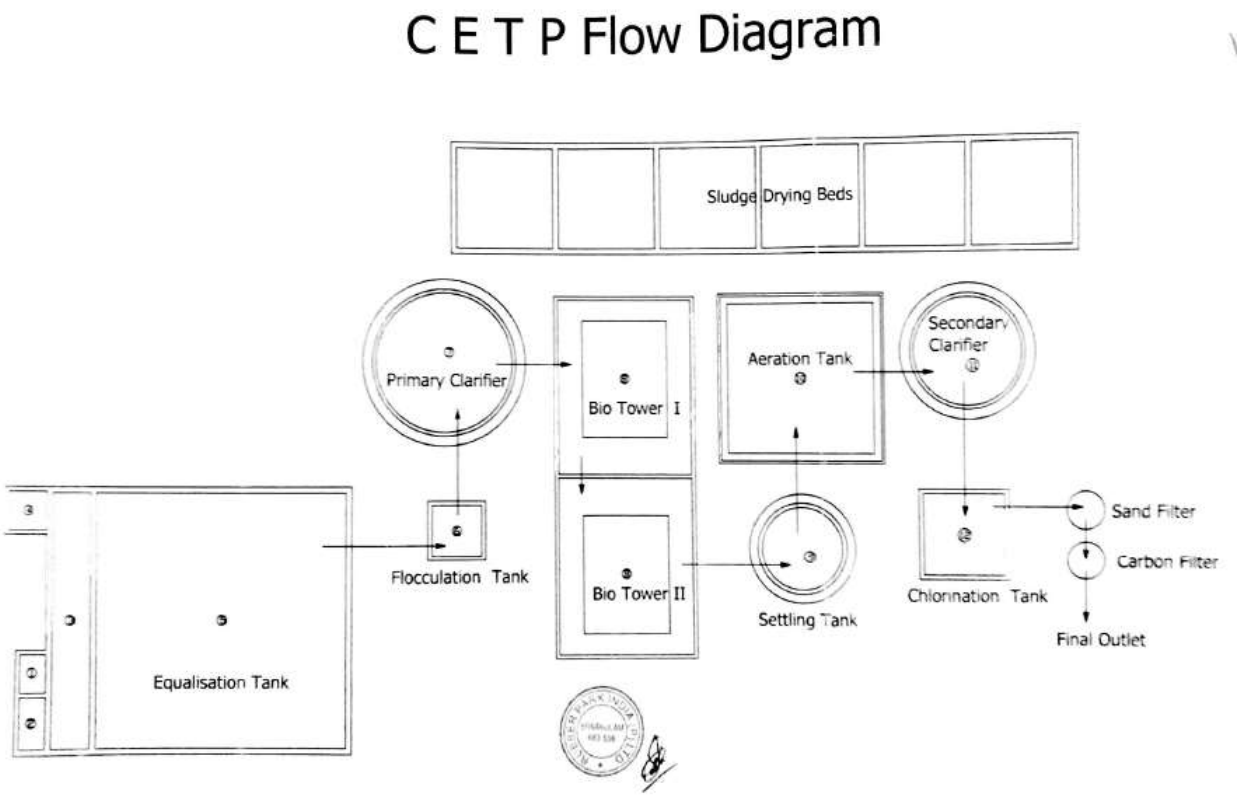
Observations:

- The CETP is commissioned in an Industrial park M/s Rubber Park India (P) Ltd., developed by KINFRA & Rubber Board. The Rubber Park has 37 industries in which 13 units are member of CETP. All units are Rubber & Rubber Wood Based.

- The CETP has installed capacity of 250 KLD in which about 80-90 KLD of effluent is received from the member units through tankers.

Trucks Carrying Effluent to CETP

- The treatment system in the CETP includes physio-chemical and biological treatments. The CETP consists of equilisation tank, flocculation tank, primary clarifier, bio towers, settling tank, aeration tank, secondary clarifier, chlorination tank, sand & carbon filter and sludge drying bed.



- The samples were collected at different stages of the treatment unit. The characteristics of the effluent are shown below.

Parameters	Designed inlet norms	After equalization	After Primary Clarifier	After Bio filter	After Settling Tank	After Secondary Clarifier	Final Outlet	Standards
pH	4 - 9	7.3	7.6	7.7	7.7	7.8	7.7	**6.5 – 8.5**
TSS	800 - 1000	177	78	34	16	02	08	**100**
TDS	2400	1283	1298	1200	1192	1198	1196	**2100**
BOD	1500	282	43	27	09	07	23	**30**
COD	2700	820	180	113	106	63	66	**250**
Sulfide	2.9	-					BDL	**2.8**
Sulphate	690	489					530	**1000**
Phenol							BDL	**1**
NH_3-N	410	79.8					23.8	**50**
Aeration Tank		**MLSS**	128					

* All values are in mg/l except pH

- MLSS in the aeration is observed very less. It was informed by the CETP that the operation & maintenance of the plant is changed to new agency. The new agency has desludged from aeration tank a day before the monitoring and fresh microbes were being developed.

Aeration Tank & Bio Towers

- The treated effluent quality is within the stipulated norms and discharged on land for gardening.

- The sludge drying bed was found filled with the sludge. Since Kerala is having high rainfall rate of drying is very less.

Sludge Drying Bed

- No flow meters were installed at inlet and outlet of CETP.

Recommendations:

- MLSS in the aeration tank should be maintained as per designed concentration for effective treatment.
- Mechanical desludging such as filter press, decanter etc. shall be installed.
- Flow meters shall be installed at inlet and outlet of CETP.
- Treated effluent shall be reused/ recycled to achieve Zero Liquid Discharge.

(R. Rajkumar)
Scientist C