

*(as on 13.6.2018)*

## **CENTRAL POLLUTION CONTROL BOARD**

(Waste Management Division-Bio-medical Waste)

**DELHI – 110 032**

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### **Subject: Status on Bio-medical Waste Management Scenario and recommendations for ensuring compliance to the Bio-medical Waste Management Rules, 2016.**

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#### **1. Introduction to the Bio-medical Waste Management Rules, 2016:**

As per Bio-medical Waste Management Rules, 2016 (BMWM Rules, 2016) notified under the Environment (Protection) Act, 1986, the State Pollution Control Board (SPCB) in the respective State and Pollution Control Committee (PCC) in the respective UT as well as Director General Armed Forces Medical Services (DGAFMS) in respect of the Armed Forces Health Care Establishments (AFHCEs) under the jurisdiction of the Ministry of Defence are the 'Prescribed Authority' for overall enforcement of the said Rules. Further, as per Rule 13 (1) of the said BMWM Rules, 2016, all SPCBs and PCCs as well as Director General of Armed Forces Medical Services (DGAFMS) are required to submit annual report information on Bio-medical Waste Management in their respective State / Union Territory / AFHCE for the previous calendar year in a compiled form to the Central Pollution Control Board (CPCB), on or before 31st July of every year.

#### **2. Bio-medical Waste Management Scenario:**

The annual report information on bio-medical waste management for the year 2016 has been received from all of the SPCBs/PCCs and DGAFMS. As per the compiled annual report information for the year 2016, there are 1, 87,160 no. of Health Care Facilities (HCFs) having 18, 99,269 beds and generating bio-medical waste at about 517 Tonnes per day. 91,061 no. of HCFs have granted authorization under the BMW Rules. There are 199 no. of CBWTFs in operation (23 under construction) and 15,281 no. of HCFs are having captive bio-medical waste treatment and disposal facilities, which are involved in treatment and disposal of 501 out of 517 Tonnes per day bio-medical waste. As reported, 12,034 no. of HCFs/CBWTFs observed to be violating the provisions of the BMW Rules. The detailed bio-medical waste management scenario in the Country **(Annexure-I)** is given below:

➤ No. of healthcare facilities	: 1,87,160
➤ No. of beds	: 18,99,269
➤ No. of CBWTFs	: 199* + 23**
➤ No. of HCFs granted authorization	: 91,061

- No. of HCFs having Captive Treatment Facilities : 15,281
- No. of Captive Incinerators Operated by HCFs : 536
- Quantity of bio-medical waste generated in Tonnes/day : 517
- Quantity of bio-medical waste treated in Tonnes/day : 501
- No. of HCFs violated BMW Rules :12,034
- No. of Show-cause notices/Directions issued to defaulter HCFs : 11,272

**Note:** (i) \* - CBWTFs in operation (ii) \*\* - CBWTFs under installation

### 3. Annual Report Information – A Comparison:

<b>Particulars</b>	<b>As per Annual Report Information for the year 2015</b>	<b>As per Annual Report Information for the year 2016</b>
<b>No. of healthcare facilities</b>	1,88,098	1,87,160
<b>No. of beds</b>	17,61,316	18,99,269
<b>No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)</b>	203+32	199+23
<b>No. of healthcare facilities applied for authorization</b>	46,697	95,723
<b>No. of healthcare facilities granted authorization</b>	99,945	91,061
<b>Quantity of bio-medical waste generated in Tonnes/day</b>	501	517
<b>Quantity of bio-medical waste treated in Tonnes/day</b>	486	501
<b>No. of HCFs/CBWTFs violated BMW Rules</b>	6,074	12,034
<b>No. of Show-cause notices/Directions issued to defaulter HCFs/CBWTFs</b>	5,103	11,272

