



**CENTRAL POLLUTION CONTROL BOARD
ZONAL OFFICE (SOUTH)
BENGALURU**

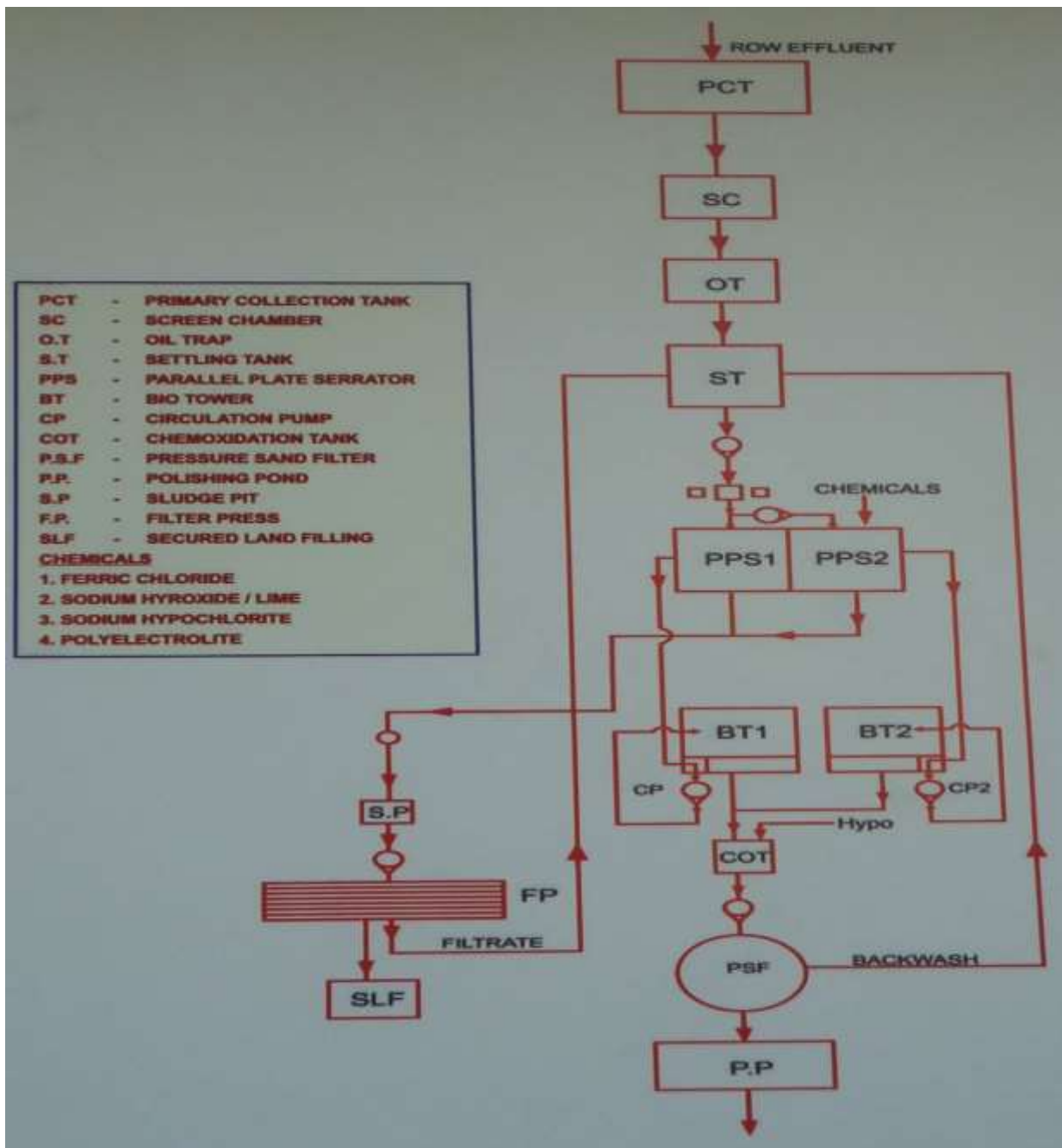
**Report on M/s KINFRA International Apparel Parks Ltd.,
Thiruvananthapuram, Kerala**

1.	Name/ address of CETP/ company	KINFRA International Apparel Parks Ltd Thumba, St.Xavier's College P O, Kazhakkuttom, Thiruvananthapuram- 695 586 Ph:0471 2706001,04	
2.	Area occupied by CETP (plot area)	1.5 acres	
3.	Total no. of staff (including operational & skilled persons)	Supervisor cum operator- 1 No Skilled Persons – 3 Nos	
4.	Contact person (Name, Designation, and Contact No, FAX, e mail)	Shri. S. Abdul Halim Managing Director Ph: 0471 2706001,04	
5.	Status of CETP	operational	
6.	Consent & Authorization	Applied for renewal	
7.	Industrial area/estate (s) connected to CETP	KINFRA International Apparel Parks Ltd	
8.	Type of industries in the connected industrial areas		
	Industrial area/estate	Type of industries	Number of industries
	KINFRA	Garments Washing Units, Laundry Units	11
	Number of member industries of CETP		11 nos.
9.	Method of collection of effluent (pipeline/tanker)	Pipeline	
10.	Details of flow meters	Flow Meter provided at Inlet & Outlet.	
11.	Treatment capacity	0.6 MLD	
	Design flow of CETP	25 m ³ /hr	
12.	Wastewater treated	0.216 MLD	
	Average flow reaching CETP	9 m ³ /hr	

