



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

**Inspection Report of CETP M/s. Pallavaram Tanners Industrial Effluent Treatment
Company Limited**

M/s. Pallavaram Tanners Industrial Effluent Treatment Co Ltd (Capacity : 3000 m³/d) is one of the oldest CETPs established in Tamil Nadu in the year 1995 for treatment of tannery effluent generated by 149 member tanneries involved in processing of hides/skins of goats & sheep. A detailed study covering performance of various components of CETP was carried out on 26th & 27th September 2013 and the observations/results are as under:

1	Name & address of CETP	M/s Pallavaram Tanners Industrial Effluent Treatment Co Ltd 105, Anna Salai, Nagalkeni, Chrompet, Chennai 600044.
2	Area occupied by CETP	3.525 Acres
3	Total no.of staff	70
4	Name of Contact Person Contact No. email	Mr. Mohamed Nazeeb, Managing Director 044-22416522 pallavaramcetp@yahoo.in
5	Status of CETP: Operational or closed	Operational
6	Consent under water & air act Authorisation:	Applied for renewal. Valid upto 06.12.2015
7	Industrial area /estate(s) connected to CETP	Pallavaram, Pammal Municipal Area
8	Types of industries in the connected Industrial area/Estate	Leather Tanneries
	Number of member industries of CETP	149 MEMBERS
9	Method of collection of effluent	Through Pipe Line

10	Details of flow meters	Electromagnetic flow meter @ inlet, outlet of CETP, RO permeate & reject
11	Treatment capacity Design flow reaching CETP	3 MLD 125 (m ³ /hr)
12	Wastewater treated Average flow of CETP	2.2 MLD 92 (m ³ /hr)
14	Treatment units and dimensions	Flow chart is shown in fig 1 & dimension in Table 4
15	Details of chemicals used	Given in Table - 1
16	Primary sludge management system	
	Primary sludge generation rate	120 m ³ /day
	Details of any other methods for sludge thickening	Filter press 3 T/day - 2 nos 6 T/day - 2 nos
	Quantity of sludge stored	3 TONS
	Sludge disposal	Common disposal site (TSDF) at Gummidipoondi, Chennai
18	Conveyance system for disposal of treated wastewater	Through pipeline for distance of about 6 Kms. Partially taken for RO system.
19	Method of treated waste water disposal	Discharged through pipeline for distance of about 6 Km to Adyar River, which ultimately meets the sea after 10 Km.
20	Operational cost	65 lakh per month
21	Date of Inspection	26-27 .9.2013
22	Inspected by (Name & Designation)	1. Sh. R. Rajkumar, Sc 'C' 2. Sh. V. Deepesh, SSA 3. Sh. S. Seenivel Raj, JLA

OBSERVATIONS:

- (i) Consents under Water Act and Air Act were issued on 12.03.1999 valid up to 31.3.1999 for operation and maintenance of CETP so as to bring the quality of treated effluent within the prescribed standards. Thereafter consents were not renewed by TNPCB. **Almost for more than 13 years the CETP is in operation without valid consents.**
- (ii) TNPCB issued authorization under HW (M&H) Rules, 1989 as amended in 2003 on 07.12.2010 with a validity of five years for collection, storage and disposal of chemical / chrome sludge from waste water treatment to TSDF at Gummidipoondi (2555 T/year).
- (iii) As per the information obtained from the CETP, there are 149 member tanneries out of which 123 units are in operation and remaining 26 units are closed (Table-

2). The units process skins/hides of sheep and goats from semi-finish to finished leathers. The wastewater generation of about 2200 KLD is received from these member units. The average inflow & capacity utilisation is shown in the table-3.

- (iv) The unit has installed RO system & Multi effect evaporator, which is in the trail run. The RO permeate is being utilised for chemical makeup and sent to the member units through pipelines and tankers. So for 16 member units is connected through pipeline. The unit is having storage capacity of 1200 KL for RO permeate.
- (v) The treatment system in the CETP includes physico-chemical and biological treatments. After treatment from Dual Media Filter, the effluent is discharged into Adyar River through a pipeline and partially taken to RO & MEE for trail run. Composite sampling for 12 hrs is carried out. The analysis result is depicted below:

Sl.No	Parameters	Equilisation tank	Primary clarifier outlet	Secondary Clarifier Outlet	Reactor clarifier outlet	Dual Media Filter Outlet	R.O Feed	R. O Permeate
1	pH	7	7.3	7.3	7.63	7.36	7.13	7.62
2	TSS	1160	988	166	90	64	8	3
3	TDS	7820	6782	5474	4922	4116	4139	362
4	BOD	1058	616	37	-	30	3.4	-
5	COD	3136	1646	529	408	298	84	6.0
6	Chloride	1552	-	-	-	897	-	140
7	Sulphate	2914	-	-	-	1137	-	68.6
8	NH ₃ -N	83.4	-	-	-	45.9	-	8.4
9	TKN	11	-	-	-	2.24	-	BDL
10	H. Cr	BDL	-	-	-	BDL	-	BDL
11	Sulphide	-	-	-	-	0.6	-	BDL
12	O&G	-	-	-	-	6.8	-	-

All values are in mg/l except pH.

