



LettNo.MHB/BMW001/Form-IV/BMW-June/2020

10th Jun, 2020

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

Dear Sir,

Sub: Submission of Biomedical Waste Annual Report for the year January 2019 to December 2019

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 2019 to Dec 2019.

Kindly acknowledge the same.

Thanking you,

Dr Manish Rai,
Hospital Director,
Manipal Hospital, Bangalore

Shreya Lakshmi 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

Re_gistered 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)	Dr Manish Rai, Hospital Director, 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	Not Applicable
	(v) Tel. No, Fax. No	Tel No: +91 80 4011 9000 Fax No : +91 80 2526 6757
	(vi) E-mail ID	info@manipalhospitals.com
	(vii) URL of Website	https://www.manipalhospitals.com/oldairportroad/bio-medical-report
	(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/HCE/2018/Reg. No. 145590/H-277, Dated 14 th June 2018, Valid Up to: 30.06.2021
(xi). Status of Consents under Water Act and Air Act	Consent No: AW-312819, Dated:24/05/2019 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/HCE/2018/Reg. No.145590/H-277 Dated: 14 th June 2018 Valid Up to: 30.06.2021



3	Details of CBMWTF		NA																																	
	(i) Number healthcare facilities covered by CBMWTF		NA																																	
	(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 : 12786.02 Kg																																	
			Red : 15006.43 Kg																																	
			White(Sharp Waste): 497.71 Kg																																	
			White with blue colour marking : 3422.27 Kg																																	
5	(i) Details of the Storage, treatment, transportation, processing and Disposal Facility		Yellow(Chemo Waste)-372.49 Kg																																	
	(ii) Details of the on-site storage Facility disposal facilities		Size -NA-																																	
			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></td> <td rowspan="10">-NA-</td> </tr> <tr> <td>Plasma Pyrolysis</td> <td></td> <td></td> </tr> <tr> <td>Autoclaves</td> <td></td> <td></td> </tr> <tr> <td>Microwave</td> <td></td> <td></td> </tr> <tr> <td>Hydroclave</td> <td></td> <td></td> </tr> <tr> <td>Shredder</td> <td></td> <td></td> </tr> <tr> <td>Needle tip cutter or destroyer</td> <td></td> <td></td> </tr> <tr> <td>Sharps encapsulation or concrete pit</td> <td></td> <td></td> </tr> <tr> <td>Chemical disinfection</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		
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		Any other treatment equipment:									
	(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 the period January 2019 to December 2019									
	(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		36								
	(ii) number of personnel trained		Total: 2633								
	(iii) number of personnel trained at the time of induction		820								
	(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										
	(ii) Number of persons affected		Nil								
	(iii) Remedial Action taken (Please attach details if any)										
	(iv) Any Fatality occurred, details.										
9	Are you meeting the standards of air		-NA-								



	Pollution from the incinerator? How many times in last year could not met the standards?	
	Details of Continuous online emission monitoring systems installed	-NA-
10	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?	Liquid waste is treated in DEWAT & the 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 2019 to Dec 2019.

Date: 10.06.2020

Place: Bangalore

Dr Manish Rai

Hospital Director, Manipal Hospital, Bangalore

Name and Signature of the Head of Institution

(SHREYA LAKSHMI ASMA)



ANNEXURE						
BIOMEDICAL WASTE INVENTORY FROM JANUARY 2019 TO DECEMBER 2019						
Sl. No.	Month	Quantity In Kg				
		Yellow	Yellow-Chemo	Red	White container (Glass waste)	White-Sharps
1	Jan-19	12443.11	257.16	14903.97	3446.70	431.37
2	Feb-19	11996.20	254.61	14770.70	3339.58	403.20
3	Mar-19	12268.60	251.73	14458.10	3494.66	463.72
4	Apr-19	11277.80	276.60	12607.50	3477.51	412.06
5	May-19	13511.00	377.43	15519.10	3799.66	494.28
6	Jun-19	11950.50	237.24	14089.30	3418.10	428.58
7	Jul-19	13427.10	366.62	15745.80	3896.65	535.75
8	Aug-19	14001.40	326.41	15739.40	3610.54	535.06
9	Sep-19	13278.70	432.61	15633.60	3388.16	577.98
10	Oct-19	12191.90	472.81	14362.70	3015.13	554.94
11	Nov-19	12734.90	688.82	15443.90	3068.07	580.00
12	Dec-19	14351.07	527.89	16803.08	3112.54	555.65
Total BMW Generation Per Annum		153432.27	4469.90	180077.15	41067.28	5972.57
Avg BMW Generation per Month		12786.02	372.49	15006.43	3422.27	497.71

