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KERALA STATE POLLUTION CONTROL BOARD
കേരള സംസ്ഥാന മലിനീകരണ നിയന്ത്രണ ബോർഡ്

Pattom P.O., Thiruvananthapuram – 695 004
പട്ടം പി.ഒ., തിരുവനന്തപുരം - 695 004

PCB/HO/EE-2/AR-BMW-2019/2020

Dated : 19.09.2020

From

The Member Secretary

To

The Member Secretary,
Central Pollution Control Board,
Parivesh Bhavan, East Arjun Nagar,
Delhi – 110 032

Sub:- Submission of Annual Report on Bio-Medical Waste (Management and Handling)
Rules, 2016 for the year 2019.

Sir,

The Annual Report on Bio Medical Waste (Management & Handling) Rules, 2016
for the year 2019 is enclosed herewith for kind information.

Yours faithfully,

Encl: As above


MEMBER SECRETARY

Form IV A

(See rule 13(2))

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

1	Name of the Organisation :	Kerala State Pollution Control Board
2	Name of the Nodal Officer with contact telephone number and e-mail :	Premaletha S. Environmental Engineer, 9447975725, pcbhoawareness@gmail.com
3	Total no. of Health Care Facilities / Occupiers :	13869
	(i) Bedded Hospitals and Nursing Homes (bedded) :	2126
	(ii) Clinics, dispensaries :	7583
	(iii) Veterinary Institutions :	309
	(iv) Animal houses :	0
	(v) Pathological Laboratories :	2311
	(vi) Blood banks :	26
	(vii) Clinical establishment :	1358
	(viii) Research Institutions :	9
	(ix) AYUSH :	147
4	Total no. of beds :	97794
5	Status of authorisation :	
	(i) Total number of Occupiers applied for authorisation :	6986
	(ii) Total number of Occupiers granted authorisation :	6735
	(iii) Total number of application under consideration :	68
	(iv) Total number of applications rejected :	225
	(v) Total number of Occupiers in operation without applying for authorisation :	7108

6	Quantity of Bio-medical Waste Generation (in kg/day) (Please enclose District Wise Bio-medical Waste Generation as per Part – 2)	:	42932
	(i) Bio-medical waste generation by bedded hospitals (in kg/day)	:	36818
	(ii) Bio-medical waste generation by non-bedded hospitals (in kg/day)	:	5815
	(iii) Any other	:	299
			42932
7	Bio-medical waste treatment and disposal	:	
	(a) By Captive bio-medical waste treatment and disposal by Health Care Facilities (please enclosed details as per (Part – 3)	:	3557
	(i) Number of Health Care Facilities having captive treatment and Disposal facilities	:	52 (3 hospitals in Palakkad have one captive treatment plant)
	(ii) Total Bio-medical waste treated and disposed by captive treatment facilities in kg/day	:	3417
	(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	:	1
	(ii) Number of Common Bio Medical Waste Treatment Facilities under construction	:	1 (implementation in advanced stage)
	(iii) Total bio-medical waste treated in kg/day	:	36853
	(iv) Total treated bio-medical waste disposed through authorised recyclers (in kg/day)	:	27138
8	Total no. of violation by	:	
	(i) Health Care Facilities (bedded and non-bedded)	:	189
	(ii) Common Bio Medical Waste Treatment Facilities	:	0
	(iii) Others (please specify)	:	655
9	Show cause notice / direction issued to defaulter	:	936

	(i) Common Bio Medical Waste Treatment Facilities	:	0
	(ii) Others	:	936
10	Any other relevant information	:	
	(i) Number of workshops/trainings conducted during the year	:	27
	(ii) Number of occupiers installed liquid waste treatment facility	:	4007
	(iii) Number of captive incinerators complying to the norms	:	20
	(iv) Number of occupiers organised trainings	:	50
	(v) Number of occupiers constituted Bio-medical Waste Management Committees	:	104
	(vi) Number of occupiers submitted Annual Report for the previous calendar year	:	3277
	(vii) Number of occupiers practising pre-treatment of lab microbiology and Bio-technology waste	:	650
	(viii) Number of Common Bio Medical Waste Treatment Facilities that have installed Continuous Online Emission Monitoring Systems	:	1

Part 2: District – wise Bio-medical Waste Generation (for the previous calendar year 2019)

Sl. No.	Name of the State/Union Territory	Name of the State/Union Territory	Bio-medical Waste Generation (in Kg/day)	Existing Total bio-medical Waste Treatment capacity (both captive and CBMWTF) kg/day	
1	Kerala State Pollution Control Board		42932	Equipment	Total
				Incinerator	
				Autoclave	
				Deep Burial	
				Any other IMAGE	