The treated effluent discharging into river after dual media filter having TDS, COD & Sulphate 0.96, 0.19, 0.14 times higher than the standard limit 2100, 250 & 1000 mg/l respectively. BOD value is equal to the standard limit.

- (vi) The solid wastes generated from the process are being sent to TSDF site located in Gummidipoondi, Chennai, which is given in table 4.

Recommendation:

In view of the observations / results mentioned above, unit may be directed to comply the below recommendations.

- To get valid renewed consent under Water Act and Air Act from TNPCB.
- To take necessary steps to comply the discharge norms for the parameters TDS, COD & Sulphate till starting of full fledged operation of MEE.

S.No	Description	Quantity/Month	Quantity/Year
1	Lime	80 Tones	960 Tones
2	Alum	35.1 Tones	421.2 Tones
3	Poly electrolyte	130 kg	1560 kg
4	PAC(Poly aluminium chloride)	11.7 Tones	140.4 Tones
5	Soda ash	30 tons	360 Tones
6	Anti Scalant	450 lts	5400 lts
7	SMBS	1000 kgs	1200 kg
8	Sodium Hypo Chlorite	5000 lit	60,000 lts
9	Hcl	10,000 lts	1,20,000 lts
10	Na OH	600 kgs	7200 kgs
11	Sodium Lauryl Sulphate	100 kgs	1200 kgs
12	Citric Acid	100 kgs	1200 kgs
13	Liquid Ammonia	500 lts	6000 lts

Sl. No	Name	Production Capacity, (Kg/d)	Wastewater Generation, KLD	Sl. No	Name	Production Capacity, (kg/day)	Wastewater Generation, KLD
1	A+A Leather products	1500	15	55	Mahalakshmi leather corpn	1500	15
2	Alamelu Industries	1500	15	56	Marson tanning inds	5000	50
3	Alina PVT LTD	1500	15	57	Mathew enterprises	1500	15
4	AMK Leather syndicate	1500	15	58	Meenakshi & co	2000	20
5	Anchor Leather Unit A	2000	20	59	Meenakshi shoe exports	1500	15
6	Anchor Leathers	1500	15	60	MEENAS	2000	20
7	Ansarniya & CO	1500	15	61	Melo leather manufacture	1500	15
8	Appollo Enterprises	2500	25	62	Naagu leathers	1500	15
9	APS Tanners	1500	15	63	Naga leathers	1500	15
10	Aristo Leather Exports	1500	15	64	Naveen enterprises	2000	20
11	Akay Leathers P Ltd	2500	25	65	Nayagam tanners	1500	15
12	ATC Chemicl Pvt Ltd		20	66	New Vision Leathers		
13	Arulmurguan leather	2000	20	67	Noor & soons	2500	25
14	Balaji Enterprises	2000	20	68	Nutech leathers	2500	25
15	Balamurugan leathers	1500	15	69	Parveen Leather Exports		
16	Bayleaf Leather	1500	15	70	Pallava Tanners	1500	15
17	Bengal tanning industries	1000	10	71	Palson leathers	3250	32.5
18	Bharath skin Corpn	2000	20	72	Persons leather	1000	10
19	BASK India Ltd			73	PMA leather	1000	10
20	Buckman Laboratories Asia P Ltd			74	Ponnai International	1000	10
21	C.Kalayanam & co	2000	20	75	Poorani enterprises	2000	20
22	Chandrakeerthi tanners P Ltd	1000	10	76	Pranaam leathers Pvt Ltd	1250	12.5
23	Conceria Virginia Chennai P Ltd	6000	60	77	Priya tanners	1500	15
24	Cresent leather Industries	1500	15	78	Ram Meena Prime tanners	1500	15
25	Colourtex Industries Pvt Ltd			79	Rangkup enterprises	1500	15
26	Danish leather exports	2000	20	80	Rashi leather Pvt Ltd	2000	20
27	Dhanam tanners	2000	20	81	Rathnam leather Unit A	2000	20
28	Dharain enterprises	1000	10	82	Rathnam Leathers	1500	15
29	Digital leather	1500	15	83	Rathnam leather Unit II		
30	East Euro leather	1500	15	84	Rower Leather Industries	2000	20
31	Emsons enterprises	2000	20	85	Royal Leather Industries	2000	20
32	Euro international	1500	15	86	Ruby Tanners	2500	25
33	Facom	1000	10	87	Ruphy leathers	1500	15
34	Forward leather co main	2000	20	88	S.L.leathers P Ltd	1000	10
35	Forward leather co Unit A	5000	50	89	Sagayi leather Trading co	1500	15
36	G.K.Enterprises	1500	15	90	Sai Tanners	1500	15
37	Geetha traders	1000	10	91	Sara leathers	2000	20