SRK
(SUGDA RMOZA ASMA)



FORM - I

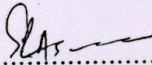
[(See rule 4(o), 5(i) and 15 (2))

ACCIDENT REPORTING

1. Date and time of accident: NA
2. Type of Accident: Nil
3. Sequence of events leading to accident: NA
4. Has the Authority been informed immediately: NA
5. The type of waste involved in accident: NA
6. Assessment of the effects of the accidents on human health and the environment: NA
7. Emergency measures taken: NA
8. Steps taken to alleviate the effects of accidents: NA
9. Steps taken to prevent the recurrence of such an accident: NA
10. Does your facility has an Emergency Control policy? If yes give details: Yes. Emergency team & Emergency Numbers have been displayed all across hospital & various protocols are in place.

Date: 10.06.20

Place: Bangalore

Signature

Designation: Environmental Engineer



BIOMEDICAL WASTE MANAGEMENT COMMITTEE – MINUTES OF MEETING

Date: 09.01.2020	Time: 9.00 AM –9.30 AM	Venue: 3 rd Floor Board Room
Members Present 1. Dr Sunil Karanth-Chairperson-HICC 2. Ms. Syeda Rabia Asma-Convener 3. Dr. Ranjeeta Adhikary-Infection Control Officer 4. Dr Shañtala Kurtkotl-Medical services 5. Ms Usha Rani Madhavan-HICC 6. Mr Chetan Shenoy-Human Resource 7. Ms Judith Vasani-Nursing 8. Dr Niranjan Rai-Administrator 9. Mr. Prasad D S –Housekeeping 10. Ms Pushpa Malar-HICC 11. Ms Mary Parotina-HICC 12. Ms Shakila Banu -HICC	Members Absent 1. Mr Sanjay Ghosh-Engineering 2. Ms Aparna S Vellore –Quality 3. Ms Jency Manoj-HICC	Invitees Present 1. Dr Kshitija Kulkarni-Clinical Operations

Sl. No.	Agenda	Points Discussed	Responsibility	Target Date/Date for Completion
1	Review of previous Minutes of Meeting	Half yearly Common Biomedical Waste treatment facility visit to be given this month -Common Biomedical Waste treatment facility visit was given on 31.07.19 Yellow liners being used by the Linen department for transportation of linen to be looked in as the liners have hospital details the same could lead to issues if found to be dropped nearby -Feasibility on procuring dark yellow shaded liners to be worked out -Yellow liners without label have been procured and provided to stores and the same is in use Closures for improper waste segregation waste escalations were not	Syeda Rabia Mr Albert Benjamin Ms Judith Vasani &	Completed Completed Completed



BIOMEDICAL WASTE MANAGEMENT COMMITTEE - MINUTES OF MEETING

ManipalHospitals

LIFE'S ON IT

		received from most of the in charges, chairperson informed HIC team and the Nursing Superintendent to ensure that all closures are being sent without further delay	Ms Usharani Madhavan	
2	Review of annual report to be submitted to KSPCB	Biomedical Waste Annual returns for the preceding year to be submitted on or before 30 th June 2020	--	--
3	Review of waste segregation, packing, transportation and storage	Biomedical Waste generation report for the period July 2019 to Dec 2019 was presented Improper Waste segregation trend for the period July 2019 to Dec 2019 was discussed	--	--
4	Review of license related to Biomedical waste from PCB	Biomedical Waste authorization is valid upto 30.06.2021	--	--
5	Review of accidents if any and its reporting	No accidents were noted & reported during the period July 2019 to Dec 2019	--	--
6	Other topics for discussion	Half yearly Common Biomedical Waste treatment facility visit to be given this month Status on Annual Health Checkup status of Housekeeping Staff was reviewed and it was suggested by the Infection Control Officer to cover Annual Health Checkup for Housekeeping Supervisors as well	--	31.1.2020 25.1.2020

Syeda Rabia Asma

Syeda Rabia Asma

Dr Sunil Karanth

Dr Sunil Karanth

Convenor of Biomedical Waste Management Committee, Manipal Hospital, HAL Airport Road, Bangalore	Signature and Name of Chairperson of Hospital Infection Control Committee, Manipal Hospital, HAL Airport Road, Bangalore
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