

Form – IV A
(See rule 13)
ANNUAL REPORT

Format for submission of the Annual Report Information on Bio- Medical Waste Management)
(to be submitted by the State Pollution Control Committees and Director General Armed Forces Medical Services to Central Pollution Control Board on or before 31st July of every year for the period from January to December of the year 2021)

1)	Name of the Organization	:	Kerala State Pollution Control Board
2)	Name of the Nodal Officer with contact telephone number and e-mail	:	Er. Premaletha S., Environmental Engineer Head Office, TVM ms.kspcb@gov.in pcbhoawareness2@gmail.com 9447975725 0471-2318151
3)	Total no. of Health Care Facilities/ Occupiers	:	17875
i)	Bedded Hospitals and Nursing Homes (bedded)	:	2095
ii)	Clinics, dispensaries	:	9028
iii)	Veterinary institutions	:	648
iv)	Animal houses	:	31
v)	Pathological laboratories	:	2721
vi)	Blood banks	:	24
vii)	Clinical establishment	:	1598
viii)	Research Institutions	:	8
ix)	AYUSH	:	1722
4)	Total no. of beds	:	124804
5)	Status of authorization	:	
i)	Total number of Occupiers applied for authorization	:	17106
ii)	Total number of Occupiers granted authorization	:	16792
iii)	Total number of application under consideration	:	2
iv)	Total number of applications rejected	:	201
v)	Total number of Occupiers in operation without applying for authorization	:	970
6)	Quantity of Bio-medical Waste Generation	:	
i)	Bio-medical waste generation by bedded hospitals(in kg/day)	:	53340kg/day
ii)	Bio-medical waste generation by non-bedded hospitals (in kg/day)	:	7533kg/day
iii)	Any other	:	263 Kg/day
	Total	:	61136Kg/day
7)	Bio-medical waste treatment and disposal	:	
a)	By Captive bio-medical waste treatment and disposal by Health Care Facilities (please enclose details as per Part-3)	:	
i)	Number of Health Care Facilities having captive treatment and Disposal facilities :	:	44

ii)	Total bio-medical waste treated and disposed by captive treatment facilities in kg/day	:	2438 Kg/day
b)	Bio-medical waste treatment and disposal by Common Bio Medical Waste Treatment Facilities (please enclose details as per Part 4)	:	
i)	Number of Common Bio Medical Waste Treatment Facilities in Operation :	:	2 (1 CBWTF by KEIL started operation in May2021)
ii)	Number of Common Bio Medical Waste Treatment Facilities under construction	:	
iii)	Total bio-medical waste treated in kg/day	:	58698kg/day
iv)	Total treated bio-medical waste disposed through authorized recyclers (in Kg/day)	:	16802.804kg/day
8)	Total no. of violation by	:	1435
i)	Health Care Facilities (bedded and non-bedded)	:	1435
ii)	Common Bio Medical Waste Treatment Facilities	:	1
iii)	Others (please specify)	:	nil
9)	Show cause notices/directions issued to defaulters	:	1497
i)	Health Care Facilities (bedded and non-bedded)	:	1320
ii)	Common Bio Medical Waste Treatment Facilities	:	3
iii)	Others	:	174
10)	Any other relevant information	:	
i)	Number of workshops / trainings conducted during the year	:	10237-IMAGE 18-KEIL 1 by NGO
ii)	Number of occupiers installed liquid waste treatment facility	:	<ul style="list-style-type: none"> Out of 2095 bedded hospitals, 60 have STP/ETP(combined) and 4 STPs under construction, 2 have terminal sewer connection 2029 bedded hcfs have disinfection system for laboratory liquid waste & sullage and septic tank/soak pit for sewage 15780 non bedded have provided disinfection system and soak pit/ sewer connection
iii)	Number of captive incinerators complying to the norms	:	15 (temperature and chimney height norms complied. OCEMS not provided in these incinerators) *out of 15, 4 have now obtained affiliation with CBWTF; 1 has stopped working of incinerator in 2022. Actions already taken for remaining 10 to affiliate with CBWTFs.
iv)	Number of occupiers organized trainings	:	76
v)	Number of occupiers constituted Bio-medical Waste Management Committees	:	109
vi)	Number of occupiers submitted Annual Report for	:	4016

	the previous calendar year		
vii)	Number of occupiers practicing pre-treatment of lab microbiology and Bio-technology waste	:	1954
viii)	Number of Common Bio Medical Waste Treatment Facilities that have installed Continuous Online Emission Monitoring Systems	:	2