38	General Industrial Leathers Pvt Ltd	3000	30	92	Sarada garments	1500	15
39	Gokulram Leathers	2000	20	93	Selvam leather	1500	15
40	Goraa overseas	1500	15	94	Shafoor shoes	1000	10
41	GPM leader	1500	15	95	Shafs leather export	1500	15
42	Graphico leather	1000	10	96	Shiva Tanners	1500	15
43	GRN Exports	1000	10	97	Shri Kalyani leathers	1000	10
44	Harsha exports	2000	20	98	Shri vignesh & co	1500	15
45	Hifasan leather products	2000	20	99	Sierra Trading Ltd	2000	20
46	J.S.leader	1500	15	100	SIR leather	1500	15
47	Jahan leather exports	1750	17.5	101	Sornalakshmi tanners	1000	10
48	Jay aar Enterprises	2000	20	102	Sravani leathers	1500	15
49	Jay aar enterprises Unit A	3500	35	103	Sri Amman leathers	1500	15
50	Kathija Tanning co	1500	15	104	Sri Arangaa tanners	1500	15
51	Kavitha leathers	1000	10	105	Sri rajarajeshwari enterprises	2500	25
52	KM.Adam tannery	4500	45	106	Srinivas leather Manufactures	1500	15
53	Lakshman Chettiar & Co			107	SS. Tanning Industries	1500	15
54	Loyal international	1500	15	108	Sun tannery	1500	15
109	Stahl India Pvt Ltd			130	Galaxy leather exports		
110	Surya pelle			131	Imriz & co		
111	TMF Leather P Ltd	1500	15	132	Izhraul Huque & co		
112	Trinity leadwaren	1000	10	133	Kibro leather		
113	TFL Quinn India Pvt Ltd			134	Leather leader corpn		
114	Unity leather	2000	20	135	Mazda leather		
115	V EM R Tanners			136	Presidency shoe Internatn.		
116	Venkat & Co			137	Shaika leather corpn		
117	Valliappa Tanners	2000	20	138	Spency leather P Ltd		
118	Vasun Leather	1000	10	139	Sri Kasthuri Leather		
119	Vel leather	1000	10	140	Sumitha Tanners		
120	Venponn Tannery	1000	10	141	Tej Situ Investments P Ltd		
121	VRS leathers Pvt Ltd	2750	27.5	142	Ultra leather		
122	VSB leather	1500	15	143	Wazhec leather Industries		
123	Yahiya Overseas	1500	15	144	KPM Associates		
124	Bharath & co			145	Rams India International		
125	Chistia Tannery			146	Arafath Leathers		
126	Chrome leather company Ltd			147	Gemini Leathers		
127	Coastal tanners			148	M. A. Rahim & Co.		
128	Dheen leather						
129	Fab Exports Pvt Ltd			149	Lakshmi saraswathi Enterprises		

Closed

Closed

Month	inflow, KL/month	Avg inflow /day, KL	Capacity utilization (%)
Jan-13	53969	1927	64
Feb-13	59232	2115	71
Mar-13	66058	2131	71
Apr-13	67141	2238	75
May-13	68580	2212	74
Jun-13	63381	2113	70
Jul-13	69547	2243	75
Aug-13	68175	2199	73
Sep-13	65774	2268	76

S.No	Description	Quantity/Month	Quantity/Year	Disposal
1	Sludge	Approximately 90 Tones wet weight.	Approximately 1080 Tones wet weight	Being sent to common SLF at Gummidipoondi.

