

CENTRAL POLLUTION CONTROL BOARD

(Hazardous Waste Management Division)

DELHI – 110 032

Subject: Status and Issues on implementation of Bio-medical Waste (Management & Handling) Rules, 1998 and as amended

1. Introduction to the Bio-medical Waste (Management & Handling) Rules, 1998 and amendments made thereof:

The Bio-medical Waste (Management & Handling) Rules, 1998 and amendments thereof (hereafter referred as BMW Rules) were notified under the Environment (Protection) Act, 1986 by the Ministry of Environment, Forest & Climate Change (MoEF & CC) in the year 1998 and further amendments were made in the year 2000 and 2003. As per BMW Rules, 1998, State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) in the respective States/UTs and Director General Armed Forces Medical Services (DGAFMS) in respect of the Health Care Establishments (HCEs) under the jurisdiction of the Ministry of Defence (MoD) have been notified as the 'Prescribed Authority' for overall enforcement of the said Rules. As per Rule 10 of the BMW Rules, 'SPCBs and PCCs as well as DGAFMS are required to submit annual report information in a compiled form to the Central Pollution Control Board (CPCB), for the preceding year by 31st March of every year.

2. Bio-medical Waste Management Scenario:

Annual report information for the year 2014 received from the State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) and Director General of Armed Forces Medical Services (DGAFMS), there are 1,69,913 no. of HCFs having 17,86,108 beds strength and generating bio-medical waste at about 495.3 Tonnes /day. 1,18,964 no. of HCFs have obtained authorization under the BMW Rules. There are 191 no. of CBWTFs in operation (33 under construction) as well as 21,491 no. of HCFs are having captive bio-medical waste treatment and disposal facilities and 461.9 out of 495.3 Tonnes per day (TPD) of bio-medical waste generated is treated and disposed of by these facilities. About 5980 no. of HCFs/CBWTFs 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	: 1,69,913
➤ No. of beds	: 17,86,108
➤ No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)	: 191 * + 33**
➤ No. of healthcare facilities (HCFs) using CBWTFs	: 1,38,001
➤ No. of HCFs having treatment & disposal facilities	: 21,491
➤ No. of healthcare facilities applied for authorization	: 1,11,690
➤ No. of healthcare facilities granted authorization	: 1,18,964

➤ Total no. of on-site/captive treatment equipment installed (Excluding CBWTFs) by the HCFs	:
• No. of incinerators	: 440
i) With Air Pollution Control Device	: 358
(ii) Without Air Pollution Control Device	: 82
• No. of autoclaves	: 2634
• No. of microwaves	: 317
• No. of Hydroclave	: 02
• No. of Shredders	: 2722
➤ Total no. of treatment equipment installed by the CBWTFs	:
• No. of incinerators	: 215
• No. of autoclaves	: 202
• No. of microwaves	: 04
• No. of Hydroclave	: 02
• No. of Shredders	: 218
➤ Quantity of bio-medical waste generated in Tonnes/day	: 495.30
➤ Quantity of bio-medical waste treated in Tonnes /day	: 461.95
➤ No. of HCFs/CBWTFs violated BMW Rules	: 5980
➤ No. of Show-cause notices/Directions issued to defaulter HCFs	: 4965

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

3. Annual Report Information – A Comparison:

Particulars	As per Annual Report Information for the year 2013	As per Annual Report Information for the year 2014
No. of healthcare facilities	1,68,869	1,69,913
No. of beds	17,13,742	17,86,108
No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)	198*+28**	191*+33**
No. of healthcare facilities (HCFs) using CBWTFs	1,31,837	1,38,001
No. of HCFs having treatment & disposal facilities	22,245	21,491
No. of healthcare facilities applied for authorization	1,06,805	1,11,690*
No. of healthcare facilities granted authorization	1,05,270	1,18,964

