Monthly Performance Report
(HWT-NG100-MPR-42-R0)

January 2020
(From 01/01/2020 to 31/01/2020)

100 TPD Municipal Solid Waste (MSW) Facility
Calangute, North Goa

Prepared By

Hindustan Waste Treatment Pvt. Ltd.
(HWT)

Submitted To

Goa Waste Management Corporation (GWMC)

Department of Science & Technology (DS&T)

Table – 1

Summary of Overall Average Results for January 2020

(As compared to Schedule – 7: Performance Standards, Volume – I of RFP)

Sr. No.	Parameter	Performance Standard As per Schedule – 7	Actual Performace at Plant (Monthly Average)
1.	Number of fractions of recyclables sorted per day from the input mixed waste	Minimum 10 numbers of fractions shall be sorted daily from the input dry waste as received in the facility. The list of fractions are as follows: 1. PET Bottles 2. Mixed Plastic Articles 3. Newspapers / other Paper Material 4. Cardboard 5. Styrofoam &Thermocol 6. Coconut Shells 7. Clothes 8. Rubber Articles 9. Metal Articles & Cans 10. E-waste Articles and any Hazardous Waste	**13 numbers** of fractions are being sorted daily from the input dry waste as received in the facility. The list of fractions are as follows: 1. Glass 2. Aluminium 3. Metal 4. Paper + Cardboard 5. Tetra Pack 6. Hard Plastic 7. PET 8. Mixed Plastic 9. Styrofoam + Thermocol 10. Cloth + Rags + Textile 11. Leather + Rexine + Rubber 12. Coconut Shells 13. E-waste Articles and any Hazardous Waste
2.	Quantum of reject/residues to be sent to the landfill after processing. No organic fraction shall be disposed in the landfill.	Maximum 10% of inert of the total input waste as received in the facility (in TPD).	Input waste to the Plant is **176.34 TPD**. Quantum of Inert is **1.27 TPD** which is **< 10%** of the Total Input Waste as received in the Facility. No Organic Waste has been disposed in the Sanitary Landfill Facility.
3.	Electricity generation in the Plant	Minimum electricity to be generated in the plant shall be 0.40 MW per 100 tons of input wet biodegradable waste as received in the Facility (in TPD).	Electricity generation is **0.53 MW/100 MT** of Input Biodegradable Waste as received in the Facility (in TPD).
4.	Biogas Flaring System	The Biogas Flaring System shall strictly be used only in case of	Biogas is being flared strictly, only under emergency and not as a

<table>
<tr><th>Sr. No.</th><th>Parameter</th><th>Performance Standard As per Schedule – 7</th><th>Actual Performace at Plant (Monthly Average)</th></tr>
<tr><td></td><td></td><td>emergency and not as a routine practice.</td><td>routine practice. The average running time of Biogas Flaring System is <u>2.29</u> hours/day.</td></tr>
<tr><td>5.</td><td>Discharge of treated effluent conforming to regulatory norms</td><td>Effluent Treatment Plant shall be operated under all conditions.</td><td>Effluent Treatment Plant is being operated continuously and is meeting all statutory conditions. The Treated Effluent Characteristics are as follows:

<table><tr><td>pH</td><td>6.97</td></tr><tr><td>BOD</td><td>7 mg/l</td></tr><tr><td>COD</td><td>66 mg/l</td></tr><tr><td>TSS</td><td>8 mg/l</td></tr><tr><td>TDS</td><td>1,636 mg/l</td></tr></table></td></tr>
<tr><td>6.</td><td>General Housekeeping, hygienic conditions, cleanliness, safety norms, adequate manpower, treatment methodology for plant operation & maintenance and storage conditions in the plant.</td><td>Minimum housekeeping, safety norms and cleanliness conditions shall be maintained at all times as per the Bid Document requirement.</td><td>High standard of Housekeeping, Cleanliness and Safety are being maintained at all times at the Plant.
Adequate manpower has been deployed in all shifts.
Also, the treatment methodology is being followed properly and proper storage conditions have been maintained in the Plant.</td></tr>
</table>

#	Plant Performance Data: January 2020		
Sr. No.	**Content**	**Month**	**Signature**
1	Input Waste Composition	From 01.01.2020 To 31.01.2020	
2	Recyclables		
3	Electricity Generation		
4	Biogas Flare		
5	Effluent Treatment Plant		
6	Inert		
7	Housekeeping		

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

1	WASTE:																					
Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average 1-7		8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average 8-14		15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
1.1	**Input Waste:**																								
1	Type 1: Dry Waste	TPD	92.61	116.04	108.06	95.27	84.02	103.81	88.80	98.37	52.04%	84.44	89.94	80.58	66.35	66.12	89.86	80.21	79.64	46.11%	92.76	80.40	81.93	87.09	71.21
2	Type 2: Wet Waste	TPD	95.27	78.22	89.11	88.74	101.62	95.79	72.32	88.72	46.94%	80.48	94.32	81.84	109.40	97.18	93.69	78.34	90.75	52.54%	88.08	82.55	96.50	76.06	90.62
3	Type 3: Mixed Waste	TPD	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00
4	Type 4: Tree Waste	TPD	0.54	1.06	2.26	0.50	2.70	1.95	4.50	1.93	1.02%	2.33	3.97	2.80	3.49	1.94	0.94	0.80	2.32	1.35%	1.95	2.18	2.98	1.98	1.23
5	**Total.....(1)+(2)+(3)+(4)**	**TPD**	**188.42**	**195.32**	**199.43**	**184.51**	**188.34**	**201.55**	**165.62**	**189.03**	**100.00%**	**167.25**	**188.23**	**165.22**	**179.24**	**165.24**	**184.49**	**159.35**	**172.72**	**100.00%**	**182.79**	**165.13**	**181.41**	**165.13**	**163.06**

**Note:**

1 **Type-I: Dry Waste:** This has 25-30% Organic and 70-75% Inorganic.

2 **Type-II: Wet Waste:** This has 65-70% Organic and 30-35%

3 **Type-I: Mixed Waste:** This has 45-50% Organic and 50-55% Inorganic.

Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average		8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average		15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
1.2	**Output Products:**																								
1	Organic Fraction	TPD	91.22	85.09	91.57	87.13	92.62	95.42	72.96	88.00	46.55%	76.72	87.13	77.16	92.29	83.34	85.85	76.77	82.75	47.91%	83.33	77.89	91.74	73.06	82.44
2	Inorganic Fraction:																								
	Recyclables	TPD	13.96	14.72	15.18	14.15	13.96	14.21	11.62	13.97	7.39%	11.94	13.38	11.95	13.11	12.72	12.78	11.61	12.50	7.24%	12.80	12.29	12.65	12.51	11.68
	RDF	TPD	77.57	92.09	87.58	80.19	76.31	86.09	74.03	81.98	43.37%	72.41	81.21	70.87	64.62	60.56	82.47	65.05	71.03	41.12%	78.25	70.82	69.90	74.95	65.73
	Bulking Material	TPD	2.48	2.35	2.84	2.54	2.75	2.77	2.51	2.61	1.38%	2.57	2.54	2.44	2.50	2.37	2.46	2.24	2.44	1.42%	2.68	1.96	2.21	2.63	1.97
	Inert	TPD	2.65	0.00	0.00	0.00	0.00	1.10	0.00	0.54	0.28%	1.28	0.00	0.00	3.23	4.31	0.00	2.89	1.67	0.97%	3.78	0.00	1.93	0.00	0.00
3	Tree Waste	TPD	0.54	1.06	2.26	0.50	2.70	1.95	4.50	1.93	1.02%	2.33	3.97	2.80	3.49	1.94	0.94	0.80	2.32	1.35%	1.95	2.18	2.98	1.98	1.23
	Total.....(1)+(2)+(3)	**TPD**	**188.42**	**195.32**	**199.43**	**184.51**	**188.34**	**201.55**	**165.62**	**189.03**	**100%**	**167.25**	**188.23**	**165.22**	**179.24**	**165.24**	**184.49**	**159.35**	**172.72**	**100%**	**182.79**	**165.13**	**181.41**	**165.13**	**163.06**

2	RECYCLABLES:																								
Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average		8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average		15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
1	Glass	Kg	188	233	197	276	278	220	209	229		181	203	211	176	196	202	190	194		181	228	250	196	178
2	Aluminum	Kg	188	117	99	92	149	200	145	141		165	111	97	176	147	184	79	137		127	114	161	98	162
3	Metal	Kg	301	350	375	294	316	339	322	328		330	350	325	264	327	330	285	316		362	293	357	326	307
4	Tetra Pack	Kg	132	194	118	92	186	180	129	147		99	92	97	123	114	184	159	124		145	81	161	98	162
5	Hard Plastic	Kg	225	389	394	202	297	299	258	295		165	313	292	281	212	275	174	245		307	326	178	179	194
6	PET	Kg	207	330	315	294	353	299	242	291		165	221	260	246	310	349	254	258		235	228	357	228	178
7	Mixed Plastic	Kg	12,532	12,938	13,585	12,752	12,289	12,475	10,167	12,391		10,703	11,958	10,590	11,723	11,268	11,105	10,322	11,096		11,266	10,885	11,009	11,225	10,389
8	Thermocol + Styrofoam	Kg	188	175	99	147	93	200	145	150		132	129	81	123	147	147	143	129		181	130	178	163	113
9	Cloth + Rags + Textiles	Kg	1,259	1,884	1,498	1,730	1,281	1,058	1,015	1,389		1,220	1,106	991	1,494	1,584	1,762	856	1,288		1,628	1,027	1,088	1,550	1,456
10	Leather + Rexine + Rubber	Kg	1,146	1,923	1,341	1,251	1,151	1,377	1,515	1,386		1,567	1,382	1,413	1,019	1,045	954	1,094	1,211		1,429	1,059	1,338	1,044	1,165
11	Paper + Cardboard	Kg	1,202	1,263	1,262	1,159	1,225	1,337	1,128	1,225		1,023	1,179	1,056	1,213	1,029	1,285	1,110	1,128		1,139	1,124	1,124	1,093	1,003
12	Coconut	Kg	1,278	1,088	1,577	1,380	1,522	1,437	1,386	1,381		1,550	1,364	1,381	1,283	1,339	1,175	1,126	1,317		1,537	831	1,088	1,534	971

**Note:**

1 Item No. 9 (Cloth + Rags + Textiles) and 10 (Leather + Rexine + Rubber) are sent to Cement Plants as RDF.

2 Item No. 11 (Paper + Cardboard) and 12 (Coconut) are used as Bulking Material in Composting.

3	DISPOSAL OF INERT:																								
Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average		8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average		15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
1	**As per Tender:** Maximum 10% of Inerts of the Total Input Waste (excluding Mulched Tree Waste) as received in the Facility.																								
2	Input Waste	TPD	188.42	195.32	199.43	184.51	188.34	201.55	165.62	189.03		167.25	188.23	165.22	179.24	165.24	184.49	159.35	172.72		182.79	165.13	181.41	165.13	163.06
3	Inert Fraction	TPD	2.65	0.00	0.00	0.00	0.00	1.10	0.00	0.54		1.28	0.00	0.00	3.23	4.31	0.00	2.89	1.67		3.78	0.00	1.93	0.00	0.00
4	% of Total Input Waste.....(3) ÷ (2)	%	1.41%	0.00%	0.00%	0.00%	0.00%	0.55%	0.00%	0.28%		0.77%	0.00%	0.00%	1.80%	2.61%	0.00%	1.81%	1.00%		2.07%	0.00%	1.06%	0.00%	0.00%