13.	Wastewater if bypassed in CETP from treatment:	No
14.	Treatment units and dimensions	
	Name of the unit	Numbers
	Dimension in mm	Capacity, m³
	Oil Trap	1
	3 mX1.5mX1.5m	6.75 m ³
	Screen Chamber	1
	3mX1.5mX1.5m	6.75 m ³
	Collection Tank	1
	10mX10mx2.5m	250m ³
	Chemical Preparation Tank	1
	1.75mX1.75mX1.75m	5.36m ³
	Chemical Tank	2
		200m ³
	Parallel Plate Separator	2
	4mX3.25mX3m	39m ³
	Bio Tower	2
	4.8mX4.2mX3m	60m ³
	Chemoxidation Tank	1
	3mX2.5mX2.5m	18.75m ³
	Filter Press	1
	910mmx910mmx0.05mm	
	Pressure Sand Filter	1
	2.2m Diax2.4m Ht	
	Secured Land Fill	1
	20mX20mX1.7m	680m ³
	Polishing Tank	1
	15mX15mX1.5m	337.5m ³
15.	Details of chemicals used	
	Name of chemical	Quantity
	Sodium Hypochlorite	25 Litre/day
	Caustic Soda Flakes	20 Kg/day
	Ferric Chloride	35 Litre/day
	Poly electrolyte	125 mg
16.	Primary sludge management system <ul style="list-style-type: none"> Primary sludge generation rate Details of any other methods for sludge thickening Primary sludge disposal 	No data available Filter press Stored in SLF
17.	Method of Treated wastewater disposal	Used for landscaping
18.	Capital cost of sources of funds	Rs. 1, 19, 40,000/-. Fund made available through Government of India assistance under ASIDE Scheme
19.	Operational cost	Rs. 1.40 Lakhs
20.	Inspection Team	Sh. R. Rajkumar, Sc C Sh. Deepesh V, SSA Sh. S. Seenivel Raj, JLA
21.	Date of Inspection	16.01.2015

Observations:

- The CETP is commissioned in KINFRA International Apparel Parks Ltd having 11 member units such as garment washing and laundry units. The CETP has installed capacity of 0.6 MLD in which about 0.126 MLD of effluent is received from the member units.
- The treatment system in the CETP includes physio-chemical treatments, which consists of collection tank, screen chamber, oil trap, settling tank, parallel plate separator, bio tower, chemoxidation tank, pressure sand filter, polishing pond and filter press. The treated wastewater is being used for gardening.



Flow Chart of CETP

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

Parameters	Designed inlet norms	Screen Chamber	After Settling tank	After parallel plate separator	After Bio tower	After chemical oxidation	Polishing pond treated water	Standards
pH	6.5 – 8.5	6.6	6.2	6.2	6.7	6.7	7.3	6.5 – 8.5
TSS	650 - 750	26	184	92	102	86	80	100
TDS	1800 - 2000	406	1098	1258	1122	928	876	2100
BOD	500 - 750	108	709	724	375	176	130	30
COD	1000 - 1200	205	1193	1030	613	396	296	250
O & G	5 – 10	-					34.6	10
Sulfide		8.0					0.6	2.8
Sulphate		68.1					103.1	1000
NH₃-N	30 - 50	47					1.7	50

* All values are in mg/l except pH

- The primary collection tank is under renovation during inspection, so effluent is being coming directly to screen chamber. Sample for inlet of CETP was taken from screen chamber so the load of effluent is low compare to the samples taken after screen chamber.
- The CETP is designed for inlet BOD 500 – 750 mg/l and COD 1000 – 1200 mg/l. It is evident from the analysis result is that the BOD and COD load after settling tank is almost equal to the inlet designed load, which shows the CETP receives high BOD & COD load effluent than the designed norms. So the treated effluent quality is not meeting the stipulated norms in terms of BOD & COD. The O&G in the outlet of the treated effluent is also higher than the stipulated norms.



Renovation of Primary collection tank



Polishing Pond (final treated effluent)

- A record for chemical consumption is being maintained but no records are being maintained for flow meters reading, energy meter reading and sludge generation & storage.

- The sludge generated in ETP is being stored in top covered SLF facility, wherein water was stagnated.



SLF for storage of ETP Sludge

Recommendations:

CETP shall be directed to comply/implement the following:

- To modify/upgrade the treatment plant to meet the quality of treated effluent discharge as per prescribed norms.
- Proper records shall be maintained for flow meters reading, energy meter reading and sludge generation & storage.
- Proper facility shall be provided to avoid water stagnation in SLF. The stagnated water should be pumped from SLF and is to be treated before discharge.

(R. Rajkumar)
Scientist C

(S. Suresh)
Scientist D