Fig 1: Flow chart of CETP

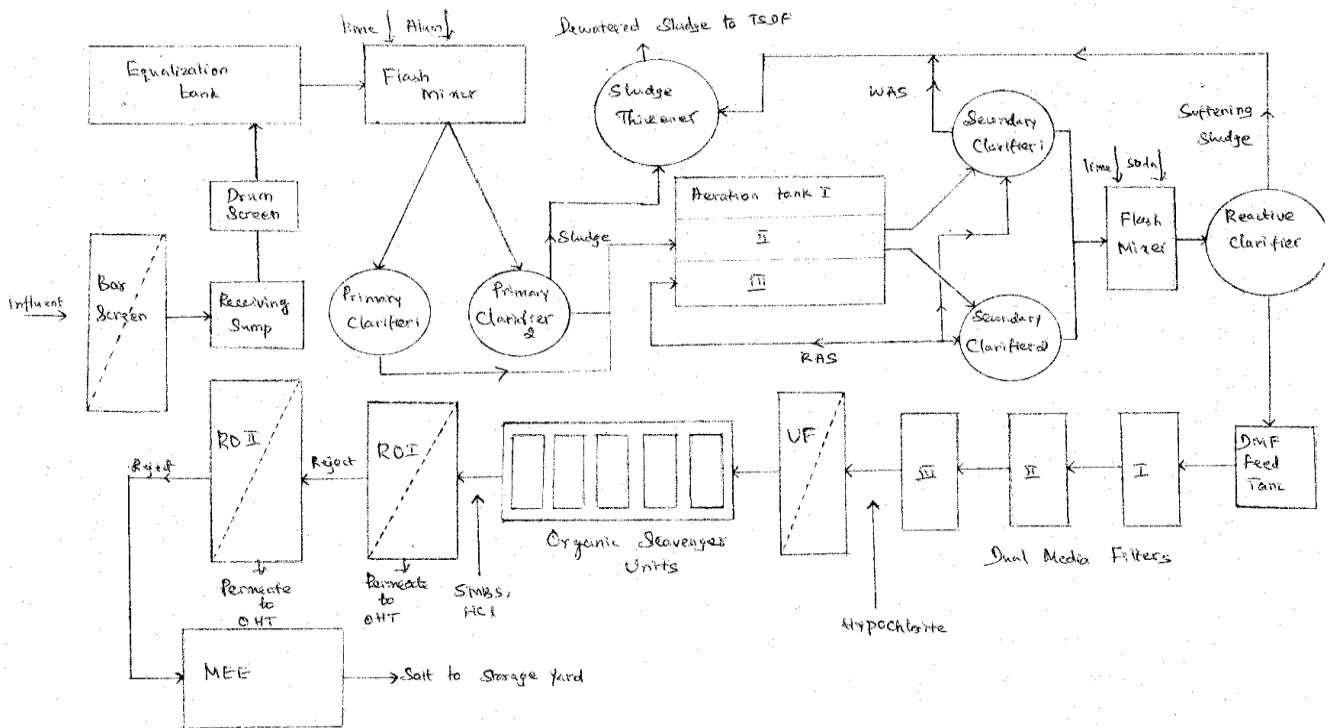


Table-5 Details of Sizes of the Units

Sl. No.	Units	Size Of The Components
1	Design flow	3000 m ³ /day
2	Screen chamber	0.7m X 3m X 2m
3	Receiving sump	6m diaX 5m deep
4	Fine screen	Drum type-konica model
5	Grit chamber	3m X 3m X 1.2m
6	Equalization basin	40m X 11m X 3m-1 No & 36m X 18m X 3.5m -1 No
7	Flash Mixer	2m X 2m X 2m
8	Primary Clariflocculator, Flocculator	6m dia X 1.5 deep-2nos,12m dia X 3m deep - 2Nos
9	Secondary Clarifier	12m dia X 3m SWD - 2 Nos
10	Aeration tank, 3 Nos	40m X 15m X 4m SWD - 2Nos, 40m X 11m x 3m SWD - 1No, Diffused aeration
11	Secondary clarifier, 2Nos	12m dia X 2.2 SWD
12	Sludge thickener	12m dia X 3m SWD
13	Plate Filter Press	Plate size:1m X 1m - 52Nos - 2Units
14	Sludge Drying Bed	16m X 10m -1Nos
15	Tertiary Flash Mixer	2m X 2m X 2m
16	Reactor Clariflocculator	12.5m Dia x 3.5m depth
17	Dual Media Filter (DMF)	3m Dia x 2.2m Height
18	Ultra Filtration (UF)	10'' dia x 12'' length -32 no's
19	Organic Scavenger(OS)	10 No's vessel
20	Reverse Osmosis(RO)	44 Vessel, 1 st stage192 Brackish membrane, 2 nd stage 72 sea water membrane.
21	Multiple Effect Evaporator	7 stage Evaporator