4	ELECTRICITY GENERATION:																								
Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average		8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average		15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
3.1	**Biogas Gensets:**																								
1	Biogas Genset-I: Running Time	hr/day	23.95	23.68	23.71	23.31	23.90	23.95	23.95	23.78		23.45	23.90	21.45	23.70	24.00	23.50	23.70	23.39		23.75	24.00	24.00	24.00	23.95
2	Biogas Genset-I: Biogas Consumption	Nm^3/day	2,311	2,273	2,253	2,285	2,298	2,302	2,316	2,291		2,258	2,314	2,032	2,263	2,303	2,246	2,274	2,241		2,281	2,287	2,299	2,284	2,281
3	Biogas Genset-I: Energy Generation	kW.hr/day	3,880	3,819	3,807	3,838	3,770	3,880	3,700	3,813		3,610	3,780	3,410	3,610	3,820	3,690	3,970	3,699		3,940	4,000	3,940	4,040	4,000
4	Biogas Genset-II: Running Time	hr/day	23.95	23.66	23.01	22.36	23.90	23.96	23.95	23.54		23.40	23.85	21.40	23.70	24.00	23.45	23.70	23.36		23.55	24.00	24.00	24.00	24.00
5	Biogas Genset-II: Biogas Consumption	Nm^3/day	2,147	2,106	2,002	2,012	2,119	2,120	2,129	2,091		2,079	2,131	1,875	2,090	2,130	2,074	2,100	2,069		2,088	2,103	2,111	2,098	2,106
6	Biogas Genset-II: Energy Generation	kW.hr/day	3,850	4,001	3,783	3,642	3,760	3,860	3,690	3,798		3,590	3,770	3,390	3,570	3,800	3,650	3,960	3,676		3,900	4,010	3,930	4,040	4,000
7	**Total Biogas Consumption = (2)+(5)**	**Nm^3/day**	**4,458**	**4,379**	**4,254**	**4,297**	**4,418**	**4,422**	**4,445**	**4,382**		**4,337**	**4,445**	**3,907**	**4,353**	**4,433**	**4,320**	**4,375**	**4,310**		**4,369**	**4,390**	**4,410**	**4,382**	**4,387**
8	**Total Energy Generation = (3)+(6)**	**kW.hr/day**	**7,730**	**7,820**	**7,590**	**7,480**	**7,530**	**7,740**	**7,390**	**7,611**		**7,200**	**7,550**	**6,800**	**7,180**	**7,620**	**7,340**	**7,930**	**7,374**		**7,840**	**8,010**	**7,870**	**8,080**	**8,000**

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average 1-7	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average 8-14	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
3.2	**Electricty Generation:**																						
1	**As per Tender:** Minimum electricity to be generated in the plant shall be 0.4 MW per 100 tons of Input Biodegradable Waste as received in the Facility.	MW/100 MT	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
2	Biodegradable Waste = 1.2.2	TPD	95.27	78.22	89.11	88.74	101.62	95.79	72.32	88.72	80.48	94.32	81.84	109.40	97.18	93.69	78.34	90.75	88.08	82.55	96.50	76.06	90.62
3	Guranteed Electricity Generation = (3.2.2 x 3.2.1)) ÷ 100	kW	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
4	Guaranteed Electricity Generation = 3.2.3 x 24 x 1000	kW.hr/day	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760
5	Available Electricity Generation = (A2 ÷ 24) + (A4 ÷ 24)	kW	322	326	316	312	314	323	308	317	300	315	283	299	318	306	330	307	327	334	328	337	333
6	Available Electricity Generation = 3.2.5 ÷ 100	MW/100 MT	0.54	0.54	0.53	0.52	0.52	0.54	0.51	0.53	0.50	0.52	0.47	0.50	0.53	0.51	0.55	0.51	0.54	0.56	0.55	0.56	0.56

5	**BIOGAS FLARE:**																						
Sr. No.	**Description**	**Unit**	**1-Jan**	**2-Jan**	**3-Jan**	**4-Jan**	**5-Jan**	**6-Jan**	**7-Jan**	**Weekly Average**	**8-Jan**	**9-Jan**	**10-Jan**	**11-Jan**	**12-Jan**	**13-Jan**	**14-Jan**	**Weekly Average**	**15-Jan**	**16-Jan**	**17-Jan**	**18-Jan**	**19-Jan**
1	Operation Time	hr/day	1.12	5.48	2.42	0.07	1.78	1.17	2.25	2.04	3.48	2.02	4.42	3.98	3.87	5.32	3.08	3.74	1.30	3.28	2.35	2.03	4.22
2	Biogas Flared	Nm^3/day	251	1,234	544	15	401	263	506	459	784	454	994	896	870	1,196	694	841	293	739	529	457	949

