



**MANUAL
ON
BIO-MEDICAL
WASTE
MANAGEMENT
IN HEALTH CARE FACILITIES**



**DEPARTMENT OF HEALTH AND FAMILY WELFARE
GOVERNMENT OF UTTAR PRADESH**



Manual on Biomedical Waste Management in Health Care Facilities

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This version (1.5) of the 'Manual on Bio-Medical Waste Management in Health Care Facilities' has been prepared in the context of Biomedical Waste Management Rules, 2016 and Biomedical Waste Management (Amendment) Rules, 2018.

The Manual has been developed under the mandate of the Uttar Pradesh Health System Strengthening Project. The project is a five-year Financing Agreement between International Development Association and the State of Uttar Pradesh (Credit Number 5033-IN dated March 21, 2012). The implementing agency is the Department of Medical Health and Family Welfare, Government of Uttar Pradesh (GoUP), India.



Principal Secretary, Medical Health & Family Welfare, Government of Uttar Pradesh

Foreword

Bio-medical waste is a potential health hazard. It constitutes about 10-25% of the total waste generated in the course of health care delivery. There has been a long felt need for an evidence-based, comprehensive and user-friendly guide for ensuring effective bio-medical waste management at each level, i.e. places of its generation, collection, storage, transportation, treatment as well as disposal.

It gives me great pleasure to introduce this '*Manual on Bio-Medical Waste Management in Health Care Facilities*', developed by the Uttar Pradesh Health System Strengthening Project (UPHSSP). Based on evidence-based regulatory guidelines, this Manual sets the standards for implementation of biomedical waste management.

The contents in this manual are well organized and touch upon all relevant aspects of biomedical waste management at healthcare facilities. This manual is a timely contribution by UPHSSP as one of the several steps towards improving quality of health services delivery in Uttar Pradesh.

I sincerely hope that this manual achieves its intended purpose to act as a useful reference tool for planners as well as implementers towards effective biomedical waste management in healthcare facilities in Uttar Pradesh, and elsewhere.

Prasant Trivedi, IAS



Project Director, Uttar Pradesh Health System Strengthening Project, Uttar Pradesh
Preface

Uttar Pradesh Health System Strengthening Project (UPHSSP) is committed to improve quality of health services delivery in Uttar Pradesh. Establishment of Environment Management Cell (EMC) within the Directorate of Medical & Health (M&H) Services through UPHSSP is one such step in this direction. Environment Management Cell is an institutional structure for management and coordination of biomedical waste management and infection control in health facilities in Uttar Pradesh.

Improper management of biomedical waste generated in health facilities causes adverse impact on the health of the patients, their caregivers, the health workers, the community and the environment. It gives me immense satisfaction that the 'Manual on Bio-Medical Waste Management in Healthcare Facilities' has finally come out after a series of efforts done by the Environment Management team at UPHSSP. It provides a comprehensive and step-by-step guide for training and facility-level implementation of an effective biomedical waste management system. This manual is an opportune contribution by UPHSSP as one of the several steps towards ensuring good health and wellbeing of people in Uttar Pradesh.

I'm confident that this manual will be instrumental in training and equipping doctors and all paramedical staff of hospitals on biomedical waste management, hazards of untreated infectious waste and segregation and disposal practices as per the regulatory guidelines of the Government of India.

V. HekaliZhimomi, IAS



**Director General, Medical & Health Services,
Uttar Pradesh**
Introduction

Biomedical waste, if improperly disposed, is a pertinent health risk to the hospital staff, patients, attendants as well as the general population. It cannot be overemphasized that proper and effective management of biomedical waste is a pertinent public health priority.

The Environment Management Cell, at the Directorate of Medical & Health Services, established by the UPHSSP, has made significant contributions towards strengthening human and system capacities for effective biomedical waste management in healthcare facilities in the State. This Manual is one such step in this direction.

This evidence-based manual incorporates all aspects related to biomedical waste management as envisaged in the Biomedical Waste Management Rules, 2016 as well as the Biomedical Waste Management (Amendment) Rules, 2018. The Manual is beautifully organized with What, Where, Why, When, Who and How about the Biomedical Waste Management in healthcare facilities. It covers legal and administrative framework, key roles and responsibilities of stakeholders, as well as step-wise implementation plan for biomedical waste management at healthcare facilities.

