

**Monthly Performance Report
(HWT-NG100-MPR-30-R0)**

**January 2019
(From 01/01/2019 to 31/01/2019)**

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

Prepared By
**Hindustan Waste Treatment Pvt. Ltd.
(HWT)**

Submitted To
**Department of Science & Technology (DS&T)
Goa State Infrastructural Development
Corporation Limited (GSIDC)
Goa Waste Management Corporation (GWMC)**

Table – 1
Summary of Overall Average Results for January 2019
(As compared to Schedule – 7: Performance Standards, Volume – I of RFP)

Sr. No.	Parameter	Performance Standard As per Schedule – 7	Actual Performance 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 172.73 TPD . Quantum of Inert is 0.47 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

Sr. No.	Parameter	Performance Standard As per Schedule – 7	Actual Performance at Plant (Monthly Average)										
		emergency and not as a routine practice.	routine practice. The average running time of Biogas Flaring System is 1.99 hours/day .										
5.	Discharge of treated effluent conforming to regulatory norms	Effluent Treatment Plant shall be operated under all conditions.	Effluent Treatment Plant is being operated continuously and is meeting all statutory conditions. The Treated Effluent Characteristics are as follows: <table border="1" data-bbox="1032 646 1403 856"> <tbody> <tr> <td>pH</td> <td>6.96</td> </tr> <tr> <td>BOD</td> <td>7 mg/l</td> </tr> <tr> <td>COD</td> <td>71 mg/l</td> </tr> <tr> <td>TSS</td> <td>8 mg/l</td> </tr> <tr> <td>TDS</td> <td>1,664 mg/l</td> </tr> </tbody> </table>	pH	6.96	BOD	7 mg/l	COD	71 mg/l	TSS	8 mg/l	TDS	1,664 mg/l
pH	6.96												
BOD	7 mg/l												
COD	71 mg/l												
TSS	8 mg/l												
TDS	1,664 mg/l												
6.	General Housekeeping, hygienic conditions, cleanliness, safety norms, adequate manpower, treatment methodology for plant operation & maintenance and storage conditions in the plant.	Minimum housekeeping, safety norms and cleanliness conditions shall be maintained at all times as per the Bid Document requirement.	<ul style="list-style-type: none"> • 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. 										

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

#	Plant Performance Data: January 2019		
Sr. No.	Content	Month	Signature
1	Input Waste Composition	From 01.01.2019 To 31.01.2019	
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	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		
1A Input Waste:																									
1	Type I: Dry Waste	TPD	69.780	88.310	72.470	73.640	61.060	71.530	70.320	72.44	38.88%	75.640	58.860	65.380	67.500	86.760	64.770	76.560	70.78	40.42%	75.080	71.340	67.690	57.880	68.390
2	Type 2: Wet Waste	TPD	114.800	121.280	112.390	112.190	110.560	110.620	104.490	112.33	60.29%	101.500	94.850	106.970	96.400	108.020	102.980	108.180	102.70	58.65%	111.010	109.440	96.320	110.910	96.620
3	Type 3: Mixed Waste	TPD	0.000	0.000	0.000	3.090	0.000	0.000	0.000	0.44	0.24%	0.000	1.950	0.000	0.000	0.000	0.000	0.000	0.28	0.16%	0.000	0.000	0.000	0.000	0.000
4	Type 4: Tree Waste	TPD	0.260	1.220	0.370	0.000	2.160	1.560	2.180	1.11	0.59%	1.070	0.950	0.700	2.440	1.510	1.000	1.760	1.35	0.77%	0.950	0.760	3.150	4.640	2.040
5	Total.....(1)+(2)+(3)+(4)	TPD	184.84	210.81	185.23	188.92	173.78	183.71	176.99	186.33	100.00%	178.21	156.61	173.05	166.34	196.29	168.75	186.50	175.11	100.00%	187.04	181.54	167.16	173.43	167.05