6	**DIGESTERS:**																						
Sr. No.	**Description**	**Unit**	**1-Jan**	**2-Jan**	**3-Jan**	**4-Jan**	**5-Jan**	**6-Jan**	**7-Jan**	**Weekly Average 1-7**	**8-Jan**	**9-Jan**	**10-Jan**	**11-Jan**	**12-Jan**	**13-Jan**	**14-Jan**	**Weekly Average 8-14**	**15-Jan**	**16-Jan**	**17-Jan**	**18-Jan**	**19-Jan**
5.1	**Digester-I: Front End**																						
1	pH	---	7.55	7.46	7.42	7.52	7.47	7.49	7.51	7.49	7.50	7.52	7.50	7.50	7.55	7.57	7.61	7.54	7.70	7.67	7.66	7.67	7.67
2	TSS	ppm	40,720	37,831	35,558	37,321	37,292	35,551	36,797	37,296	39,967	38,401	38,349	39,967	37,057	38,885	37,550	38,597	45,262	38,246	34,885	42,549	43,639
3	VSS	ppm	28,165	26,046	24,938	26,460	27,564	24,938	26,868	26,426	28,953	27,425	26,952	28,953	22,037	27,770	27,130	27,031	31,899	26,142	23,561	30,621	28,328
4	Total Alkalinity	ppm as CaCO3	6,525	6,000	6,325	6,375	6,225	6,375	6,075	6,271	6,300	6,200	6,225	6,175	6,275	6,450	6,675	6,329	7,500	7,350	7,350	7,325	7,475
5	VFA	ppm as HAc	2,830	2,996	2,996	3,079	3,245	3,245	3,411	3,115	3,328	3,411	3,577	3,577	3,577	3,494	2,913	3,411	2,581	2,664	2,664	2,830	2,996
5.2	**Digester-I: Back End**																						
1	pH	---	7.58	7.52	7.46	7.58	7.52	7.51	7.58	7.54	7.54	7.56	7.57	7.58	7.61	7.61	7.66	7.59	7.75	7.71	7.69	7.66	7.71
2	TSS	ppm	42,051	37,368	35,268	36,403	35,107	35,256	34,572	36,575	37,201	39,973	39,500	37,368	41,316	37,973	35,756	38,441	35,975	38,697	36,314	37,482	37,874
3	VSS	ppm	28,305	25,945	24,877	26,478	25,592	24,877	24,805	25,840	27,229	27,355	26,058	25,904	29,597	26,770	25,660	26,939	24,345	26,948	25,082	18,382	26,108
4	Total Alkalinity	ppm as CaCO3	6,675	6,300	6,475	6,500	6,425	6,450	6,275	6,443	6,475	6,425	6,350	6,450	6,400	6,550	6,800	6,493	7,775	7,425	7,475	7,600	7,725
5	VFA	ppm as HAc	2,581	2,830	2,996	2,913	3,079	3,245	3,245	2,984	3,162	3,162	3,245	3,245	3,328	3,162	2,747	3,150	2,498	2,581	2,664	281	2,747
5.3	**Buffer Tank: Front End**																						
1	pH	---	7.81	7.76	7.63	7.68	7.71	7.64	7.70	7.70	7.67	7.71	7.70	7.72	7.74	7.70	7.71	7.71	7.73	7.71	7.68	7.68	7.74
2	TSS	ppm	31,877	29,886	29,685	31,377	30,162	30,677	30,083	30,535	29,886	30,202	32,705	40,312	29,782	29,302	31,060	31,893	37,978	31,305	29,672	33,615	33,130
3	VSS	ppm	24,815	20,135	19,722	21,867	21,185	21,722	21,532	21,568	20,134	22,286	23,652	28,953	19,723	22,366	21,919	22,719	26,881	19,798	19,098	23,218	23,365
4	Total Alkalinity	ppm as CaCO3	7,450	7,925	7,550	7,325	7,800	7,550	7,275	7,554	7,675	7,700	7,700	7,850	7,825	7,700	7,825	7,754	7,975	8,300	7,725	7,750	7,900
5	VFA	ppm as HAc	2,415	2,166	2,332	2,332	2,249	2,332	2,332	2,308	2,332	2,498	2,415	2,498	2,581	2,498	2,083	2,415	2,000	2,083	2,166	2,083	2,083
5.4	**Buffer Tank: Back End**																						
1	pH	---	7.84	7.70	7.68	7.76	7.73	7.70	7.75	7.74	7.71	7.73	7.73	7.79	7.78	7.74	7.74	7.75	7.77	7.74	7.73	7.71	7.71
2	TSS	ppm	32,667	29,019	30,612	30,755	30,051	30,612	29,054	30,396	29,019	32,705	29,032	38,831	31,258	27,934	33,801	31,797	29,904	30,870	30,878	34,631	33,907
3	VSS	ppm	23,054	19,546	21,019	21,303	21,141	20,019	20,319	20,914	19,513	22,991	22,315	26,046	21,420	18,727	23,697	22,101	20,329	19,984	19,822	23,962	23,765
4	Total Alkalinity	ppm as CaCO3	7,575	8,000	7,675	7,500	7,950	7,725	7,375	7,686	7,750	8,000	7,925	8,075	8,000	7,850	7,925	7,932	8,125	8,175	7,850	7,375	8,025
5	VFA	ppm as HAc	1,917	2,083	2,166	2,166	2,083	2,083	2,083	2,083	2,083	2,166	2,332	2,249	2,332	2,415	2,000	2,225	1,917	1,917	1,917	2,830	1,917
5.5	**Digester-II: Front End**																						
1	pH	---	7.52	7.38	7.36	7.41	7.41	7.41	7.47	7.42	7.48	7.47	7.42	7.42	7.43	7.49	7.51	7.46	7.60	7.66	7.64	7.63	7.63
2	TSS	ppm	40,616	44,340	37,316	37,146	37,422	37,316	36,573	38,676	36,831	38,349	40,401	31,523	41,779	38,820	39,493	38,171	40,039	40,348	37,747	40,690	42,696
3	VSS	ppm	30,301	32,738	28,587	27,534	27,933	26,587	27,392	28,725	26,046	26,912	27,425	21,568	25,288	27,338	23,697	25,468	29,144	28,254	26,100	29,874	28,615
4	Total Alkalinity	ppm as CaCO3	6,600	5,925	5,925	6,225	6,125	6,225	5,900	6,132	6,150	6,075	6,075	6,150	6,100	6,300	6,475	6,189	7,000	7,400	7,400	7,375	7,500
5	VFA	ppm as HAc	2,747	3,162	3,245	3,162	3,411	3,411	3,660	3,257	3,577	3,577	3,660	3,743	3,743	3,577	2,996	3,553	2,747	2,747	2,830	2,830	2,830
5.6	**Digester-II: Back End**																						
1	pH	---	7.59	7.44	7.39	7.44	7.48	7.53	7.52	7.48	7.57	7.50	7.47	7.50	7.49	7.55	7.58	7.52	7.67	7.69	7.70	7.69	7.69
2	TSS	ppm	41,606	44,740	41,662	35,939	35,986	40,667	35,056	39,379	36,368	38,500	39,973	34,318	43,319	41,316	37,518	38,759	35,339	40,773	37,352	41,123	41,096
3	VSS	ppm	30,539	32,738	29,856	26,602	26,675	29,057	25,805	28,753	25,904	26,052	27,335	21,322	26,789	28,597	27,238	26,177	25,371	27,191	25,509	29,391	29,602
4	Total Alkalinity	ppm as CaCO3	6,725	6,200	6,225	6,450	6,250	6,550	6,100	6,357	6,425	6,250	6,300	6,200	6,300	6,500	6,600	6,368	7,200	7,625	7,600	7,425	7,600
5	VFA	ppm as HAc	2,498	2,913	3,079	3,162	3,328	3,162	3,577	3,103	3,411	3,411	3,577	3,494	3,494	3,245	2,830	3,352	2,581	2,664	2,581	2,498	2,830