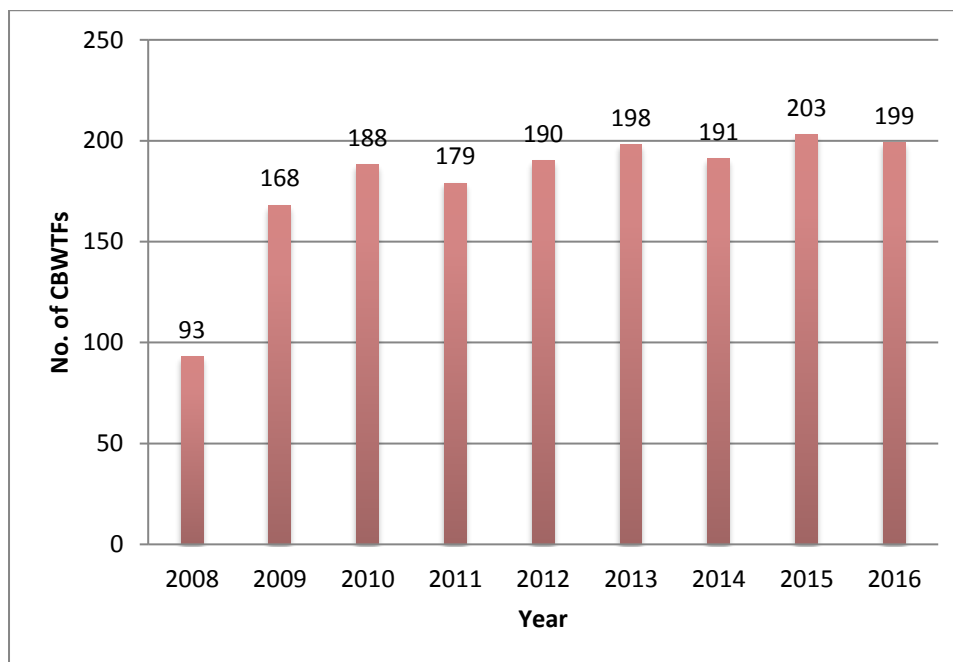
The comparison between the Annual Report Information for the year 2015 and 2016 reveals the following:

- There has been decrease of 938 (0.49%) numbers of Healthcare Facilities (HCFs) in the year 2016 as compared to the no. of HCFs reported for the year 2015.
- Whereas, there has been an increase in total bio-medical waste generation from 501 Tonnes per day to 517 Tonnes per day in the year 2016.
- As per the AR-2016, about 97 % of generated bio-medical waste is treated & disposed off.

- To facilitate the treatment and disposal of bio-medical waste generated from the HCFs, there are 199 no. of Common Bio-medical Waste Treatment Facilities (CBWTFs) in operation and 23 no. of CBWTFs under construction.
- No. of HCFs/CBWTFs violating the provisions of BMW Rules in 2016 has been increased from 6,074 in the year 2015 to 12,034 in the year 2016.

#### 4. Common Bio-medical Waste Treatment Facilities:

There has been decrease in number of CBWTFs this year. Figure indicating year-wise growth in CBWTFs in the Country is shown in **Figure 1**. At present there are 199 no. of CBWTFs in operation and 23 no. of CBWTFs under construction, as reported by SPCBs/PCCs. Though CBWTFs are widely accepted by the HCFs for the treatment & disposal of bio-medical waste, still there are some States/Union Territories which are yet to develop the CBWTFs in their respective States/UTs.



**Figure: 1. Year-wise Status of Common Bio-medical Waste Treatment Facilities**

#### 5. Issues and Recommendations on Bio-medical Waste Management:

S. No.	Particulars	Issues	Recommendations
1	<b>Non-submission of Annual Report within the due date (i.e., by 31<sup>st</sup> March of every</b>	The annual report information is not submitted regularly within the due date by most of the SPCBs/PCCs thereby making it difficult to compile	SPCBs/PCCs should direct all the HCFs/CBWTFs located in the respective State/UT for submission of Annual Report in light of the format