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% Inorganic.
 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		
1B Output Products:																									
1	Organic Fraction	TPD	97.74	107.65	95.18	101.42	91.18	94.37	87.43	96.42	51.75%	90.46	78.40	89.38	83.27	94.27	90.07	94.10	88.56	50.58%	97.39	90.62	82.80	89.20	84.85
Inorganic Fraction:																									
2	Recyclables	TPD	14.36	16.18	14.33	13.11	13.15	13.22	12.11	13.78	7.40%	12.63	11.49	11.77	12.05	15.08	11.73	13.06	12.54	7.16%	13.51	12.78	12.42	12.24	11.80
	RDF	TPD	68.09	82.91	73.25	71.90	65.03	71.64	72.68	72.21	38.76%	69.30	63.62	68.92	66.21	82.63	61.90	75.31	69.70	39.80%	72.88	75.34	66.43	64.80	66.28
	Bulking Material	TPD	2.49	2.85	2.11	2.49	2.27	2.91	2.59	2.53	1.36%	2.62	2.15	2.28	2.38	2.80	2.38	2.27	2.41	1.38%	2.31	2.04	2.36	2.55	2.08
	Inert	TPD	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.15%	2.13	0.00	0.00	0.00	0.00	1.67	0.00	0.54	0.31%	0.00	0.00	0.00	0.00	
3	Tree Waste	TPD	0.26	1.22	0.37	0.00	2.16	1.56	2.18	1.11	0.59%	1.07	0.95	0.70	2.44	1.51	1.00	1.76	1.35	0.77%	0.95	0.76	3.15	4.64	2.04
5	Total.....(1)+(2)+(3)	TPD	184.84	210.81	185.23	188.92	173.78	183.71	176.99	186.33	100.00%	178.21	156.61	173.05	166.34	196.29	168.75	186.50	175.11	100.00%	187.04	181.54	167.16	173.43	167.05

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	240	272	222	189	257	182	210	225	213	156	224	213	253	185	203	207	242	235	197	203	248
2	Aluminum	Kg	111	189	166	132	86	109	157	136	124	78	103	82	195	151	166	128	186	127	82	169	83
3	Metal	Kg	295	377	351	321	343	328	350	338	337	233	293	262	390	319	277	302	335	362	328	270	314
4	Tetra Pack	Kg	166	189	166	170	137	146	175	164	89	93	121	164	117	168	129	126	112	181	82	118	99
5	Hard Plastic	Kg	295	272	296	321	309	182	227	272	230	249	207	229	331	201	222	238	261	343	279	338	198
6	PET	Kg	295	356	370	283	223	200	227	279	283	265	207	246	312	302	333	278	354	289	295	304	314
7	Mixed Plastic	Kg	12,810	14,420	12,607	11,562	11,687	11,894	10,628	12,230	11,231	10,274	10,444	10,686	13,362	10,300	11,565	11,123	11,835	11,136	11,005	10,684	10,429
8	Thermocol + Styrofoam	Kg	148	105	148	132	103	182	140	137	124	140	172	164	117	101	166	141	186	108	148	152	116
9	Cloth + Rags + Textiles	Kg	1,680	1,195	1,183	1,530	1,167	1,803	1,241	1,400	886	965	1,275	1,147	1,344	1,292	979	1,127	1,265	1,103	1,607	1,654	842
10	Leather + Rexine + Rubber	Kg	1,421	1,970	998	1,398	1,047	1,694	1,346	1,411	1,169	1,012	1,655	1,115	1,519	1,376	1,145	1,284	1,396	1,320	1,558	1,097	1,040
11	Paper + Cardboard	Kg	1,200	1,362	1,165	1,171	1,098	1,129	1,049	1,168	1,240	996	1,138	1,098	1,169	1,157	1,293	1,156	1,117	1,121	984	1,080	1,040
12	Coconut	Kg	1,292	1,488	943	1,322	1,167	1,785	1,538	1,362	1,382	1,152	1,138	1,278	1,636	1,225	979	1,256	1,191	922	1,378	1,468	1,040