7	**EFFLUENT TREATMENT PLANT:**																						
Sr. No.	**Description**	**Unit**	**1-Jan**	**2-Jan**	**3-Jan**	**4-Jan**	**5-Jan**	**6-Jan**	**7-Jan**	**Weekly Average**	**8-Jan**	**9-Jan**	**10-Jan**	**11-Jan**	**12-Jan**	**13-Jan**	**14-Jan**	**Weekly Average**	**15-Jan**	**16-Jan**	**17-Jan**	**18-Jan**	**19-Jan**
6.1	**Raw Effluent Quality:**																						
1	Flow	m^3/day	71.22	70.66	69.90	71.31	61.29	72.89	66.74	69.14	62.94	52.88	68.74	69.81	67.33	68.01	68.14	65.41	72.82	71.64	74.15	70.86	70.20
2	pH	---	7.33	7.41	6.14	7.74	7.20	6.79	6.37	7.00	6.16	6.30	6.84	6.10	7.95	6.40	7.93	6.81	6.78	6.86	6.54	6.93	7.58
3	Biochemical Oxygen Demand (BOD5)	mg/l	2,372	1,755	1,771	2,022	1,772	2,127	2,025	1,978	1,942	1,658	1,864	1,542	2,041	2,256	1,844	1,878	1,828	1,683	2,112	1,627	2,174
4	Chemical Oxygen Demand (COD)	mg/l	7,685	4,107	4,587	5,641	3,615	4,360	4,536	4,933	5,671	5,256	5,946	3,886	4,143	6,272	4,979	5,165	6,051	5,167	6,547	3,986	5,805
5	Total Suspended Solids (TSS)	mg/l	5,266	2,738	2,674	3,640	3,101	3,403	4,313	3,591	4,836	3,200	4,008	2,776	3,551	4,783	3,227	3,769	4,223	2,625	4,879	4,019	3,957
6	Total Dissolve Solids (TDS)	mg/l	1,591	1,499	1,340	1,697	1,557	1,440	1,781	1,558	1,763	1,752	1,624	1,456	1,641	1,679	1,687	1,657	1,320	1,415	1,509	1,410	1,402

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

Sr. No.	Description	Unit	1-Jan	2-Jan	3-Jan	4-Jan	5-Jan	6-Jan	7-Jan	Weekly Average 1-7	8-Jan	9-Jan	10-Jan	11-Jan	12-Jan	13-Jan	14-Jan	Weekly Average 8-14	15-Jan	16-Jan	17-Jan	18-Jan	19-Jan
6.2	**Treated Effluent Quality:**																						
1	pH	---	6.98	7.38	6.53	6.93	7.00	6.94	6.62	6.91	7.32	6.53	6.85	6.63	6.99	6.75	7.49	6.94	7.08	7.20	7.05	6.51	7.08
2	Biochemical Oxygen Demand (BOD5)	mg/l	7	8	9	8	8	7	9	8	5	5	8	9	7	9	6	7	7	7	9	7	6
3	Chemical Oxygen Demand (COD)	mg/l	54	86	62	84	58	78	61	69	75	74	58	57	61	87	68	69	55	62	70	65	50
4	Total Suspended Solids (TSS)	mg/l	8	9	10	9	9	8	10	9	6	6	9	10	8	10	7	8	8	8	10	8	7
5	Total Dissolve Solids (TDS)	mg/l	1,639	1,499	1,394	1,782	1,666	1,440	1,959	1,626	1,816	1,910	1,770	1,500	1,657	1,813	1,754	1,746	1,333	1,429	1,660	1,495	1,416

8	HOUSEKEEPING:																						
Sr. No.	**Description**	**Unit**	**1-Jan**	**2-Jan**	**3-Jan**	**4-Jan**	**5-Jan**	**6-Jan**	**7-Jan**	**Weekly Average**	**8-Jan**	**9-Jan**	**10-Jan**	**11-Jan**	**12-Jan**	**13-Jan**	**14-Jan**	**Weekly Average**	**15-Jan**	**16-Jan**	**17-Jan**	**18-Jan**	**19-Jan**
1	Hygenic Conditions	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
2	Cleanliness	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
3	Manpower Deployed	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
4	Safety Norms	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
5	Treatment Methodology	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
6	Storage Conditions	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

1	WASTE:																				
Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average 15-21		22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average 22-28		29-Jan	30-Jan	31-Jan	Weekly Average 29-31		Monthly Average 1-31	
1.1	**Input Waste:**																					
1	Type 1: Dry Waste	TPD	88.72	85.74	83.98	48.17%	81.86	80.94	74.17	79.99	74.11	95.70	82.84	81.37	47.06%	83.14	86.46	71.48	80.36	47.86%	85.31	48.38%
2	Type 2: Wet Waste	TPD	91.56	93.29	88.38	50.69%	88.17	86.08	80.47	97.65	83.86	95.86	88.75	88.69	51.29%	90.79	80.44	87.91	86.38	51.45%	88.87	50.40%
3	Type 3: Mixed Waste	TPD	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00%	0.00	0.00	0.00	0.00	0.00%	0.00	0.00%
4	Type 4: Tree Waste	TPD	2.62	0.93	1.98	1.14%	4.34	3.57	5.31	1.76	2.21	1.11	1.62	2.85	1.65%	0.36	1.50	1.62	1.16	0.69%	2.16	1.23%
5	**Total.....(1)+(2)+(3)+(4)**	**TPD**	**182.90**	**179.96**	**174.34**	**100.00%**	**174.37**	**170.59**	**159.95**	**179.40**	**160.18**	**192.67**	**173.21**	**172.91**	**100.00%**	**174.29**	**168.40**	**161.01**	**167.90**	**100.00%**	**176.34**	**100.00%**

**Note:**

1 **Type-I: Dry Waste:** This has 25-30% Organic and 70-75% Inorganic.

2 **Type-II: Wet Waste:** This has 65-70% Organic and 30-35%

3 **Type-I: Mixed Waste:** This has 45-50% Organic and 50-55% Inorganic.

Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average		22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average		29-Jan	30-Jan	31-Jan	Weekly Average		Monthly Average	
1.2	**Output Products:**																					
1	Organic Fraction	TPD	86.53	86.51	83.07	47.65%	80.13	80.96	75.69	89.64	76.46	92.36	82.95	82.60	47.77%	85.57	79.72	77.17	80.82	48.14%	83.79	47.51%
2	Inorganic Fraction:																					
	Recyclables	TPD	12.66	12.71	12.47	7.15%	12.91	12.49	11.32	13.86	11.77	13.39	11.79	12.50	7.23%	13.57	12.58	11.25	12.47	7.43%	12.82	7.27%
	RDF	TPD	76.21	77.61	73.35	42.07%	72.72	71.21	55.47	71.57	65.57	83.24	72.56	70.33	40.68%	72.39	72.16	68.51	71.02	42.30%	73.87	41.89%
	Bulking Material	TPD	2.29	2.20	2.28	1.31%	2.69	2.35	2.26	2.58	2.05	2.57	2.18	2.38	1.38%	2.40	2.44	2.45	2.43	1.45%	2.43	1.38%
	Inert	TPD	2.59	0.00	1.19	0.68%	1.59	0.00	9.90	0.00	2.12	0.00	2.11	2.25	1.30%	0.00	0.00	0.00	0.00	0.00%	1.27	0.72%
3	Tree Waste	TPD	2.62	0.93	1.98	1.14%	4.34	3.57	5.31	1.76	2.21	1.11	1.62	2.85	1.65%	0.36	1.50	1.62	1.16	0.69%	2.16	1.23%
	Total.....(1)+(2)+(3)	**TPD**	**182.90**	**179.96**	**174.34**	**100%**	**174.37**	**170.59**	**159.95**	**179.40**	**160.18**	**192.67**	**173.21**	**172.91**	**100%**	**174.29**	**168.40**	**161.01**	**167.90**	**100%**	**176.34**	**100%**

2	RECYCLABLES:																			
Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average	29-Jan	30-Jan	31-Jan	Weekly Average	Monthly Average
1	Glass	Kg	180	269	212	221	234	216	249	158	230	206	216	261	250	207	239	215
2	Aluminum	Kg	90	90	120	119	117	108	89	142	134	120	118	87	83	128	99	126
3	Metal	Kg	361	358	338	323	284	247	284	284	306	326	293	313	284	287	295	316
4	Tetra Pack	Kg	126	90	123	153	84	155	107	111	134	154	128	174	167	80	140	132
5	Hard Plastic	Kg	306	233	246	272	284	232	338	158	211	172	238	313	334	239	295	260
6	PET	Kg	270	340	262	204	301	232	355	158	192	206	235	330	167	255	251	261
7	Mixed Plastic	Kg	11,141	11,189	11,015	11,477	11,107	10,036	12,275	10,616	12,030	10,484	11,146	11,949	11,132	9,930	11,004	11,372
8	Thermocol + Styrofoam	Kg	180	143	155	136	84	93	160	142	153	120	127	139	167	128	145	141
9	Cloth + Rags + Textiles	Kg	1,749	1,754	1,465	1,207	1,269	1,546	1,119	900	1,188	1,081	1,187	1,565	1,285	877	1,242	1,323
10	Leather + Rexine + Rubber	Kg	1,082	1,325	1,206	1,683	1,186	974	1,581	806	1,782	927	1,277	974	1,185	877	1,012	1,245
11	Paper + Cardboard	Kg	1,190	1,146	1,117	1,173	1,169	1,082	1,084	948	1,283	1,132	1,124	1,183	1,102	1,100	1,128	1,147
12	Coconut	Kg	1,100	1,056	1,160	1,513	1,186	1,175	1,492	1,106	1,283	1,047	1,257	1,218	1,335	1,355	1,303	1,281

**Note:**

1 Item No. 9 (Cloth + Rags + Textiles) and 10 (Leather + Rexine + Rubber) are sent to Cement Plants as RDF.

2 Item No. 11 (Paper + Cardboard) and 12 (Coconut) are used as Bulking Material in Composting.

3	DISPOSAL OF INERT:																	
Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average	29-Jan	30-Jan	31-Jan	Weekly Average	Monthly Average
1	**As per Tender:** Maximum 10% of Inerts of the Total Input Waste (excluding Mulched Tree Waste) as received in the Facility.																	
2	Input Waste	TPD	182.90	179.96	174.34	174.37	170.59	159.95	179.40	160.18	192.67	173.21	172.91	174.29	168.40	161.01	167.90	176.34
3	Inert Fraction	TPD	2.59	0.00	1.19	1.59	0.00	9.90	0.00	2.12	0.00	2.11	2.25	0.00	0.00	0.00	0.00	1.27
4	% of Total Input Waste.....(3) ÷ (2)	%	1.42%	0.00%	0.65%	0.91%	0.00%	6.19%	0.00%	1.32%	0.00%	1.22%	1.38%	0.00%	0.00%	0.00%	0.00%	0.72%

4	ELECTRICITY GENERATION:																	
Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average	29-Jan	30-Jan	31-Jan	Weekly Average	Monthly Average
3.1	**Biogas Gensets:**																	
1	Biogas Genset-I: Running Time	hr/day	23.95	23.65	23.90	23.90	23.90	23.95	23.45	23.50	23.55	23.40	23.66	23.80	23.80	23.85	23.82	23.70
2	Biogas Genset-I: Biogas Consumption	Nm^3/day	2,299	2,264	2,285	2,264	2,297	2,298	2,246	2,249	2,260	2,210	2,260	2,278	2,238	2,275	2,264	2,269
3	Biogas Genset-I: Energy Generation	kW.hr/day	3,990	3,870	3,969	4,040	3,820	3,940	3,890	3,820	3,890	3,760	3,880.00	3,920	3,840	3,970	3,910	3,847
4	Biogas Genset-II: Running Time	hr/day	24.00	23.50	23.86	23.90	23.95	24.00	23.50	23.40	23.55	23.20	23.64	23.80	23.85	23.85	23.83	23.62
5	Biogas Genset-II: Biogas Consumption	Nm^3/day	2,129	2,081	2,102	2,101	2,123	2,116	2,080	2,069	2,094	2,038	2,089	2,107	2,089	2,093	2,096	2,088
6	Biogas Genset-II: Energy Generation	kW.hr/day	3,990	3,840	3,959	4,030	3,830	3,940	3,880	3,810	3,890	3,780	3,880	3,920	3,920	3,970	3,937	3,839
7	**Total Biogas Consumption = (2)+(5)**	**Nm^3/day**	**4,428**	**4,346**	**4,387**	**4,365**	**4,420**	**4,414**	**4,326**	**4,318**	**4,354**	**4,248**	**4,349**	**4,385**	**4,327**	**4,368**	**4,360**	**4,357**
8	**Total Energy Generation = (3)+(6)**	**kW.hr/day**	**7,980**	**7,710**	**7,927**	**8,070**	**7,650**	**7,880**	**7,770**	**7,630**	**7,780**	**7,540**	**7,760**	**7,840**	**7,760**	**7,940**	**7,847**	**7,685**

