



LettNo.MHB/BMW001/Form-IV/BMW-Apr/2018

19th April, 2018

To,
The Environmental Officer,
Karnataka State Pollution Control Board,
Bangalore-City East
"Nisarga Bhavan", 3rd Floor,
Timmeriah road, 7th D Cross, Opp Pushpanjali Theatre,
Shivanagar, Bangalore-560 010.

Dear Sir,

Sub: Submission of Biomedical Waste Annual Report for the year January 2017 to December 2017

With reference to the above subject, kindly find enclosed herewith the Annual report in prescribed Form-IV for Biomedical Waste generated & disposed by M/s. Manipal Hospital, Bangalore for the period Jan 2017 to Dec 2017.

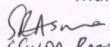
Kindly acknowledge the same.

Thanking you,

Deepak Venugopalan

Chief Operating Officer

Manipal Hospital, Bangalore


(SUGDA RASMA ASMA)
ENVIRONMENTAL ENGINEER

Enclosures: 1. Annual report in Form-IV and Annexure

2. Accident Report in Form-I

3. Minutes of Biomedical Waste Management Committee Meeting




Manipal Hospital HAL Airport Road

#98, HAL Airport Road, Bengaluru 560017 P +91 80 4011 9000. +91 80 2502 3344/4444 www.manipalhospitals.com



For any medical emergency

 **2222 1111**

Registered Office

Manipal Health Enterprises Pvt Ltd

The Annexe, #98/2, Rustom Bagh Road, Off HAL Airport Road, Bengaluru 560 017 P +91 80 4936 03000 www.manipalhospitals.com

CIN: U85110KA2010PTC052540



Form - IV

(See rule 13)

ANNUAL REPORT

[To be submitted to the prescribed authority on or before 30th June every year for the period from January to December of the preceding year, by the occupier of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF)]

Sl. No.	Particulars	Description
1	Particulars of the Occupier	Ms. Manipal Hospitals, Bangalore
	(i) Name of the authorised person (occupier or operator of facility)	Mr. Deepak Venugopalan, COO, Manipal Hospital, Bangalore
	(ii) Name of HCF or CBMWTF	Ms. Manipal Hospitals, Bangalore
	(iii) Address for Correspondence	Manipal Hospital, Bangalore No 98, Rustom Bagh, HAL Airport Road, Bangalore – 560 017
	(iv) Address of Facility	Manipal Hospital, Bangalore No 98, Rustom Bagh, HAL Airport Road, Bangalore – 560 017
	(v) Tel. No, Fax. No	Tel No: +91 80 4011 9000 Fax No : +91 80 2526 6757
	(vi) E-mail ID	deepak.venugopalan@manipalhospitals.com
	(vii) URL of Website	Yet to have
	(viii) GPS coordinates of HCF or CBMWTF	--
	(ix) Ownership of HCF or CBMWTF (State Government or Private or Semi Govt. or any other)	Private
	(x). Status of Authorisation under the Bio-Medical Waste (Management and Handling) Rules	Authorisation No.: KSPCB/BMW/2015-16/Reg. No. 89903/H 366 Dated: 13.07.2015 Valid Up to: 30.06.2018
(xi). Status of Consents under Water Act and Air Act	Consent No: AW-301638, Dated:15/12/2016 Valid up to: 30/06/2021	
2	Type of Health Care Facility	Super Speciality Quaternary care hospital
	(i) Bedded Hospital	No. of Beds : 600
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)	NA
	(iii) License number and its date of expiry	Authorisation No.: KSPCB/BMW/2015-16/Reg. No. 89903/H 366 Dated: 13.07.2015 Valid Up to: 30.06.2018
3	Details of CBMWTF	NA
	(i) Number healthcare facilities	NA