Total no. of on-site/captive treatment equipment installed (excluding CBWTFs) by the HCFs:		
• No. of incinerators		
i) With Air Pollution Control Devices	331	358
(ii) Without Air Pollution Control Devices	217	82
• No. of autoclaves	3,112	2,634
• No. of microwaves	250	317
• No. of Hydroclave	15	02
• No. of Shredders	5,179	2,722
Total no. of treatment equipment installed by the CBWTFs:		
• No. of incinerators	198	215
• No. of autoclaves	189	202
• No. of microwaves	06	04
• No. of Hydroclave	03	02
• No. of Shredders	202	218
Quantity of bio-medical waste generated in Tonnes/day	484	495
Quantity of bio-medical waste treated in Tonnes /day	447	462
No. of HCFs/CBWTFs violated BMW Rules	7,894	5,980
No. of Show-cause notices/Directions issued to defaulter HCFs/CBWTFs	4,391	4,965

- *Information not provided by few SPCBs/PCCs*

The comparison between the Annual Report Information for the year 2013 and 2014 indicates the following:

- There has been an increase of 1044 (0.6 %) in number of Healthcare Facilities (HCFs) in the year 2014 as compared to the no. of HCFs reported in the year 2013.
- When compared to the year 2013, there is an increase in total bio-medical waste generation from 484 Tonnes/day to 495 Tonnes / day in the year 2014.
- As per the AR-2014, about 93.33 % of generated bio-medical waste is treated & disposed off.
- To facilitate the treatment and disposal of bio-medical waste generated from the HCFs, at present, there are 191 no. of Common Bio-medical Waste Treatment Facilities (CBWTFs) in operation and 33 no. of CBWTFs are under construction).

- During the year 2013 to 2014, decrease in no. of HCFs having captive treatment & disposal facilities has been observed (decreased from 22245 to 21491 no. of HCFs).
- Number of captive incinerators operated by the HCFs has been decreased from 548 to 440 and simultaneously, 108 no. of captive incinerators without APCD or having single chamber appears to be closed in compliance to the BMW Rules by the SPCBs/PCCs.
- No. of HCFs/CBWTFs violating the provisions of BMW Rules in 2014 has been decreased by 24.25 % as compared to 2013, due to regular follow-up with the SPCBs/PCCs regarding implementation of BMW Rules as well as CPCB guidelines, by CPCB.

4. Status of Common Bio-medical Waste Treatment Facilities (CBWTFs):

There has been an increase in number of CBWTFs over the years. **Figure 1** indicates increase in no. of CBWTFs operational over the years 2008 to 2014. At present, there are 191 no. of CBWTFs in operation and 33 no. of CBWTFs are under construction, as reported by SPCBs/PCCs. Though CBWTFs are widely accepted by the HCFs for the treatment & disposal of bio-medical waste, still States namely **Arunachal Pradesh, Goa, Mizoram, Nagaland & Sikkim as well as Union Territories (UTs) namely A & N Islands, Lakshadweep** are yet to develop the CBWTFs in the respective States/UTs.