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average 15-21	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average 22-28	29-Jan	30-Jan	31-Jan	Weekly Average 29-31	Monthly Average 1-31
3.2	**Electricty Generation:**																	
1	**As per Tender:** Minimum electricity to be generated in the plant shall be 0.4 MW per 100 tons of Input Biodegradable Waste as received in the Facility.	MW/100 MT	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
2	Biodegradable Waste = 1.2.2	TPD	91.56	93.29	88.38	88.17	86.08	80.47	97.65	83.86	95.86	88.75	88.69	90.79	80.44	87.91	86.38	88.87
3	Guranteed Electricity Generation = (3.2.2 x 3.2.1)) ÷ 100	kW	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
4	Guaranteed Electricity Generation = 3.2.3 x 24 x 1000	kW.hr/day	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760	5,760
5	Available Electricity Generation = (A2 ÷ 24) + (A4 ÷ 24)	kW	333	321	330	336	319	328	324	318	324	314	323	327	323	331	327	320
6	Available Electricity Generation = 3.2.5 ÷ 100	MW/100 MT	0.55	0.54	0.55	0.56	0.53	0.55	0.54	0.53	0.54	0.52	0.54	0.54	0.54	0.55	0.54	0.53

5	**BIOGAS FLARE:**																	
Sr. No.	**Description**	**Unit**	**20-Jan**	**21-Jan**	**Weekly Average**	**22-Jan**	**23-Jan**	**24-Jan**	**25-Jan**	**26-Jan**	**27-Jan**	**28-Jan**	**Weekly Average**	**29-Jan**	**30-Jan**	**31-Jan**	**Weekly Average**	**Monthly Average**
1	Operation Time	hr/day	4.25	2.47	2.84	1.20	2.33	2.62	2.05	1.00	1.07	0.22	1.50	0.00	0.12	0.12	0.08	2.29
2	Biogas Flared	Nm^3/day	956	555	640	270	525	589	461	225	240	49	337	0	26	26	17.55	515.82

6	**DIGESTERS:**																	
Sr. No.	**Description**	**Unit**	**20-Jan**	**21-Jan**	**Weekly Average 15-21**	**22-Jan**	**23-Jan**	**24-Jan**	**25-Jan**	**26-Jan**	**27-Jan**	**28-Jan**	**Weekly Average 22-28**	**29-Jan**	**30-Jan**	**31-Jan**	**Weekly Average 29-31**	**Monthly Average**
5.1	**Digester-I: Front End**																	
1	pH	---	7.63	7.62	7.66	7.60	7.66	7.68	7.67		7.65	7.64	7.65	7.68	7.70	7.61	7.66	7.60
2	TSS	ppm	37,599	39,280	40,209	37,066	36,314	40,015	37,482		45,262	39,138	39,213	36,881	34,919	34,880	38,382	38,739
3	VSS	ppm	26,330	25,508	27,484	23,831	23,561	29,451	18,386		31,899	25,334	25,410	25,785	23,611	23,561	25,933	26,457
4	Total Alkalinity	ppm as CaCO3	7,225	7,950	7,454	8,200	7,850	7,825	7,650		7,500	7,175	7,700	7,475	7,325	7,825	7,500	7,051
5	VFA	ppm as HAc	2,664	2,581	2,711	2,498	2,664	2,664	2,747		2,830	2,996	2,733	2,913	2,913	2,747	2,855	2,965
5.2	**Digester-I: Back End**																	
1	pH	---	7.66	7.66	7.69	7.65	7.68	7.71	7.74		7.69	7.70	7.70	7.74	7.74	7.66	7.70	7.64
2	TSS	ppm	37,712	35,767	37,117	34,276	34,885	43,087	42,566		35,975	38,508	38,216	36,505	36,154	37,498	37,143	37,498
3	VSS	ppm	26,292	25,230	24,627	20,331	25,082	29,670	30,621		24,345	24,510	25,760	24,811	25,145	25,382	24,992	25,632
4	Total Alkalinity	ppm as CaCO3	7,400	8,125	7,646	8,275	7,975	7,925	7,750		7,675	7,425	7,838	7,675	7,425	7,900	7,656	7,215
5	VFA	ppm as HAc	2,581	2,498	2,264	2,415	2,664	2,581	2,664		2,581	2,747	2,609	2,747	2,664	2,581	2,655	2,732
5.3	**Buffer Tank: Front End**																	
1	pH	---	7.61	7.70	7.69	7.71	7.70	7.71	7.69		7.72	7.73	7.71	7.72	7.72	7.64	7.71	7.70
2	TSS	ppm	32,502	26,802	32,143	30,612	29,672	30,061	33,615		31,305	30,348	30,936	30,599	29,818	29,672	30,446	25,085
3	VSS	ppm	21,714	17,632	21,672	17,337	19,822	26,296	23,218		19,798	20,232	21,117	21,061	19,206	19,098	20,085	21,432
4	Total Alkalinity	ppm as CaCO3	7,900	8,525	8,011	8,525	8,100	8,100	7,875		7,975	7,650	8,038	8,100	7,850	8,100	7,952	7,861
5	VFA	ppm as HAc	2,000	1,917	2,047	1,917	2,000	1,834	1,917		2,166	2,083	1,986	2,000	1,917	1,917	2,012	2,154
5.4	**Buffer Tank: Back End**																	
1	pH	---	7.64	7.73	7.72	7.72	7.73	7.73	7.72		7.76	7.74	7.73	7.78	7.76	7.68	7.74	7.74
2	TSS	ppm	33,609	27,250	31,578	27,128	30,878	30,956	30,878		29,904	32,733	30,413	30,931	30,229	33,615	31,304	31,098
3	VSS	ppm	22,852	18,997	21,387	17,879	19,822	24,143	19,098		20,329	22,188	20,577	21,331	20,192	22,218	21,139	21,224
4	Total Alkalinity	ppm as CaCO3	8,175	8,600	8,046	8,575	8,250	8,175	8,025		8,100	7,850	8,163	7,975	7,725	8,350	8,027	7,971
5	VFA	ppm as HAc	1,751	1,751	2,000	1,834	1,751	1,668	1,917		2,000	2,000	1,862	2,000	1,917	1,751	1,922	2,018
5.5	**Digester-II: Front End**																	
1	pH	---	7.57	7.57	7.61	7.57	7.61	7.63	7.63		7.70	7.63	7.63	7.61	7.64	7.60	7.63	7.55
2	TSS	ppm	37,281	35,011	39,116	36,219	37,747	37,076	37,847		40,039	41,937	38,478	36,151	37,588	40,688	39,147	38,717
3	VSS	ppm	26,019	13,980	25,998	23,725	26,100	26,137	26,123		29,144	25,322	26,092	24,858	19,527	29,864	25,801	26,417
4	Total Alkalinity	ppm as CaCO3	7,400	7,825	7,414	8,050	7,925	7,675	7,725		7,600	7,125	7,683	7,325	7,175	7,750	7,443	6,972
5	VFA	ppm as HAc	2,913	2,664	2,794	2,581	2,830	2,747	2,830		2,996	2,996	2,830	2,830	2,913	2,747	2,885	3,064
5.6	**Digester-II: Back End**																	
1	pH	---	7.60	7.62	7.67	7.63	7.65	7.70	7.71		7.73	7.69	7.69	7.65	7.68	7.61	7.67	7.61
2	TSS	ppm	37,895	31,784	37,909	35,139	37,352	38,225	38,498		40,773	38,151	38,023	36,790	36,514	37,328	37,930	38,400
3	VSS	ppm	26,539	21,711	26,473	23,914	25,509	27,438	36,540		27,191	26,399	27,832	25,280	19,734	26,100	25,423	26,932
4	Total Alkalinity	ppm as CaCO3	7,500	8,025	7,568	8,175	8,050	7,850	7,925		7,725	7,375	7,850	7,500	7,375	7,850	7,613	7,151
5	VFA	ppm as HAc	2,747	2,498	2,628	2,415	2,581	2,747	2,581		2,664	2,664	2,609	2,664	2,747	2,664	2,669	2,872