Part 2: District-wise Bio- Medical Waste Generation (for the previous calendar year 2021)

Name of District	Name of State	Total No of HCFs	Bio-medical Waste Generation (captive & CBWTF)(in Kg/day)
Thiruvananthapuram	KERALA	1516	7349
Kollam	KERALA	1768	5565
Alappuzha	KERALA	801	2156
Pathanamthitta	KERALA	1019	4184
Kottayam	KERALA	1356	3990
Idukki	KERALA	933	1470
DO1, Ernakulam	KERALA	1258	7490
DO2,Ernakulam	KERALA	775	2334
Thrissur	KERALA	2207	4569
Palakkad	KERALA	1180	4990
Malappuram	KERALA	1818	5609
Kozhikkodu	KERALA	1219	6091
Wayanad	KERALA	357	956
Kannur	KERALA	1012	2676
Kasargodu	KERALA	480	791
ESC,Eloor,EKM	KERALA	176	916
Total		17875	61136

Part 4: Information on Common Bio Medical Waste Treatment and Disposal Facilities (for the previous calendar year 2020)

Sl no	Name and Address of the common Bio Medical Waste Treatment Facilities with contact person name and telephone no.	GPS Coordinates	Coverage Area in KMS	Name of the cities/areas covered by common Biomedical Waste Treatment facilities	Total number of Health Care Facilities being covered	Total number of beds covered	Total Quantity of Bio Medical Waste collected from member Health Care Facilities (kg/day)	Capacity of Treatment equipment installed by Common Bio Medical Waste Treatment Facilities			Total Biomedical Waste treated in Kg/day	Method of Disposal of treated wastes (incineration Ash/sharps/Plastic)
								Equipment	NOS	Total installed capacity		
1	IMAGE,CBUTF, MANTHURUTHI, KANJIKODE WEST, PALAKKAD 678623	Latitude 10° 48' 54" N Longitude - 76° 43' 34" E			14412	110580		Incinerator	5	40T/D	35.5T/D	Self
								Plasma pyrolysis	Nil			
								Autoclave	5	25 T/D	17.8T/D	
								Hydroclave	Nil			
								Shredder	3	15 T/D		
								Sharp encapsulation/concrete pit	1		0.43T/D	
								Deep burial pit	Nil			
								Effluent treatment plant		4.5 lakhs litres per day		
								Chemical disinfection	1 bottle		0.7	
								Total			54.43 Tpd	
2	KEIL,CBUTF, COMMON TSDF, INSIDE FACT CD CAMPUS, AMBALAMEDU, KOCHI-682303	Latitude 9°59'1.16"N Longitude 76°21'46.73"E			524	11239		Incinerator	2	12T/D		
								Plasma pyrolysis				
								Autoclave	2	6 T/D		
								Hydroclave				
								Shredder	1	8.4T/D		
								Sharp encapsulation/concrete pit	1			
								Deep burial pit				
								Effluent treatment plant		100 KLD		
								Chemical disinfection				
								TOTAL			4.268Tpd	

- a. Total No of transportation of Bio-medical Waste on daily basis by the common Bio-Medical Waste Treatment facilities : 78
- b. List of Health Care Facilities not have membership with common biomedical waste treatment facilities and neither having captive treatment facility : 2892 (including AYUSH clinics and remaining small hcfs have already affiliated to CBWTF in the following year and it will be reflected in next year annual report -2022 (AR 2022))
- c. No of training organized by CBWTF operator: 10255
- d. No of accidents reported by CBWTF : 1

ANNEXURE

Part 3: Information on Health Care Facilities having captive treatment facilities (for the previous calendar Year 2021)