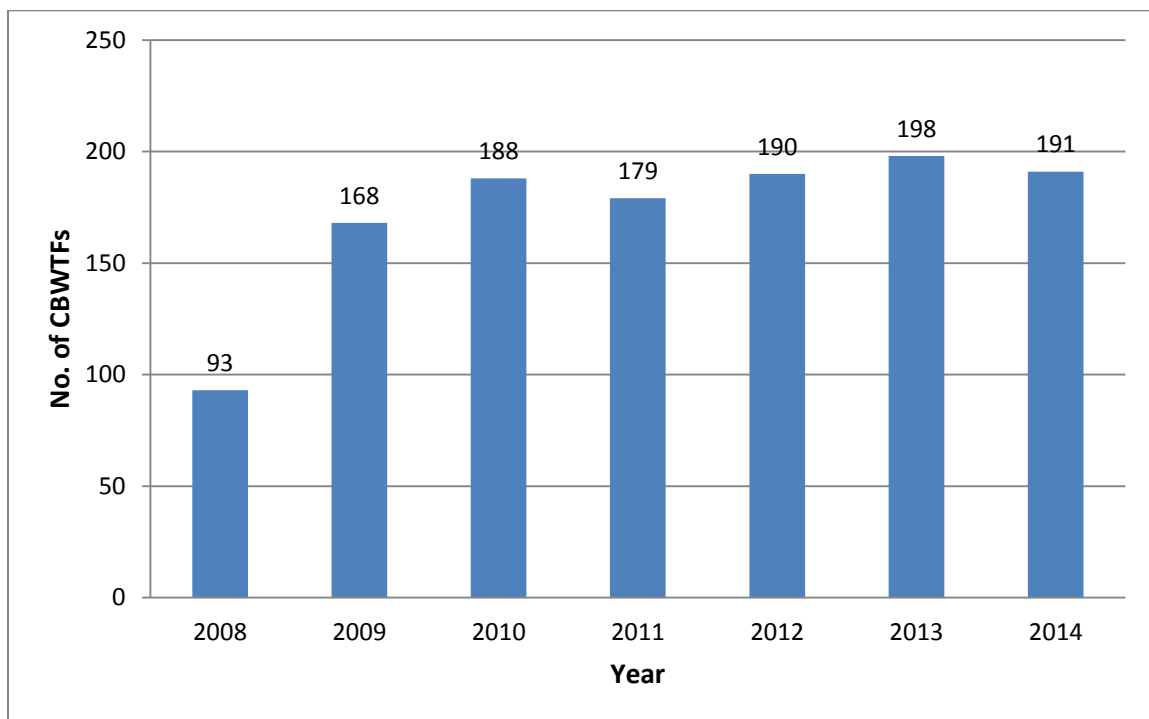


Figure 1 Increase in no. of CBWTFs Operational during the Year 2008 to 2014

a) Major non-compliances observed in CBWTFs:

CPCB has carried out joint inspection of CBWTFs to verify compliance to the provisions of BMW Rules & CPCB guidelines wherein various non-compliances have been observed. Following are the major observations in CBWTFs which are not complied w.r.to the BMW Rules & CPCB guidelines:

1. Some of the CBWTFs are in operation without having valid authorization as required under Bio-medical Waste (Management & Handling) Rules, 1998;
2. Collection of mixed waste from the member HCFs & manual segregation of waste within the facilities;
3. Separate spacing provision for treatment equipment, bio-medical waste storage room etc.;
4. Interlocked Programmable Logic Control (PLC) based waste feeding system and recording system with the incinerator;
5. Devices for measuring negative draft in primary chamber, air flow rate in the incinerator chambers and pressure drop across venturi scrubber;
6. Operation of the incinerator in accordance with the provisions as stipulated under BMW Rules;
7. Stack monitoring provision (such as platform, porthole etc.) with the incinerator stack;
8. Procurement of Flue gas analyser for measurement of CO, O₂ & CO₂ level in the stack gases;
9. Recording system for autoclave for operational parameters such as batch number, temperature, pressure, start and end of sterilization of the autoclave as well as validation test to check the efficacy of autoclave;
10. Provision for mechanical feeding system with the autoclave as required under CPCB guidelines;
11. Provision for disposal of sharp waste in sharp-pit/encapsulation facility and pit for disposal of incineration ash etc.

Respective SPCB/PCC is required to ensure that all the Common Bio-medical Waste Treatment Facilities (CBWTFs) comply with the provisions of Bio-medical Waste (Management & Handling) Rules, 1998 as well as CPCB guidelines.

5. Bio-medical Waste Management in Armed Forces Healthcare Establishments:

Rule 7 (1) of the Bio-medical Waste (Management & Handling) Rules, 1998 as amended, stipulates that "the prescribed authority for enforcement of the provisions of these rules in respect of all health care establishments including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, Animal houses, pathological laboratories and blood banks of the Armed Forces under the Ministry of Defence shall be the Director General, Armed Forces Medical Services (DGAFMS)". Further, as per Rule 9 A of the said Rules,

CPCB shall monitor the implementation of BMW Rules in respect of all Armed Forces Healthcare Establishments under the Ministry of Defence.