	<b>year)</b>	the national status on bio-medical waste management scenario and its submission to MoEF & CC within the due date of 31 <sup>st</sup> August of every year.	circulated by CPCB, by 30 <sup>th</sup> of June of every year in accordance with BMWM Rules.
<b>2</b>	<b>Operation of Healthcare Facilities without Authorization under BMW Rules</b>	As per Annual Report Information for the year 2016, there are 24,701 out of 1,87,160 no. of Healthcare Facilities (HCFs) which are operating without obtaining Authorization under BMW Rules. Such HCFs needs to obtain authorization under BMWM Rules.	All the HCFs irrespective of type of treatment and quantity of bio-medical waste generated and which are in operation without obtaining authorization under BMWM Rules, 2016 should be directed to obtain authorization from the prescribed authority in compliance to the BMWM Rules, 2016. Also, all the HCFs should be directed to take adequate steps and to take a membership from the nearby CBWTF for safe and environmentally sound disposal of bio-medical waste generated by such HCFs.
<b>3</b>	<b>Liquid waste treatment Facility installed by Healthcare Facilities</b>	Out of 1,87,160 there are only 8,176 Healthcare Facilities which are having liquid waste treatment facilities installed for the treatment of chemical liquid waste.	All the Healthcare Facilities are required to install liquid waste treatment facilities for the treatment of chemical liquid waste generated from laboratories before mixing the wastewater with other wastewater. The combined discharge shall conform the discharge norms given under Schedule III of the BMWM Rules, 2016.
<b>4</b>	<b>States/UTs which are yet to develop CBWTFs in the respective State/UT</b>	<i>05 States namely Arunachal Pradesh, Goa, Mizoram, Nagaland &amp; Sikkim and 02 UTs namely Andaman &amp; Nicobar Islands and Lakshadweep</i> where, are yet to develop CBWTFs in the respective	Action should also be taken by the Arunachal Pradesh, Goa, Mizoram, Nagaland & Sikkim SPCBs as well as Andaman & Nicobar Islands, Lakshadweep PCCs for Development of Common

		State/UT.	Bio-medical Waste Treatment and Disposal Facilities (CBWTFs) in the respective State/UT.
<b>5</b>	<b>Installation of ETP/STP by the Healthcare Facilities</b>	Many of the HCFs have not installed ETPs/STPs for ensuring proper treatment of liquid waste generated the HCFs in compliance to the discharge norms stipulated under Schedule II of the BMWM Rules, 2016, as amended.	All the HCFs be directed to ensure compliance to the liquid waste discharge norms stipulated under Schedule II of the BMWM Rules, 2016, as amended by installing adequate STP/ETP.
<b>6</b>	<b>Bar code system for tracking of bio-medical waste</b>	As per the BMWM Rules, 2016 every Occupier and Operator of the CBWTF shall establish Bar Code system for bags or containers containing bio-medical waste.	All the SPCBs and PCCs should ensure that the bar code system is well implemented by the Occupier and Operator of the CBWTF by 27.03.2019 which will help in tracking of waste from the source of generation to its final treatment and disposal.
<b>7</b>	<b>Mercury waste disposal</b>	Awareness with regard to the mercury spillage collection, storage of collected mercury spills and final disposal	The HCFs are required to phase out all mercury based medical instruments used in treatment of patients and also to ensure mercury waste management as per the CPCB guidelines i.e. "Environmentally Sound Management of Mercury Waste generated in Healthcare Facilities.

**Annual Report Information on Bio-medical Waste Management Scenario in the Country for the Year 2016**  
(as submitted by SPCBs/PCCs and DGAFMS)(Updated as on 13/06/2018)