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 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	17.18	21.76	17.76	22.43	22.73	16.96	23.64	20.35	22.86	21.06	21.02	17.43	19.80	17.87	17.90	19.71	22.54	20.17	23.44	19.53	19.56
2	Biogas Genset-I: Energy Generation	kW.hr	3,062	3,855	3,152	3,761	4,082	3,040	3,964	3,559.43	4,057	3,623	3,525	3,105	3,460	3,123	3,164	3,436.71	3,962	3,477	4,023	3,334	3,344
3	Biogas Genset-II: Running Time	hr	19.31	18.67	21.70	21.50	23.42	19.27	18.73	20.37	20.81	22.53	22.58	17.95	19.20	22.02	23.13	21.17	18.52	21.70	17.76	19.37	17.75
4	Biogas Genset-II: Energy Generation	kW.hr	3,421	3,235	3,696	3,860	3,974	3,306	3,172	3,523.43	3,736	3,869	3,893	3,117	3,290	3,930	3,969	3,686.29	3,287	3,859	3,139	3,437	3,199
5	Total.....(1)+(2)+(3)+(4)	kW.hr	6,483	7,090	6,848	7,621	8,056	6,346	7,136	7,083	7,793	7,492	7,418	6,222	6,750	7,053	7,133	7,123	7,249	7,336	7,162	6,771	6,543
3.2 Electricity 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	TPD	97.74	107.65	95.18	101.42	91.18	94.37	87.43	96.42	90.46	78.40	89.38	83.27	94.27	90.07	94.10	88.56	97.39	90.62	82.80	89.20	84.85
3	Electricity Generation = 100 * ((A2 + A1) + (A4 + A3)) ÷ 1000 ÷ 18.1	kW	355	350	348	347	349	351	337	348	357	344	340	352	346	353	348	349	353	350	348	348	351
4	Electricity Generation	MW/100 MT	0.59	0.58	0.58	0.58	0.58	0.58	0.56	0.58	0.60	0.57	0.57	0.59	0.58	0.59	0.58	0.58	0.59	0.58	0.58	0.58	0.59

4 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	6.97	7.38	3.00	3.40	6.67	0.92	0.83	4.17	0.50	6.20	0.00	0.00	0.10	0.00	0.18	1.00	0.00	3.28	4.75	4.18	0.08

5 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
5.1 Raw Effluent Quality:																							
1	Flow	m ³ /day	93.10	93.10	90.98	80.49	91.75	77.43	78.33	86.45	60.58	69.63	39.29	40.78	73.76	74.23	55.20	59.07	59.75	94.25	73.75	93.64	94.24
2	pH	---	7.51	7.67	7.11	6.71	7.55	7.55	6.07	7.17	7.07	7.20	6.67	6.34	7.69	6.45	6.06	6.78	6.85	7.28	6.03	6.86	7.77
3	Biochemical Oxygen Demand (BOD5)	mg/l	1,953	1,951	1,703	1,637	1,910	1,615	1,846	1,802	1,633	2,009	1,567	2,261	1,999	1,950	2,285	1,958	2,439	2,170	1,922	1,761	2,473
4	Chemical Oxygen Demand (COD)	mg/l	4,199	6,789	5,943	4,223	5,845	3,311	5,796	5,158	5,389	6,429	5,359	7,371	4,438	6,104	7,42						

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

6 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	184.58	209.59	184.86	188.92	171.62	182.15	174.81	185.22	177.14	155.66	172.35	163.90	194.78	167.75	184.74	173.76	186.09	180.78	164.01	168.79	165.01
3	Inert Fraction	TPD	1.90	0.00	0.00	0.00	0.00	0.00	0.00	0.27	2.13	0.00	0.00	0.00	0.00	1.67	0.00	0.54	0.00	0.00	0.00	0.00	0.00
4	% of Total Input Waste.....(3) ÷ (2)	%	1.03%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.15%	1.20%	0.00%	0.00%	0.00%	0.00%	1.00%	0.00%	0.31%	0.00%	0.00%	0.00%	0.00%	0.00%