I feel that the '*Manual on Bio-Medical Waste Management in Health Care Facilities*', would go a long way to train doctors and all paramedical staff on the necessity as well as the ways for effective biomedical waste management.

Dr. Padmakar Singh



ACKNOWLEDGEMENT

This 'Manual on Biomedical Waste Management in Healthcare Facilities' has been developed as a comprehensive guide for effective Bio-Medical Waste Management in health facilities in Uttar Pradesh. The processes and procedures laid down in this Manual are in accordance with Biomedical Waste Management Rules, 2016 and Biomedical Waste Management (Amendment) Rules, 2018.

This Manual details, inter alia, roles and responsibilities of key stakeholders, as well as step-by-step hospital-level implementation guide, covering authorization, contracting of services of Common Biomedical Waste Treatment Facilities (CBWTFs), training, hospital-specific bio-medical waste management planning, record keeping and Bio-Medical Waste Management Information System (BMW MIS).

This Manual has benefitted with guidance and support by many stakeholders at every step of its development.

First of all, we thank Mr. Prashant Trivedi, Principal Secretary, Department of Medical Health & Family Welfare, Uttar Pradesh, for his leadership in pushing reforms in health sector in UP and Ms. V. He kali Zhimomi, Project Director, UPHSSP, for her instrumental role and encouragement towards developing this Manual.

We are encouraged by the support by Dr. Padmakar Singh, Director General, Medical & Health Services, Uttar Pradesh and Dr. Rakesh Kumar, Director, Medical Care, Directorate of Medical & Health Services, Uttar Pradesh, for their constructive inputs during the development of this Manual as well as during the field-level implementation of the Bio-Medical Waste Management initiatives as per the guidelines developed by the UPHSSP.

Dr. Harsh Sharma, Additional Project Director, UPHSSP, provided his critical inputs during each phase of development of this Manual. Dr. DheerajTiwari, Assistant Director, Environment Management, UPHSSP, provided valuable insights on hospital functioning and practical tips to make this Manual more user-friendly.

This Manual has also benefitted a lot from the feedback by the team members from the Environment Management Cell, Strategic Planning Cell and the Data Resource Centre, Directorate of Medical & Health Services, Uttar Pradesh. The IT team from the Data Resource Centre assisted in the development of the Bio-Medical Waste Management Information System (BMW MIS). BMW MIS provides for effective reporting and monitoring of Bio-Medical Waste Management, which is an integral part of the processes laid down in the Manual.

Mr. Jorge A. Coarasa and Mr. Amith Nagaraj from the World Bank have been extremely generous to share their insights and experiences in bio-medical waste management from other geographies, both at national as well as global level.

This Manual also draws heavily from the bio-medical waste management practices followed at two leading medical institutions in the State, the King George's Medical University (KGMU) and Sanjay Gandhi Post Graduate Institute of Medical Sciences (SGPGIMS). The teams from both the institutions led by Dr. Kirti Srivastava and Dr. Harshvardhan, respectively, have been generous in sharing best practices and experiences that have further contributed to enhance the quality of this Manual.

Saloni Goel,

Environment Management Expert



CONTENTS

	Page No.
Section 1 Introduction	1
Manual Design	1
Manual Outcomes	2
Steering through the Manual	2
Section 2 The 5 W's And How of Biomedical Waste Management	4
WHAT is Biomedical Waste	4
WHERE is Biomedical Waste Generated	5
WHY should Biomedical Waste be segregated, Treated & Disposed	5
WHEN should Biomedical Waste be segregated	6
WHO should Segregate Biomedical Waste	6
HOW should Biomedical Waste be segregated, Treated & Disposed	7
Standards for Deep Burial	9
Section 3 Legal & Administrative Framework for Biomedical Waste Management	10
Main Features of these Rules	10
Penalties for Non-Compliance of Regulations	12
Section 4 Key Roles and Responsibilities in Biomedical Waste Management.....	13
State Level Bodies	13
District Level Bodies	15
Facility Level Bodies	16
Section 5 Step-Wise Implementation of Biomedical Waste Management Plan at Healthcare Facility	22
5.1 Constitution of the Biomedical Waste Management Committee and appointment of Nodal Officer	22
5.2 Contract with CBWTF for collection, transportation, Treatment & Disposal of BMW	22
5.3 Authorization from UPPCB	23
5.4 Annual Report	25
5.5 Facility Level BMW Management Plan	25
5.6 General guidelines for the common sites of Placement of Bins & Containers at HCFs	26
5.7 List of Consumables/Materials/Equipment	27
5.8 Display of Posters/IEC material	28