S.No.	Name of the State/UT and DGAFMS(Date of submission of Annual Report)	Total no. of Bedded Health Care Facilities (HCFs)	Total no. of Non-bedded Health Care Facilities (HCFs)	Total no. of Other's Health Care Facilities (HCFs)	Total no. of Beds	Authorization Status					Total Quantity of BMW generated (kg/day)	Total Quantity of BMW Treated and Disposed (kg/day)	Captive BMW Treatment Facilities Operated by the (HCFs)		Common Bio-medical Waste Treatment Facilities (CBWTFs)		Total BMW treated by captive treatment facilities by HCFs in (kg/day)	Total BMW treated by CBWTFs kg/day)	Total No. of HCFs/CBWTFs violated BMW Rules	Total No. of show cause notices/Directions issued to defaulter HCFs/CBWTFs	No of HCFs installed liquid waste treatment facility in the State/UT/By DGAFMS
						Total no. of HCFs applied for authorization	Total no. of HCFs granted authorization	Total no. of applications under consideration	Total no. of applications rejected	Total no. of HCFs in operation without applying for authorization			No. of HCFs having Captive Treatment Facilities	No of Captive Incinerators Operated by HCFs	CBWTFs Operational	CBWTFs under Construction					
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)
(1)	Andaman & Nicobar (06.03.2018)	35	INP	INP	1065	INP	1	INP	INP	INP	380	380	30	06	Nil	Nil	Nil	Nil	Nil	Nil	Nil
(2)	Andhra Pradesh (25.07.2017)	4652	1270	INP	102733	5441	5427	14	Nil	481	9898	9898	01	01	11	Nil	56	9842	487	487	102
(3)	Arunachal Pradesh (10.08.2017)	15	44	INP	950	63	63	Nil	Nil	INP	577.4	INP	06	06	Nil	Nil	118.8	Nil	11	INP	INP
(4)	Assam (15.09.2017)	620	761	INP	25047	427	287	140	Nil	954	7925.8	5698.5	149	32	01	..	1943.0	3755.5	217	23	192
(5)	Bihar (31.07.2017)	241	149	INP	5672	390	45	271	74	2707	8827.69	8827.69	03	03	03	01	296.69	8531	31	31	08
(6)	Chandigarh (21.7.2017)	47	733	INP	4290	35	42	Nil	Nil	INP	1994	1994	03	03	01	Nil	1636	358	03	02	INP
(7)	Chhattisgarh (05.10.2017)	486	159	INP	15231	2243	345	159	04	NIL	1988.85	3321.14	554	178	04	01	1354.54	1966.6	135	135	66
(8)	Daman & Diu and Dadra & Nagar Haveli	23	94	04	760	50	46	04	Nil	INP	253.9	253.9	Nil	Nil	INP	Nil	Nil	253.9	Nil	Nil	Nil

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	(06.03.2018)																					
(9)	Delhi (18.08.2017)	856	3788	INP	48891	708	745	107	Nil	INP	24996.44	24996.44	8 (only autoclave)	Nil	02	Nil	843.44	24153	364	364	105	
(10)	Goa (22.03.2018)	162	85	INP	3220	597	590	07	Nil	INP	2660.34	2659.92	247	1	NIL	NIL	2659.92	NIL	250	250	NIL	
(11)	Gujarat (31.7.2017)	10215	18382	INP	171312	5418	5009	347	62	7696	30296	30296	Nil	Nil	19	Nil	Nil	30296	1806	1808	20	
(12)	Haryana (30.10.2017)	2319	848	INP	47370	3143	3138	01	04	24	11171.02	12045.3	01	01	11	NIL	283.9	11761.4	259	259	29	
(13)	Himachal Pradesh (31.07.2017)	506	290	INP	13015	758	718	40	NIL	NIL	1717.70	1717.70	396	02	03	01	291.68	1426.02	42	42	108	
(14)	Jharkhand (01.08.2017)	1026	124	INP	25573	1048	143	908	01	INP	12829.98	2353	INP	13	01	Nil	INP	2353	INP	702	NIL	
(15)	J & K (17.11.2017)	445	318	INP	6526	348	250	49	49	415	885.94	402.43	76	1	1	0	131.6	270.83	764	786	6	
(16)	Karnataka (04.09.2017)	13506	10314	6054	187745	29875	27279	325	138	INP	66468	66468	5061	03	25	05	INP	INP	1925	1925	22	
(17)	Kerala (19.12.2017)	2043	7111	INP	114089	3025	2922	86	17	6129	37773.45	37773.45	88	34	1	Nil	6095.45	31678	66	66	1575	
(18)	Lakshadweep (03.02.2018)	11	9	INP	250	Nil	Nil	Nil	Nil	20	80	80	20	3	Nil	INP	80	INP	Nil	Nil	INP	
(19)	Madhya	2780	2300	INP	82449	1262	2885	00	50	2195	12810	12810	181	02	13	01	404	12406	456	456	99	