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

Sl No	District	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
			Yellow	Red	Blue	White	Total Bio-medical waste generated (in Kg/day)	Incinerator	Autoclave	Deep burial	Any other		
1	Thiruvananthapuram	Gokulam Medical College, Venjeramood	278	88	50	3	419	2400				Incinerator 278 Autoclave 138 Deep Burial 3 Any other 3 Total 419	
2	Kottayam	Mar Kavukatt Memorial Hospital, Anthrad P.O., Pravithanam	0.38	2.17	0.05	0.4	3	50				Incinerator 2.25 Autoclave 0.3 Deep Burial 0.45 Any other 3 Total 3	
3	Idukki	HOLY FAMILY HOSPITAL, MUTHALAKODAM	2.5	8.5	5.42	1.21	17.6	600					
4		Morning Star Medical Centre, Adimaly	1.97	0.99	1.97	0.49	5.42	300					
5		KDHP - Madupatty Hospital, 04868	0.014	0.0139	0.00063	0.0027	0.0309	NIL	2	2			
6		KDHP - Chokkanad Hospital, 04868	0.0037	0.00197	0.00027	0.0023	0.0082	NIL	2	2			
7		KDHP - Grahamsland Hospital, 04868	0.0030	0.00356	0.00014	0.0025	0.0092	NIL	2	2			
8		KDHP - Guderate Hospital, 04868	0.0063	0.00219	0.0049	0	0.0134	NIL	2	2			
9		KDHP - Arvikad Hospital, 04868	0.0056	0.00145	0.00096	0	0.0080	NIL	2	2			
10		KDHP - Silent valley Hospital, 04868255821	0.0038	0.00173	0.00166	0	0.0072	NIL	2	2			
11		KDHP - Devikulam Hospital,	0.0038	0.00712	0.00466	0	0.0156	NIL	2	2			
12		KDHP - Nettigudy Hospital,	0.0071	0.0066	0.25	0	0.2637	NIL	2	2			
13		KDHP - VAGAVURRAI LOWER HOSPITAL 04868-255310	0.0265	0.02158	0.0209	0		NIL	2	NIL			

14	KDHP- CHUNDUVURRAI HOSPITAL	0.00342	0.0017	0.00416	0	0.009	NIL	0.5	1			
15	KDHP-KUNDALY HOSPITAL 04868 255734	0.00644	0.000647	0.00062	0	0.008	NIL	12	1			
16	KDHP-CHITTAVURAI HOSPITAL 04868255724	0.00572	0.00447	0.00592	0	0.016	NIL	12	NIL			
17	KDHP - YELLAPATTY HOSPITAL 04868255724	0.00274	0.00096	0.000548	0	0.004	NIL	12	1			
18	KDHP-THEMMALLAY HOSPITAL 04868255584	0.00411	0.00384	0.00438	0.0044	0.017	NIL	12	NIL			
19	KDHP - VAGAVURRAI LUCKAM HOSPITAL 04868255311	0.00381	0.00375	0.01230	0	0.020	NIL		NIL			
20	ENGINEERING DEPARTMENT KDHP Co. Pvt Ltd, MUNNAR- 685612	0					NIL	0.5	NIL			
21	Gundumallay Hospital , Gundumallay Estate KDHP Co. Pvt Ltd	0.00444	0.0041	0.00466	0	0.0132	NIL		1			
22	Gundumallay Sathuparai Hospital , Gundumallay	0.00329	0.0033	0.00411	0	0.0107	NIL	NIL	1			
23	Vaguvurrai Lower Hospital KDHP Co. Pvt Ltd	0.0265	0.0216	0.0209	0	0.0689	NIL	NIL	NIL			
24	Vaguvurrai Luckam Hospital KDHP Co. Pvt Ltd	0.0038	0.0038	0.0123	0	0.0199	NIL	0.5	NIL			
25	Vaguvurrai Main Hospital, KDHP Co. Pvt Ltd	0.00512	0.0124	0.0114	0	0.0290	NIL	0.5	NIL			
26	Nyamakad Hospital Nyamakad Estate, KDHP Co. Pvt Ltd, Idukki	0.01712	0.0044	0.005	0.00767	0.0347	NIL	0.5	2			
27	Letchmi Hospital , Letchmi Estate, KDHP Co. Pvt Ltd, Idukki	0.00131	0.00021	1.3000E-05	0	0.0015	NIL	2	2			
28	Sevemallay Hospital , Letchmi Estate, KDHP	0.000164	0.00017	0.000021	0	0.0004	NIL	2	2			39
29	Viriparai Dispensary , Letchmi Estate KDHP Co. Pvt Ltd	0.000046	2.400E-05	0.000054	0	0.0001	NIL	2	2			84.5