5.9	Plan for Bag Replacement & BMW Transfer to Collection Shed	.....	28
5.10	BMW Interim Collection Shed	.....	29
5.11	Effluent Treatment Plant	.....	30
5.12	Spill Management	.....	32
5.13	Facility Level Training Plan	.....	33
5.14	Facility level BMW Monitoring Plan	.....	34
5.15	Record Keeping	.....	35
5.16	Bio-Medical Waste Management Information System (BMW MIS)	.....	36
5.17	Reward for Good Work	.....	43
5.18	Immunization, Periodic Health Check-ups and Personal Protective Equipment for Healthcare Personnel	.....	43
5.19	BMW Management at Out Reach Activities and By Occasional Generators	.....	44

LIST OF ANNEXURES

Annexure 1	Healthcare Facility Biomedical Waste Internal Monitoring Form	.....	45
Annexure 2	Biomedical Waste (BMW) Generation Station Monthly Scoring Record	.....	46
Annexure 3	Biomedical Waste Collection Record	.....	47
Annexure 4	Consumables Supply Record	.....	48
Annexure 5	Biomedical Waste Storage Shed Cleaning Record	.....	49
Annexure 6	Health Care Facility Level Training Record	.....	50
Annexure 7	Contact Details of Concerned Officials & Resource Persons	.....	51
Annexure 8	List of Regional Offices of UPPCB	.....	52
Annexure 9	Detailed Specification of Consumables	.....	56
Annexure 10	Authorization or Renewal Form-II	.....	59
Annexure 11	Annual Report Form -IV	.....	62
Annexure 12	Mandatory Requirement for Private Health Care Facilities	.....	66
Annexure 13	Private Hospital Registration Form	.....	67



List of Abbreviations

BMW	Biomedical Waste
BPHC	Block Primary Health Centre
CBWTF	Common Biomedical Waste Treatment Facility
CHC	Community Health Centre
CMO	Chief Medical Officer
CMS	Chief Medical Superintendent
CPCB	Central Pollution Control Board
DHF	District Hospital Female
DHM	District Hospital Male
DMC	District Monitoring Committee
EP Act	Environment Protection Act
ETP	Effluent Treatment Plant
HCF	Healthcare Facility
IEC	Information, Education & Communication
NGT	National Green Tribunal
NO	Nodal Officer
OPD	Out Patients Department
OT	Operation Theatre
PPC	Puncture Proof Container
RO	Regional Office
STP	Sewage Treatment Plant
UPPCB	Uttar Pradesh Pollution Control Board



SECTION 1 INTRODUCTION

This manual has been developed to provide its readers necessary guidance for initiating steps for effective implementation of biomedical waste management at healthcare facilities (HCFs), within the purview of applicable environmental regulations. This manual shall be helpful to all officials responsible for training healthcare personnel for Biomedical Waste (BMW) Management in hospitals, development and implementation of hospital-specific BMW Management Plans, and monitoring and reporting activities in the context of BMW management at healthcare facilities in the Uttar Pradesh.

MANUAL DESIGN: This manual is arranged as given below:

Section 1 (Introduction): This section identifies the target audience for the Manual, learning outcomes and plan & design of the Manual.

Section 2 (The 5 W's And How of Biomedical Waste Management): This section explains what is (and isn't) BMW, where it is generated, why it must be segregated, treated and disposed according to norms, when BMW should be segregated and by whom. It also identifies the different categories of BMW, their segregation, treatment and ultimate disposal methodology.

Section 3 (Legal & Administrative Framework for Biomedical Waste Management): This section covers the main features of the legal provisions governing management and handling of BMW. In particular it clarifies the obligations and penalties applicable on health care facilities.

Section 4 (Key Roles and Responsibilities in Biomedical Waste Management): This section identifies the roles and responsibilities of key stakeholders (regulatory, government bodies and private organisations) at the state, district and facility levels.