As per the Annual Report Information for the year 2014 submitted by Director General Armed Forces Medical Services (DGAFMS), there are 408 Armed Forces Health Care Establishments (AFHCEs) which are generating about 18,980 kg/day of bio-medical waste. Almost all the AFHCEs are having captive treatment & disposal facilities except 01 AFHCE which is ensuring treatment and disposal of generated bio-medical waste through a CBWTF. Also, all the 408 AFMHCEs reported to have obtained authorization under Bio-medical Waste (Management & Handling) Rules, 1998 from DGAFMS. As reported by DGAFMS, all the captive incinerators installed by the AFHCEs are provided with Air Pollution Control Devices.

6. **State-of-art-treatment-technologies for the treatment of Bio-medical Waste:**

As per Schedule I of the Bio-medical Waste (Management & Handling) Rules, 1998 & as amended, any Health Care Facility (HCF) or Common Bio-medical Waste Treatment Facility (CBWTF) Operator wishing to use other Stat-of-the-art-technologies other than stipulated under Schedule I of the said rules, shall approach the Central Pollution Control Board (CPCB) to get the standards laid down to enable the prescribed authority to consider grant of authorization. For the purpose of evaluation of new technologies for treatment of bio-medical waste and to suggest suitable standards for any such technologies, an Expert Committee was reconstituted by CPCB. During the last five years, CPCB have granted approval or provisional approval to the following new Technologies for treatment of bio-medical waste, under the BMW Rules:

- i) Plasma Pyrolysis;
- ii) Waste Sharps Dry Heat Sterilization and Encapsulation; and
- iii) Shredding cum Chemical Disinfection (Static/Mobile)'.

Proposal with respect to the non-burning technology is under evaluation.

7. **Main issues and recommendations on Bio-medical Waste Management:**

Sl. No.	Particulars	Issues	Recommendations
1	Non-submission of Annual Report within the due date (i.e., by 31st March of every year)	The annual report information is not submitted regularly by most of the SPCBs/PCCs within the due date (i.e., by 31 March every year as stipulated under the Bio-medical Waste (Management & Handling) Rules, 1998 as amended thereby making it difficult to compile the national scenario on	SPCBs/PCCs should direct all the HCFs/CBWTFs located in the respective State/UT for submission of Annual Report as per the format prescribed under the Bio-medical Waste Management Rules, 2016 by 30 th of June of every year so as to submit the compiled

		<p>bio-medical waste management and its submission to MoEF & CC by CPCB.</p> <p>Now, the Bio-medical Waste Management Rules, 2016 has been published vide G.S.R. 343(E) dated 28.03.2016 in supersession of the Bio-Medical Waste (Management and Handling) Rules, 1998, by the Ministry of Environment, Forest and Climate Change (MoEF & CC) and due date for submission of the annual report as per Rule 13 of the BMWM Rules, 2016 stipulates as follows:</p> <ol style="list-style-type: none"> 1) Every occupier or operator of common bio-medical waste treatment facility shall submit an annual report to the prescribed authority in Form-IV, on or before the 30th June of every year; 2) 'The prescribed authority shall compile, review and analyse the information received and send this information to the Central Pollution Control Board on or before the 31st July of every year; 3) The Central Pollution Control Board shall compile, review and analyse the information received and send this information, along with its comments or suggestions or observations to the Ministry of Environment, Forest and Climate Change (MoEF & CC) on or before 31st August every year; and 4) The Annual Reports shall also be available online on the websites of Occupiers, State Pollution Control Boards and Central Pollution Control Board'. 	<p>information by the SPCBs/PCCs to CPCB by 31st of July every year .</p>
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2	Operation of Healthcare Facilities without obtaining Authorization under BMW Rules	As per Annual Report Information for the year 2014, there are 7521 out of 1,26,485 no. of Healthcare Facilities (HCFs) are operating without obtaining Authorization as required under BMW Rules.	All the HCFs which are in operation without obtaining authorization as required under BMW Rules, 1998 should be directed to obtain authorization from the prescribed authority. The HCFs which generate bio-medical waste but does not require authorization as per BMW Rules should be directed to take adequate steps i.e., to take a membership from the CBWTF located nearby and also authorized by the respective SPCB/PCC for ensuring safe disposal of bio-medical waste generated by such HCFs.
3	Captive Incinerators in violation of BMW Rules	There are 440 no. of captive incinerators and 82 no. of captive incinerator are operating without APCD or may be having single chamber which are in violation of BMW Rules, in the States/UTs like Andaman & Nicobar, Arunachal Pradesh, Assam, Jharkhand, Jammu & Kashmir, Kerala, Lakshadweep and Nagaland. Such, captive incinerators need to be closed by the respective SPCB/PCC in a time bound manner.	All the Captive BMW Incinerators operated by the HCFs, which are either single chamber or not connected with adequate APCD should be directed to upgrade APCD with immediate effect, failing which action should be taken for closure of such captive incinerators operated by the HCFs.
4	States/UTs which are yet to develop CBWTFs in the respective State/UT	05 States namely Arunachal Pradesh, Goa, Mizoram, Nagaland & Sikkim as well as 02 Union Territories (UTs) namely Andaman & Nicobar, Lakshadweep are yet to develop the CBWTFs in the respective States/UTs.	Action should be taken by the concerned States namely Arunachal Pradesh, Goa, Mizoram, Nagaland & Sikkim and UTs of A & N Islands, Lakshadweep for Development of Common Bio-medical Waste Treatment Facilities (CBWTFs) in the respective State/UT for ensuring proper management of bio-medical waste in accordance with the BMW Rules.