S/A4:M101. No.	Name and address of the Health Care Facility	Quantity of Bio-medical Waste Generation (in kg/day)					Total Installed Treatment Capacity in kg/day				Total bio-medical treated and disposed by Health Care Facilities in Kg/day	Remarks
		Red	Yellow	Blue	White	Total Bio- medical waste generated (in Kg/day)	Incinerat or	Autoclav e	Deep burial	Any other		
1	KDHP - Devikulam Hospital, 04868255821	0.1490	0.12300	0.05000	0	0.3220	NIL	2	2		Deep Burial	Direction has been issued to health care facilities to affiliate with CBMWTF and necessary actions are being taken by the units to affiliate with CBMWTF
2	KDHP- CHUNDÄVURR AI HOSPITAL 04868255714	0.027	0.0420	0.04500	0	0.114	NIL	NIL	1		Deep Burial	
3	KDHP- KUNDALY HOSPITAL 04868 255734	0.00800	0.096000	0.00760	0	0.112	NIL	NIL	1		Deep Burial	
4	KDHP- CHITTAVURAI HOSPITAL 04868255724	0.02400	0.04600	0.05700	0	0.127	NIL	NIL	1		Deep Burial	
5	KDHP - YELLAPATTY HOSPITAL 04868255724	0.00600	0.06000	0.053000	0	0.119	NIL		1		Deep Burial	
6	KDHP- THENMALLAY HOSPITAL 04868255584	0.05300	0.04600	0.00438	0.0044	0.108	NIL	0.6	0.6			
7	Gundumallay Hospital ,Gundumallay Estate KDHP Co.Pvt Ltd	0.00444	0.0041	0.00466	0	0.0132	NIL	0.4	0.1			
8	Vaguvurrai Lower Hospital KDHP Co.Pvt Ltd	0.0193	0.0240	0.0210	0	0.0643	NIL	1	1			
9	Vaguvurrai Luckam Hospital KDHP Co.Pvt Ltd	0.0170	0.0410	0.0044	0	0.0624	NIL	1	1		Deep Burial	

10	Vaguvurai Main Hospital ,KDHP Co.Pvt.Ltd	0.00512	0.0124	0.0114	0	0.0290	NIL	0.5	NIL			
11	Nyamakad Hospital,Nyamakad Estate ,KDHP Co.Pvt.Ltd,Idukki	0.02000	0.0170	0.041	NIL	0.1170	NIL	2	2		Deep Burial	
12	Letchmi Hospital ,Letchmi Estate ,KDHP Co.Pvt Ltd ,Idukki	0.0025	0.00120	4.5000E-03	0	0.0082	NIL	2	2		Deep Burial	
13	Sevenmally Hospital ,Letchmi Estate ,KDHP	0.00603	0.00590	0.00008	0	0.0120	NIL	2	2		Deep Burial	
14	Viriparai Dispensary ,Letchmi Estate KDHP Co.Pvt Ltd	0.0019	3.000E-03	0.000054	0	0.0050	NIL	2	2		Deep Burial	
15	Town Dispensary ,Letchmi Estate KDHP Co.Pvt Ltd	0.00013	0.00300	0.000016	0	0.0031	NIL	2	2		Deep Burial	
16	Nullatanni Hospital ,Nullatanni Estate ,KDHP Co.Pvt Ltd ,Idukki	0.0150	0.04000	0.2800	0.07000	0.4050	NIL	2	2		Deep Burial	
17	Periavurrai Hospital,Nullatanni Estate ,KDHP Estate Co.Pvt Ltd Idukki	0.0830	0.02600	0.1160	0.0005	0.2255	NIL	2	2		Deep Burial	
18	Kalaar Hospital,Nullatanni Estate ,KDHP Estate Co.Pvt Ltd Idukki	0.0142	0.00329	0.01315	0.0082	0.0389	NIL	2	2		Deep Burial	
19	Pallivasal Hospital,Munnar		0.04400		0.0800							
20	Madupetty Hospital	0.0120	0.12000	0.00700	0.0300	0.1690	NIL	2	2		Deep Burial	
21	Grahamsland Hospital	0.0400	0.03500	0.00160	0.0280	0.1046	NIL	2	2		Deep Burial	
22	Chokanad Hospital,Munnar	0.0220	0.04400	0.00330	0.0260	0.0950	NIL	2	2		Deep Burial	