7 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	Hygienic 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		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	
1A Input Waste:																						
1	Type I: Dry Waste	TPD	58.210	70.320	66.99	38.61%	67.900	63.890	64.820	66.500	56.810	56.720	76.020	64.67	39.10%	69.830	64.780	65.430	66.68	40.82%	68.31	39.57%
2	Type 2: Wet Waste	TPD	103.560	100.990	104.12	60.01%	100.670	98.730	96.790	95.490	79.130	111.260	105.520	98.23	59.40%	97.430	92.470	92.980	94.29	57.73%	102.33	59.22%
3	Type 3: Mixed Waste	TPD	0.000	0.000	0.00	0.00%	0.000	0.000	0.000	0.000	0.000	2.080	0.000	0.30	0.18%	0.000	0.000	0.000	0.00	0.00%	0.20	0.12%
4	Type 4: Tree Waste	TPD	2.670	2.560	2.40	1.38%	1.280	5.670	3.330	1.790	0.430	0.630	2.130	2.18	1.32%	3.230	0.580	3.280	2.36	1.45%	1.88	1.10%
5	Total.....(1)+(2)+(3)+(4)	TPD	164.44	173.87	173.50	100.00%	169.85	168.29	164.94	163.78	136.37	170.69	183.67	165.37	100.00%	170.49	157.83	161.69	163.34	100.00%	172.73	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% Inorganic.
 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	
1B Output Products:																						
1	Organic Fraction	TPD	85.52	89.38	88.54	51.03%	87.19	83.53	80.99	81.94	69.23	91.40	92.91	83.88	50.73%	82.93	80.25	81.84	81.67	50.00%	87.82	50.82%
Inorganic Fraction:																						
Recyclables																						
2	TPD	11.31	13.17	12.46	7.18%	11.97	12.02	12.22	12.23	9.81	12.72	12.76	11.96	7.23%	11.39	11.40	12.45	11.75	7.19%	12.50	7.23%	
	RDF	TPD	60.61	65.33	67.38	38.84%	66.61	63.33	65.99	65.62	55.20	63.44	71.36	64.51	39.01%	70.30	61.42	61.58	64.44	39.45%	67.65	39.17%
	Bulking Material	TPD	2.04	2.14	2.22	1.28%	2.80	2.24	2.41	2.20	1.70	2.50	2.60	2.35	1.42%	2.64	2.48	2.53	2.55	1.56%	2.41	1.40%
	Inert	TPD	2.29	1.28	0.51	0.29%	0.00	1.50	0.00	0.00	0.00	0.00	1.91	0.49	0.29%	0.00	1.69	0.00	0.56	0.34%	0.47	0.28%
3	Tree Waste	TPD	2.67	2.56	2.40	1.38%	1.28	5.67	3.33	1.79	0.43	0.63	2.13	2.18	1.32%	3.23	0.58	3.28	2.36	1.45%	1.88	1.10%
	Total.....(1)+(2)+(3)	TPD	164.44	173.87	173.50	100.00%	169.85	168.29	164.94	163.78	136.37	170.69	183.67	165.37	100.00%	170.49	157.83	161.69	163.34	100.00%	172.73	100.00%

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	178	206	216		219	163	194	178	150	255	200	194		234	236	222	231		214	
2	Aluminum	Kg	129	154	133		152	114	113	130	109	119	182	131		100	126	79	102		126	
3	Metal	Kg	291	291	313		303	325	242	243	204	289	272	268		268	283	301	284		301	
4	Tetra Pack	Kg	81	120	113		84	146	97	130	136	170	109	125		117	142	95	118		129	
5	Hard Plastic	Kg	307	171	271		185	195	226	275	136	204	200	203		217	252	253	241		245	
6	PET	Kg	194	291	292		320	195	307	162	177	238	327	247		284	252	285	274		274	
7	Mixed Plastic	Kg	10,030	11,769	10,984		10,569	10,733	10,893	11,032	8,795	11,309	11,328	10,666		10,036	10,001	11,089	10,375		11,076	
8	Thermocol + Styrofoam	Kg	97	171	140		135	146	145	81	109	136	145	128		134	110	127	124		134	
9	Cloth + Rags + Textiles	Kg	1,602	1,388	1,352		1,163	1,220	1,261	1,474	1,020	1,463	1,216	1,260		1,622	896	855	1,124		1,252	
10	Leather + Rexine + Rubber	Kg	1,278	1,388	1,297		1,214	813	1,147	1,296	775	1,071	1,271	1,084		1,305	912	1,489	1,235		1,262	
11	Paper + Cardboard	Kg	1,019	1,165	1,075		1,163	1,057	986	1,134	884	1,054	1,089	1,052		1,121	1,101	1,046	1,089		1,108	
12	Coconut	Kg	1,019	976	1,142		1,635	1,187	1,422	1,069	816	1,446	1,507	1,297		1,522	1,384	1,489	1,465		1,304	