5	Installation of ETP/STP by the Healthcare Facilities	Many of the HCFs have not installed ETPs/STPs for ensuring proper treatment of liquid waste generated within the HCFs in compliance to the discharge norms as stipulated under BMW Rules. CPCB already requested all the SPCBs/PCCs for initiating further necessary action.	All the HCFs be directed to ensure compliance to the liquid waste discharge norms as stipulated under Schedule V of the BMW Rules, by installing adequate STP/ETP as required under the BMW Rules to ensure compliance to the discharge norms.
6	Bio-medical Waste Handling by the Healthcare Facilities	During the inspection of some of the Healthcare Facilities, it has been observed by CPCB that the HCFs are not properly handling the generated bio-medical waste w.r.to segregation of bio-medical waste at source including storage and disposal of the waste in accordance with the BMW Rules.	All the SPCBs and PCCs should ensure that the HCFs have adequate facilities for on-site segregation, intra-mural movement and safe storage of Bio-medical waste, prior to treatment and disposal either by captive treatment facilities or through CBWTFs.
7	Mercury waste disposal	Awareness with regard to the mercury spillage collection, storage of collected mercury spills and final disposal	<p>The HCFs need to take action for switch over to the non-mercury based medical instruments. Also, the HCFs have to take action for proper collection, storage and disposal of mercury bearing waste generated by the HCFs in accordance with the CPCB Guidelines.</p> <p>SPCBs and PCCs and State Health Departments have to organize awareness workshops and also have to take a policy decision phasing out of mercury based instruments by 2020 in line with the Minamata Convention. Also, mercury waste disposal should be in accordance with CPCB guidelines i.e., 'Environmentally Sound Management of Mercury Waste generated from Healthcare Facilities'.</p>

Annual Report Information on Bio-medical Waste Management for the Year 2014
(as submitted by SPCBs/PCCs and DGAFMS) (as on 05.04.2016)