30	Town Dispensary Letchmi Estate KDHP Co. Pvt Ltd	0.0000198	0.00010	0.000016	0	0.0001	NIL	2	2			Deep Burial	39
31	Nullatanni Hospital Nullatanni Estate KDHP Co. Pvt Ltd	0.0301	0.00822	0.0164	0.00822	0.0630	NIL	2	2				
32	Peravurral Hospital, Nullatanni Estate, KDHP Estate Co. Pvt Ltd Idukki	0.0411	0.00548	0.0137	0.0055	0.0658	NIL	2	2				
33	Kalaar Hospital, Nullatanni Estate, KDHP Estate Co. Pvt Ltd Idukki	0.0142	0.00329	0.01315	0.0082	0.0389	NIL	2	2				
34	Nadayar Hospital Nullatanni Estate KDHP Estate Co. Pvt Ltd Idukki	0.0137	0.00274	0.0055	0.00822	0.0301	NIL	2	2			Any other	372.87
35	Amrita Institute of Medical Science	372.9	488.5	55.9	12.3	929.57	4800.0	2 No. with 1000 L/hr	NIL		shredder -1No - capacity of 10 TO 20 Kg/Hr encapsulation or Concrete pit -10 Nos capacity of 0.75 M3 chemically disinfection- 3 Nos capacity of 1.4 M3	Incinerator Autoclave Deep Burial Any other Total	95.68 149.94 1.74 929.57
36	Little Flower Hospital and Research centre	95.68	126.14	23.8	1.74	247.36	1200	1 No with 1200 kg/day	4 Nos with 5000 cu.ft		shredder -1No - capacity of 200 Kg/day encapsulation or Concrete pit -1 No 1200 cu.ft chemically disinfection- 1 No capacity of 50 kg/day	Any other Total	247.36
37	NIRMALA MEDICAL CENTRE,	12.5	3.5	1.2	0.7	17.9	2400	1.5 kg					17.89
38	SAMARITAN HOSPITAL, Kizhakkambalam	7	25.4	7.2	1.8	41.4	2400	20 litres					41.30
39	SANJOE HOSPITAL, Perumbavoor	3.7	2.9	6	5.7	18.3	1200						18.24
40	Ernakulam DO- MISSION Hospital, Kolenchery	435.8	10.2	3.3	11.5	460.8	3600	600 litres					460.73

41	DEVAMATHA HOSPITAL, Koothattukulam	14.4	10.1	7.8	0.4	32.7	1200	85 Kg			32.61
42	St.JOSEPH'S HOSPITAL, Kothamangalam	16.4	12.1	7.5	0.5	36.5	3000				36.48
43	Amala Cancer Hospital & Research Centre Amalanagar Thrissur - 680 555	171.35	154.78	66.08	3.879	396.089	2400 1 No. with 434L		shredder -1No - capacity of 25 Kg/Hr Concrete pit -1 No- capacity of 4 Kg/Hr		0
44	Jubilee Mission Medical College, Bishop Alappat Road Jubilee Mission P.O Thrissur - 680 005	232.88	70.68	32.88	49.32	385.76	12000 1 No	2 No	nil		385.76
45	St.Joseph's Hospital, Choondal, Thrissur - 680 502	28	25	5	8	.66	1800 1 NO	1 NO	nil		66
46	Mary Immaculate Mission Hospital, Engandiyur	23.29	5.48	9.59	8.22	46.58	2400 2 Nos.	1 No	microwave 1 NO. Needle 8 NO.		4.58
47	Mother Hospital, Olari, P.O.Pullazhy, Thrissur.	3.95	6.25	0	0.99	11.19	1200 3 No	1 No	Chemical Disinfection 1 No concrete Pit 1 NO. ETP 1 No. Bio Gas1 NO. ETO 1 No		11.19
48	Sanjos Parish Hospital, Pavaattu	23.41	3.42	15.12	22.49	64.44	480 2 No.	0	Needle tip cutter 3 No. Chemical		0

											Disinfection- 1 No.	
											Any other	0.148
											Total	64.441
											Incinerator	40
											Autoclave	80
											Deep Burial	Nil
											Any other	Nil
											Total	120
											Incinerator	
											Autoclave	
											Deep Burial	
											Any other	
											Total	98.219
49		Analia Diabetes Hospital Kozhippara	10	15	4	1	30					
		Ahalla eye foundation hospital Kozhippara	20	30	8	2	60					
50	Palakkad	Ahalla ayurveda Medical college	10	15	4	1	30					
51												
52	Malappuram	MES Medical college	79.47	16.59	1.94	0.219	98.219	75	200			
Total										43605		3556.96

Part 4: Information on Common Bio-Medical Waste Treatment and Disposal Facilities (for the previous calendar Year 2019)

Sl No.	Name and Address of the Common Bio Medical Waste Treatment Facilities with contact person name and telephone number	GPS Coordinators	Coverage Area in KMS	Name of the cities/areas covered by Common Bio-Medical 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 (in kg/day)	Capacity of Treatment equipments installed by Common Bio Medical Waste Treatment Facilities			Total Bio Medical Waste treated in kg/day	Method of Disposal of treated wastes (incineration Ash/Sharps/Plastic)
1	IMAGE, CBWTF, Mantthuruthi, Kanjikkode, West, Palakkad, 678623		Latitude - 10°48'54"N Longitude - 76°43'34"E	Whole state	15310	104185	36850	Equipment	Numbers	Total installed capacity (kg/day)	19488.28	474048 kg/yr Given to KEIL (SUM TOTAL OF ASH AND ETP SLUDGE)
								Incinerator	5	33000		
								Plasma Pyrolysis	Nil	Nil		Nil
								Autoclave	5	15000	12092.15	Sharps Quantity Disposed by