	covered by CBMWTF																																													
	(ii) No of beds covered by CBMWTF	NA																																												
	(iii) Installed treatment and disposal capacity of CBMWTF in Kg/day	NA																																												
	(iv) Quantity of biomedical waste treated or disposed by CBMWTF in Kg/day	NA																																												
4	Quantity of waste generated or disposed in Kg per annum (on monthly average basis)	Yellow : 13252.6 Kg																																												
		Red : 14765.9 Kg																																												
		White(Sharp Waste): 523 Kg																																												
		Blue(Glass Waste): 2520 Kg																																												
		Yellow(Chemo Waste)-179 Kg																																												
5	(i) Details of the Storage, treatment, transportation, processing and Disposal Facility	Size -NA-																																												
	(ii) Details of the on-site storage Facility disposal facilities	Capacity -NA- Provision of on-site storage : (cold storage or any other provision) - NA-																																												
		<table border="1"> <thead> <tr> <th>Type of treatment equipment</th> <th>No of units</th> <th>Capacity Kg/day</th> <th>Quantity Treated or disposed in kg per annum</th> </tr> </thead> <tbody> <tr> <td>Incinerators</td> <td></td> <td>-NA-</td> <td></td> </tr> <tr> <td>Plasma Pyrolysis</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Autoclaves</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Microwave</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Hydroclave</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Shredder</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Needle tip cutter or destroyer</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Sharps encapsulation or concrete pit</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Chemical disinfection</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Any other treatment equipment:</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Type of treatment equipment	No of units	Capacity Kg/day	Quantity Treated or disposed in kg per annum	Incinerators		-NA-		Plasma Pyrolysis				Autoclaves				Microwave				Hydroclave				Shredder				Needle tip cutter or destroyer				Sharps encapsulation or concrete pit				Chemical disinfection				Any other treatment equipment:			
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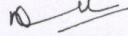
	(iii) Quantity of recyclable wastes sold to authorized recyclers after treatment in kg per annum.	Red Category (like plastic, glass etc.) -NA-								
	(iv) No of vehicles used for collection and transportation of biomedical waste	-NA-								
	(v) Details of incineration ash and ETP sludge generated and disposed during the treatment of wastes in Kg per annum	<table border="1"> <thead> <tr> <th></th> <th>Quantity generated</th> <th>Where disposed</th> </tr> </thead> <tbody> <tr> <td>Incineration</td> <td colspan="2" rowspan="3">-NA-</td> </tr> <tr> <td>Ash</td> </tr> <tr> <td>ETP Sludge</td> </tr> </tbody> </table>		Quantity generated	Where disposed	Incineration	-NA-		Ash	ETP Sludge
	Quantity generated	Where disposed								
Incineration	-NA-									
Ash										
ETP Sludge										
	(vi) Name of the Common Bio-Medical Waste Treatment Facility Operator through which wastes are disposed of	M/s. Anu Autoclave & Incin Services (w.e.f April 2018) CBWTF operator for period Jan 17 to Mar 18 was M/s. Maridi Eco Industries Pvt Ltd								
	(vii) List of member HCF not handed over bio-medical waste.	-NA-								
6	Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period	Yes								
7	Details of trainings conducted on BMW									
	(i) Number of trainings conducted on BMW Management	38								
	(ii) number of personnel trained	Total: 3069								
	(iii) number of personnel trained at the time of induction	311								
	(iv) number of personnel not undergone any training so far	--								
	(v) Whether standard manual for training is available?	Training through PPT								
	(vi) any other information)	Nil								
8	Details of the accident occurred during the year									
	(i) Number of Accidents occurred	Nil								
	(ii) Number of persons affected									
	(iii) Remedial Action taken (Please attach details if any)									
	(iv) Any Fatality occurred, details.									
9	Are you meeting the standards of air Pollution from the incinerator? How many times in last year could not met the standards?	-NA-								
	Details of Continuous online emission monitoring systems installed	-NA-								
10	Liquid waste generated and treatment	Liquid waste is treated in DEWAT & the								

	methods in place. How many times you have not met the standards in a year?	treated effluent is well within the limits Hospital has always met with the required effluent standards.
11	Is the disinfection method or sterilization meeting the log 4 standards? How many times you have not met the standards in a year?	-NA-
12	Any other relevant information (Air Pollution Control Devices attached with the Incinerator)	-NA-

Certified that the above report is for the period from Jan 2017 to Dec 2017.

Date: 19.04.2018

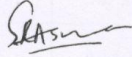
Place: Bangalore



Deepak Venugopalan

COO-Manipal Hospital, Bangalore

Name and Signature of the Head of Institution



ANNEXURE

BIOMEDICAL WASTE INVENTORY FROM JANUARY 2017 TO DECEMBER 2017

Sl. No.	Month	QUANTITY IN Kg				
		Yellow	Yellow-Chemo	Red	Blue	White-Sharps
1	Jan-17	16123	308	15634	2376	670
2	Feb-17	16123	442	15953	2119	418
3	Mar-17	15114	408	16263	2389	566
4	Apr-17	14781	545	15970	2157	510
5	May-17	14813	447	17295	2251	480
6	Jun-17	15936	0	11007.29	2025	401.22
7	Jul-17	10999.57	0	13421.25	2800.5	697.68
8	Aug-17	10575	0	13835.15	2724.26	585.29
9	Sep-17	11004.7	0	14794.91	2872.46	544.25
10	Oct-17	10693.32	0	14112.89	2937.7	491.23
11	Nov-17	11099.45	0.16	14400.58	2884.46	441.47
12	Dec-17	11768.9	0.26	14503.7	2703.77	473.99
Total BMW Generation Per Annum		159030.94	2150.42	177190.77	30240.15	6279.13
Avg BMW Generation per Month		13252.57833	179.2016667	14765.8975	2520.0125	523.2608333

S. S. S.