S.No.	Name of the State/UT/DGAFMS (Date of submission of Annual Report)	Total no. of Healthcare Facilities (HCFs)	Total no. of Beds (Approx.)	No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)/Private agencies		No. of HCFs utilizing CBWTFs/private agencies	No. of HCFs having own Treatment and Disposal facilities	Authorization Status				Total no. of on-site treatment equipment (Excluding CBWTF) installed by HCFs						Total no. of treatment equipment installed at CBWTFs					Total Quantity of BMW generated (kg/day) (Approximately)	Total Quantity of BMW treated (kg/day) (Approximately)	No. of HCFs/CBWTFs violated BMW Rules	Total No. of Show cause notices/Directions issued to defaulter HCFs/CBWTFs	
				Operational	Under Construction			No. of HCFs require Authorization under BMW Rules	No. of HCFs does not require Authorization under BMW Rules	No. of HCFs applied for Authorization	No. of HCFs granted Authorization	Incinerator or		Autoclave	Microwave	Hydroclave	Shredder	Deep Burial	Incinerator	Autoclave	Microwave	Hydroclave					Shredder
												With APCD	Without APCD														
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)	(xxiii)	(xxiv)	(xxv)	(xxvi)	(xxvii)	(xxviii)
1	Andaman & Nicobar (02.04.2015)	30	1065	0	0	0	30	35	0	01	01	0	06	0	0	0	0	22	0	0	0	0	0	312	312	0	0
2	Andhra Pradesh (16.05.2015)	4132	86328	08	02	4082	01	4267	0	3009	3677	01	0	01	0	0	01	0	08	08	0	0	08	8184	8119	270	270
3	Arunachal Pradesh (31.03.2015)	10	623	0	0	0	05	INP	INP	10	10	03	02	12	0	0	35	0	0	0	0	0	58	58	0	0	
4	Assam (23.06.2015)	1014	19772	01 [£]	0	136	152	530	340	530	84	45	41	136	97	0	157	10	06	02	0	0	05	6329.5	6318.58	01	01
5	Bihar (08.06.2015)	600	6770	03	01	470	121	INP	INP	600	591	03	0	03	0	0	03	121	03	03	0	0	03	1280.66	1280.66	42	42
6	Chandigarh (31.03.2015)	746	3791	02	0	741	03	86	660	34	33	02*	0	0	0	0	03	0	0	0	0	0	2169.05	2169.05	31	01	
7	Chhattisgarh (26.11.2015)	397	3392	04	01	154	212	222	0	182	177	04	0	101	03	0	133	1228	02	04	0	0	04	387.63	387.63	10	05
8	Daman & Diu and Dadra & Nagar Haveli (07.05.2015)	102	617	01	0	102	0	102	0	68	36	0	0	0	0	0	0	0	01	01	0	0	01	192.27	192.27	0	0

S.No.	Name of the State/UT/DGAF MS (Date of submission of Annual Report)	Total no. of Healthcare Facilities (HCFs)	Total no. of Beds (Approx.)	No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)/Private agencies		No. of HCFs utilizing CBWTFs/private agencies	No. of HCFs having own Treatment and Disposal facilities	Authorization Status				Total no. of on-site treatment equipment (Excluding CBWTF) installed by HCFs						Total no. of treatment equipment installed at CBWTFs					Total Quantity of BMW generated (kg/day) (Approximately)	Total Quantity of BMW treated (kg/day) (Approximately)	No. of HCFs/CBWTFs violated BMW Rules	Total No. of Show cause notices/Directions issued to defaulter HCFs/CBWTFs	
				Operational	Under Construction			No. of HCFs require Authorization under BMW Rules	No. of HCFs does not require Authorization under BMW Rules	No. of HCFs applied for Authorization	No. of HCFs granted Authorization	Incinerator or		Autoclave	Microwave	Hydroclave	Shredder	Deep Burial	Incinerator	Autoclave	Microwave	Hydroclave					Shredder
												With APCD	Without APCD														
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)	(xxiii)	(xxiv)	(xxv)	(xxvi)	(xxvii)	(xxviii)
9	Delhi (02.06.2015)	5185	44995	03	0	5178	07	2740	INP	INP	746	0	0	07	0	0	0	INP	05	03	0	0	03	14941.07	14941.07	45	45
10	Goa (01.06.2015)	434	5181	0	0	0	01	434	0	440	434	01	0	186	0	0	0	01	0	01	0	0	0	9586	9586	0	0
11	Gujarat (05.08.2015)	26797	150000	18	06	24644	236	20504	6293	32771	30369	0	0	0	0	0	0	236	21	19	0	0	23	29900	29900	1028	1028
12	Haryana (11.01.2016)	2664	40059	11	0	2663	01	2664	0	2664	2664	01	0	01	0	0	1	0	11	11	0	0	11	6952.73	6952.73	17	01
13	Himachal Pradesh (27.03.2015)	718	12420	01**	0	398	320	0	0	527	253	02	0	03	0	0	02	320	02	02	0	0	02	1472.9	1472.9	08	14
14	Jharkhand (13.08.2015)	906	20635	01	INP	455	14	906	NA	529	389	15	02	93	0	01	307	25	02	02	0	0	01	5703.26	3502.346	152	131
15	J&K (18.12.2015)	1273	12853	04****	0	365	127	922	351	511	407	08	01	73	0	0	04	124	04	03	0	0	03	4682	3377.5	651	33
16	Karnataka (22.06.2015)	27211	171110	21	09	18119	9012	27211	0	16389	26755	10	0	14	0	0	1	9071	26	21	0	0	23	82123	82123	1214	1214
17	Kerala (23.09.2015)	5996	122377	01	0	5702	294	INP	INP	2449	1930	44	23	04	0	0	04	INP	05	05	0	0	03	52794.42	50631.15	62	22
18	Lakshadweep (22.09.2015)	20	250	0	0	0	11	11	INP	INP	INP	0	03	11	45	0	0	21	0	0	0	0	0	70	55	0	0
19	Madhya Pradesh (04.08.2015)	2853	71417	15	0	2793	60	2853	INP	2112	2088	2	0	163	0	0	572	121	15	15	0	1	17	9409	9140	212	212