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	Pradesh (14.08.2017)																					
(20)	Maharashtra (15.01.2017)	20225	32479	INP	251948	19622	19197	279	2	50	71511.5	71511.5	4003	6	34	0	5610.431	65901.03	48	304	111	
(21)	Manipur (05.09.2017)	120	579	INP	2734	90	90	40	Nil	INP	367.49	367.49	532	04	01	Nil	367.49	INP	Nil	299	INP	
(22)	Meghalaya (31.08.2017)	173	530	INP	6419	299	299	Nil	Nil	404	972.97	972.97	90	01	01	Nil	641.87	331.1	Nil	Nil	08	
(23)	Mizoram (31.07.2017)	94	10	INP	2284	34	34	Nil	Nil	38	440.09	440.09	Nil	04 (not in use)	Nil	Nil	440.09	Nil	38	01	48	
(24)	Nagaland (29.01.2018)	81	87	INP	2723	156	156	INP	INP	12	751.48	751.48	168	4	NIL	NIL	751.48	NIL	12	12	INP	
(25)	Odisha (09.08.2017)	1429	796	INP	42178	277	298	14	Nil	07	13795.34	12568.2	1597	04	05	Nil	10287.5	2280.71	165	165	28	
(26)	Puducherry (18.09.2017)	99	143	INP	10601	145	133	19	Nil	90	5849.8	7867.67	01	01	01	Nil	577.67	7290	22	22	08	
(27)	Punjab (10.08.2017)	2606	3869	INP	57439	1430	1284	146	Nil	1875	14668	14668	Nil	Nil	04	01	Nil	14668	1599	1613	3567	
(28)	Rajasthan (10.11.2017)	4241	1406	INP	103560	2389	2194	385	160	1035	21722.84	16026.07	1282	0	10	7	2945.856	13080.48	1060	810	27	
(29)	Sikkim (23.09.2017)	35	09	INP	1375	44	44	Nil	Nil	27	388.44	172.35	44	11	Nil	Nil	172.35	Nil	NIL	NIL	NIL	
(30)	Tamil Nadu (04.10.2017)	3758	219	INP	137825	3897	3539	328	30	80	43789.08	43789.08	INP	INP	11	3	INP	43789	46	46	1938	
(31)	Telangana (21.09.2017)	2975	1046	INP	97803	2383	2227	156	..	89	13220	13220	Nil	Nil	11	Nil	Nil	13220	261	261	89	



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(32)	Tripura (29.08.2017)	137	1185	568	4694	342	342	Nil	Nil	Nil	1607	2987.3	04	04	01	NIL	1135	447.88	42	42	INP
(33)	Uttrakhand (22.08.2017)	582	191	INP	16107	309	185	123	1	373	2557.32	2557.32	236	04	01	Nil	907.34	1649.98	373	69	05
(34)	Uttar Pradesh (10.04.2017)	8656		INP	164510	3517	5146	-	-	-	37655	36422	28	28	17	Nil	INP	INP	1538	278	-
(35)	West Bengal (06.11.2017)	2477	3060	INP	106193	5488	5488	Nil	Nil	Nil	26858.76	26858.76	2	1	6	3	258.5	26600.26	14	14	14
(36)	DGAFMS (16.10.2017)	262	208	INP	34688	470	470	.	.	.	27995.26	27995.26	470	175	-	-	26249.690	1745.570	..	..	1
	Total	87938	92596	6626	1899269	95723	91061	3948	592	24701	517684.9	501151.5	15281	536	199	23	66540.29	330055.3	12034	11272	8176

Note:

INP : Information Not Provided