7	**EFFLUENT TREATMENT PLANT:**																	
Sr. No.	**Description**	**Unit**	**20-Jan**	**21-Jan**	**Weekly Average**	**22-Jan**	**23-Jan**	**24-Jan**	**25-Jan**	**26-Jan**	**27-Jan**	**28-Jan**	**Weekly Average**	**29-Jan**	**30-Jan**	**31-Jan**	**Weekly Average**	**Monthly Average**
6.1	**Raw Effluent Quality:**																	
1	Flow	m^3/day	65.57	70.68	70.85	67.26	68.88	66.74	71.14	68.53	62.40	68.97	67.70	67.80	72.07	70.78	70.22	68.46
2	pH	---	6.53	7.82	7.01	7.44	7.29	6.95	7.42	6.88	6.01	6.83	6.97	7.27	6.08	7.48	6.94	6.95
3	Biochemical Oxygen Demand (BOD5)	mg/l	2,436	2,366	2,032	2,105	2,097	1,700	2,362	2,311	2,145	2,311	2,147	2,290	2,267	1,865	2,141	2,022
4	Chemical Oxygen Demand (COD)	mg/l	5,603	7,595	5,822	4,484	7,004	4,250	4,748	5,200	4,440	7,811	5,420	5,679	4,942	6,453	5,691	5,369
5	Total Suspended Solids (TSS)	mg/l	5,213	4,046	4,137	3,894	4,383	3,723	5,692	4,137	5,148	5,338	4,616	5,061	3,650	4,513	4,408	4,065
6	Total Dissolve Solids (TDS)	mg/l	1,406	1,621	1,440	1,778	1,427	1,487	1,655	1,369	1,341	1,776	1,548	1,682	1,393	1,753	1,609	1,556

100 TPD Municipal Solid Waste (MSW) Facility at Calangute, North Goa

Sr. No.	Description	Unit	20-Jan	21-Jan	Weekly Average 15-21	22-Jan	23-Jan	24-Jan	25-Jan	26-Jan	27-Jan	28-Jan	Weekly Average 22-28	29-Jan	30-Jan	31-Jan	Weekly Average 29-31	Monthly Average 1-31
6.2	**Treated Effluent Quality:**																	
1	pH	---	6.81	6.90	6.95	6.65	7.31	6.51	6.91	6.90	6.50	7.45	6.89	7.37	7.45	7.39	7.40	6.97
2	Biochemical Oxygen Demand (BOD5)	mg/l	5	6	7	9	8	8	8	7	8	8	8	7	6	6	6	7
3	Chemical Oxygen Demand (COD)	mg/l	53	55	59	58	71	69	52	64	58	51	60	69	87	86	81	66
4	Total Suspended Solids (TSS)	mg/l	6	7	8	10	9	9	9	8	9	9	9	8	7	7	7	8
5	Total Dissolve Solids (TDS)	mg/l	1,518	1,783	1,519	1,956	1,570	1,576	1,721	1,410	1,354	1,829	1,631	1,682	1,518	1,876	1,692	1,636

8	HOUSEKEEPING:																	
Sr. No.	**Description**	**Unit**	**20-Jan**	**21-Jan**	**Weekly Average**	**22-Jan**	**23-Jan**	**24-Jan**	**25-Jan**	**26-Jan**	**27-Jan**	**28-Jan**	**Weekly Average**	**29-Jan**	**30-Jan**	**31-Jan**	**Weekly Average**	**Monthly Average**
1	Hygenic Conditions	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
2	Cleanliness	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
3	Manpower Deployed	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
4	Safety Norms	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
5	Treatment Methodology	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted
6	Storage Conditions	---	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted	Accepted