S.No.	Name of the State/UT/DGAF MS (Date of submission of Annual Report)	Total no. of Healthcare Facilities (HCFs)	Total no. of Beds (Approx.)	No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)/Private agencies		No. of HCFs utilizing CBWTFs/private agencies	No. of HCFs having own Treatment and Disposal facilities	Authorization Status				Total no. of on-site treatment equipment (Excluding CBWTF) installed by HCFs						Total no. of treatment equipment installed at CBWTFs					Total Quantity of BMW generated (kg/day) (Approximately)	Total Quantity of BMW treated (kg/day) (Approximately)	No. of HCFs/CBWTFs violated BMW Rules	Total No. of Show cause notices/Directions issued to defaulter HCFs/CBWTFs	
				Operational	Under Construction			No. of HCFs require Authorization under BMW Rules	No. of HCFs does not require Authorization under BMW Rules	No. of HCFs applied for Authorization	No. of HCFs granted Authorization	Incinerat or		Autoclave	Microwave	Hydroclave	Shredder	Deep Burial	Incinerator	Autoclave	Microwave	Hydroclave					Shredder
												With APCD	Without APCD														
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)	(xxiii)	(xxiv)	(xxv)	(xxvi)	(xxvii)	(xxviii)
20	Maharashtra (14.03.2016)	48879	276192	29	04	41546	7333	28181	20698	25244	25244	16	0	686	122	0	1375	834	32	33	0	0	34	53385.5	53385.5	370	370
21	Manipur (21.07.2015)	587	2692	01	0	26	561	59	528	50	49	04	0	25	0	0	0	568	01	01	0	0	01	372.55	372.55	0	09
22	Meghalaya (20.03.2015)	699	6186	01	0	21	678	181	518	122	122	05	0	0	0	0	01	678	01	0	0	0	0	1068.78	1068.78	0	13
23	Mizoram (06.04.2015)	95	2714	0	0	0	95	40	55	3	25	04	0	09	0	0	0	94	0	0	0	0	0	2978.94	2978.94	0	0
24	Nagaland (27.04.2015)	141	2839	0	0	0	114	INP	INP	114	114	INP	04	04	INP			01	0			675	675	0	0		
25	Odisha (31.03.2015)	1603	37606	05	01	348	975	1606	01	214	330	05	0	971	08	0	41	973	06	03	04	0	08	11029.16	9905.29	101	77
26	Puducherry (16.04.2015)	130	11465	01	0	94	02	130	0	130	96	02	0	0	01	0	0	0	01	01	0	0	01	12982.1	12982.1	05	05
27	Punjab (31.03.2015)	4905	56438	04	0	4852	0	3479	1426	2429	2282	0	0	0	0	0	0	0	05	07	0	0	09	12810.8	12810.8	630	649
28	Rajasthan (02.12.2015)	4331	80734	10	03	2219	425***	2278	INP	2278	1494	0	0	0	0	0	0	425***	10	11	0	0	10	16749.02	15595.12	307	240
29	Sikkim (17.11.2015)	36	1460	0	0	0	0	0	0	28	28	06	INP	50	01	0	0	0	0	0	0	0	0	455.4	INP	01	01
30	Tamilnadu (21.09.2015)	6594	149380	11	03	6594	0	6594	INP	6229	6168	0	0	0	0	0	0	0	10	11	0	0	15	43284	43280	14	14
31	Telangana (18.09.2015)	4190	95675	09	02	3649	0	4223	INP	3948	3941	0	0	0	0	0	0	0	10	9	0	0	9	8733	8571	199	505