23	Gudrale Hospital,KDHP. Munnar	0.0360	0.05030	0.04330	0.0300	0.1500	NIL	2	2		Deep Burial	
24	Nettigudy Hospital,KDHP Munnar	0.0900	0.11000	0.09000	nil	0.2900	NIL	2	2		Deep Burial	
25	Silentvalley Hospital,KDHP Munnar	0.1200	0.14000	0.14000	0.0500	0.4500	NIL	2	2		Deep Burial	
26	Arivikadu Hospital,KDHP, Munnar	0.0270	0.06000	0.05000	nil	0.1370	NIL	2	2		Deep Burial	
27	Rajamally Hospital,KDHP ,Munnar	0.0280	0.00600	0.06600	nil	0.1000	NIL	2	1		Deep Burial	
28	Kanniamallay Hospital,KDHP Munnar	0.0230	0.04600	0.05600	nil	0.1250	NIL	2	1		Deep Burial	
29	Kadalaar Hospital,,KDHP Munnar	0.0180	0.04100	0+C4:E33.04	nil	0.0990	NIL	2	1		Deep Burial	
Captive Incinerators												
30	Gokulam Medical Collage Venjaramoo d	250	80	42	3	378	100 Kg/hour	810 Kg/day	nil		Deep burial	
											Any other	
											total	
31	Amala cancer hospital& research Amalanager thrissur-680555	181.23	56.7	26.37	1.467	265.767	100 Kg/hour	434				
32	Jubilee mission medical college Bishop Alppat Road jubilee Mission p.o Thrissur 680005	532.88	262.975	106.98	3.38	110.36	250 Kg/hour					
33	Mary Immaculate Mission Hospital Engandiyur	26.67	6.67	11.67	10	55.01	100 Kg/hour					

34	Amrita Institute of Medical Science	369.3	538.35	81.64	9.31	998.61	660.27					
35	Little Flower Hospital and Research	126.98	127.43	15.55	1.68	271.65	739.72					
36	Mother Hospital, Olari P.O Pullazhy Thrissur	10.86	8.62	7.5	1.45	28.43	50 Kg/hour					
37	MES Medical Collage	62.35	53.95	65.03	15.4	196.46	25kg/hour					
38	Nirmala Medical Centre , Moovattupuzha	16.27	4.14	3.16	0	23.57	100 kg/hr	1.5Kg	Provide d as per BMW schedul e		8604	
39	Samaritan Hospital, Kizhakkambalam	2.25	0.83	0.81	0.14	4.03	100Kg/hr	20l	Provide d as per BMW schedul e		1475	
40	Sanjoe Hospital Perumbavoor	0.43	1.67	2.4	0.95	5.45	50Kg/hr	Provided capacity not given	Provide d as per BMW schedul e		1991	
41	Devamatha Hospital, Koothattukulam	17.07	17.12	15.17	3.23	52.59	50Kg/hr	85Kg	Provide d as per BMW schedul e		19198	
42	St Joseph Hospital , Kothamangalam	9	15.09	0.56	9.73	34.38	250Kg/hr	Provided capacity not given	Provide d as per BMW schedul e		12551	
43	Ahalya Hospital Kozhipara	30	25	30	6	0.91	50	1.6				
	Ahalya Foundation Eye Hospital Kozhipara	60	40	5	25	1.3	All the 4 hospitals the same autoclave, sharp encapsulation and disinfection in a plant as above					
	Ahalya ayurvedic Hospital Kozhipara	80	60	25	10	1.75						
	Ahalya Diabetes, Elippara, Kozhipara	60	60	6	5	1.31						
44	HOLY FAMILY HOSPITAL,MUT HALAKODAM	1.780	2.1100	0.360	0.1200	4.4	7.4	NIL	NIL			