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 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	23.23	17.44	20.84		22.01	19.10	19.33	17.64	18.54	23.22	22.11	20.28		20.86	19.05	21.68	20.53		20.34	
2	Biogas Genset-I: Energy Generation	kW.hr	3,995	3,083	3,602.57		3,891	3,390	3,384	3,064	3,202	3,955	3,894	3,540.00		3,610	3,360	3,789	3,586.33		3,545.01	
3	Biogas Genset-II: Running Time	hr	21.29	22.91	19.90		19.86	22.03	18.86	21.00	17.33	18.16	19.88	19.59		21.12	20.25	18.42	19.93		20.19	
4	Biogas Genset-II: Energy Generation	kW.hr	3,605	3,950	3,496.57		3,512	3,909	3,361	3,633	3,039	3,154	3,493	3,443.00		3,682	3,602	3,218	3,500.67		3,529.99	
5	Total.....(1)+(2)+(3)+(4)	kW.hr	7,600	7,033	7,099		7,403	7,299	6,745	6,697	6,241	7,109	7,387	6,983		7,292	6,962	7,007	7,087		7,075	
3.2 Electricity 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	TPD	85.52	89.38	88.54		87.19	83.53	80.99	81.94	69.23	91.40	92.91	83.88		82.93	80.25	81.84	81.67		87.82	
3	Electricity Generation = 100 * [(A2 + A1) + (A4 + A3)] ÷ 1000 ÷ 1B.1	kW	341	349	349		354	355	353	347	348	344	352	350		347	354	349	350		349	
4	Electricity Generation	MW/100 MT	0.57	0.58	0.58		0.59	0.59	0.59	0.58	0.58	0.57	0.59	0.58		0.58	0.59	0.58	0.58		0.58	

4 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	2.25	1.68	2.32		0.00	1.42	0.63	1.32	0.97	1.93	1.02	1.04		1.62	2.35	0.25	1.41		1.99	

5 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	
5.1 Raw Effluent Quality:																						
1	Flow	m ³ /day	84.95	61.75	80.33		74.61	91.90	92.70	84.07	74.25	53.89	89.62	80.15		72.14	89.00	78.57	79.90		77.18	
2	pH	---	6.85	7.31	6.99		7.76	7.45	6.01	7.61	6.31	6.46	6.05	6.81		6.75	6.93	7.36	7.01		6.95	
3	Biochemical Oxygen Demand (BOD5)	mg/l	1,553	2,385	2,100		1,793	1,975	1,662	1,894	1,689	2,192	2,464	1,953		1,985	2,074	1,887	1,982		1,959	
4	Chemical Oxygen Demand (COD)	mg/l	3,339	7,179	5,851		5,343	4,029	5,003	5,265	5,895	6,773	6,357	5,524		6,273	5,455	5,661	5,796		5,680	
5	Total Suspended Solids (TSS)	mg/l	3,618	4,484	4,427		2,887	4,325	3,058	3,030	3,716	5,436	3,893	3,764		4,645	5,081	3,680	4,469		4,024	
6	Total Dissolve Solids (TDS)	mg/l	1,687	1,462	1,562		1,508	1,487	1,578	1,599	1,755	1,707	1,648	1,612		1,540	1,421	1,724	1,562		1,561	
5.2 Treated Effluent Quality:																						
1	pH	---	6.91	6.97	6.88		6.97	7.23	6.72	6.99	7.11	6.81	7.11	6.99		6.67	6.87	7.25	6.93		6.96	
2	Biochemical Oxygen Demand (BOD5)	mg/l	7	5	7		6	5	5	7	5	5	7	6		8	9	5	7		7	
3	Chemical Oxygen Demand (COD)	mg/l	80	60	72		91	59	79	55	86	81	63	73		80	65	84	76		71	
4	Total Suspended Solids (TSS)	mg/l	8	6	8		7	6	6	8	6	6	8	7		9	10	6	8		8	
5	Total Dissolve Solids (TDS)	mg/l	1,771	1,564	1,663		1,583	1,561	1,688	1,663	1,825	1,724	1,780	1,689		1,709	1,464	1,845	1,673		1,664	

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

6 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	161.77	171.31	171.11	168.57	162.62	161.61	161.99	135.94	170.06	181.54	163.19	167.26	157.25	158.41	160.97	170.85
3	Inert Fraction	TPD	2.29	1.28	0.51	0.00	1.50	0.00	0.00	0.00	0.00	1.91	0.49	0.00	1.69	0.00	0.56	0.47
4	% of Total Input Waste.....(3) ÷ (2)	%	1.42%	0.75%	0.31%	0.00%	0.92%	0.00%	0.00%	0.00%	0.00%	1.05%	0.28%	0.00%	1.07%	0.00%	0.36%	0.28%

7 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	Hygienic 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