S.No.	Name of the State/UT/DGAFMS (Date of submission of Annual Report)	Total no. of Healthcare Facilities (HCFs)	Total no. of Beds (Approx.)	No. of Common Bio-medical Waste Treatment Facilities (CBWTFs)/Private agencies		No. of HCFs utilizing CBWTFs/private agencies	No. of HCFs having own Treatment and Disposal facilities	Authorization Status				Total no. of on-site treatment equipment (Excluding CBWTF) installed by HCFs						Total no. of treatment equipment installed at CBWTFs					Total Quantity of BMW generated (kg/day) (Approximately)	Total Quantity of BMW treated (kg/day) (Approximately)	No. of HCFs/CBWTFs violated BMW Rules	Total No. of Show cause notices/Directions issued to defaulter HCFs/CBWTFs	
				Operational	Under Construction			No. of HCFs require Authorization under BMW Rules	No. of HCFs does not require Authorization under BMW Rules	No. of HCFs applied for Authorization	No. of HCFs granted Authorization	Incinerator or		Autoclave	Microwave	Hydroclave	Shredder	Deep Burial	Incinerator	Autoclave	Microwave	Hydroclave					Shredder
												With APCD	Without APCD														
(i)	(ii)	(iii)	(iv)	(v)	(vi)	(vii)	(viii)	(ix)	(x)	(xi)	(xii)	(xiii)	(xiv)	(xv)	(xvi)	(xvii)	(xviii)	(xix)	(xx)	(xxi)	(xxii)	(xxiii)	(xxiv)	(xxv)	(xxvi)	(xxvii)	(xxviii)
32	Tripura (30.03.2015)	1258	4029	01	0	207	02	1258	0	564	564	01	0	395 HCFs disposing by deep burial					01	0	0	0	0	1336.5	1129.59	0	0
33	Uttarakhand (20.06.2015)	716	14971	02	0	429	265	716	0	435	330	04	0	06	01	01	06	218	02	02	0	0	02	2565.32	2565.32	208	10
34	Uttar Pradesh (01.04.2015)	7055	132210	17	01	6262	17	7055	0	3149	3670	17	0	11	0	0	10	62	17	17	0	01	15	29133	24397	776	28
35	West Bengal (22.06.2015)	7198	103174	06	0	5751	10	7198	3679	3519	3455	01	0	06	03	-	06	01	07	07	0	0	07	42236.99	22737	25	25
36	DGAFMS (22.07.2015)	408	34688	NA	NA	01	407	INP	INP	408	408	152	0	58	36	0	60	204	NA	NA	NA	NA	NA	18980	18980	0	0
37.	Total	169913	1786108	191	33	138001	21491	126485	34549	111690	118964	358	82	2634	317	02	2722	15752	215	202	04	02	218	495323.59	461952.88	5980	4965

Note: * Only one on-site incinerator with APCD is in operation
** CBWTF at Pathankot, Punjab is utilized to cater services to some HCFs located in Himachal Pradesh.
*** Mainly deep burial pits
**** 03 CBWTFs & the captive Facility in 01 HCF is also used by the associated HCFs located in J & K State.
INP : Information not provided;
NA : Not applicable
£ : 01 CBWTF & Incinerator facility at Hospital used by other 04 HCFs.