Section 5 (Step-Wise Implementation of Biomedical Waste Management Plan at Healthcare Facility): This section covers the step-by-step guide for implementation of biomedical waste management systems in health care facilities. Notably it explains the procedures for obtaining authorization from UPPCB and contracting services of CBWTFs. It also provides guidelines for constitution of the BMW management committee, development of BMW management plan, training of health care personnel, monitoring, record keeping and BMW Management Information System (BMW MIS).



Manual Outcomes: After reading this manual, it is expected that the reader shall be able to

1. Appreciate the need for BMW management at HCFs, types of wastes and their potential health and environmental impacts on healthcare service providers, patients and communities.
2. Distinguish different categories of BMW, its segregation and treatment options.
3. Acquire an understanding about key legal requirements, administrative framework, and roles and responsibilities for implementing biomedical waste management at the healthcare facility and penalties in case of legal non-compliance.
4. Undertake procedures required for obtaining authorization of HCF (from UPPCB), contract service providers (CBWTFs), and ensure service delivery and procurement of consumables and materials required for BMW handling, transportation and storage.
5. Develop and implement a biomedical waste management plan for different work areas of the HCF.
6. Provide training on BMW management to different categories of healthcare personnel and create awareness on the subject.
7. Monitor training and implementation of biomedical waste management at the HCF.
8. Acquire a working knowledge of the BMW MIS.

Steering through the Manual: Where to find What?

			Page No.
1.	Authorisation from UPPCB	:	Section 5.3 Annexure 8 23 47
2.	Biomedical Waste Management Rules, 2016	:	Section 3 (Main features in brief) 10
3.	BMW Category-wise Segregation, Treatment & Disposal	:	Section 2 7
4.	BMW Collection Record	:	Annexure 3 42
5.	BMW Management Committee at HCFs	:	Section 5.1 Section 4 22 16
6.	BMW Management Information System (BMW MIS)	:	Section 5.13 31
7.	BMW Management Plan at HCFs	:	Section 5.4 23
8.	Contact Details of key personnel	:	Annexure 7 46
9.	Contract with CBWTF	:	Section 5.2 22
10.	Guidelines for BMW transfer from generation station to BMW interim collection shed	:	Section 5.8 27
11.	Guidelines for Display of IEC material/posters	:	Section 5.7 26
12.	Guidelines for Placement of Bins/Bags etc. for BMW	:	Section 5.5 24



13.	List of Consumables, materials, equipment for BMW management	:	Section 5.6 Annexure 4 Annexure 9	25 43 50
14.	Manual Plan	:	Section 1	1
15.	Monitoring of BMW management at HCFs	:	Section 5.11 Annexure 1 Annexure 2	29 40 41
16.	Rewards & Recognition	:	Section 5.14	38
17.	Roles & Responsibilities in BMW management	:	Section 4	13
18.	Interim Collection Shed construction & maintenance	:	Section 5.9 Annexure 5	27 44
19.	Target Audience of Manual	:	Section 1	1
20.	Training on BMW management at HCFs	:	Section 5.10 Annexure 6	28 45
21.	Immunisation, Periodic Health Check-ups and Personal Protective Equipment for Healthcare Personnel	:	Section 5.15	39
22.	What, Where, Why, When & Who of BMW Management	:	Section 2	4



SECTION 2

THE 5 W'S AND HOW OF BIOMEDICAL WASTE MANAGEMENT

WHAT

IS BIOMEDICAL WASTE

- According to World Health Organization, Health-care waste includes all waste generated by health-care establishments, research facilities, and laboratories. It also includes waste produced in the course of health care undertaken in the home (dialysis, insulin injections, etc.).
- Between 75 to 90 % of waste generated at healthcare facilities is “general” or non-hazardous waste. It includes waste generated during:
 - administrative activities
 - housekeeping activities
 - kitchen & food related
 - packaging
 - maintenance functions
- Only 10 to 25% of waste generated during delivery of patient care is “hazardous” in nature and carries various health risks. This hazardous or biomedical waste includes:
 - infectious waste cultures
 - sharps
 - pathological waste
 - pharmaceutical
 - Geno toxic
 - chemical and
 - radioactive wastes
- Approx. 250 gm biomedical waste is generated per bed at the healthcare facilities, which is hazardous and requires further treatment and disposal. Therefore, total quantities of biomedical wastes generated at different facilities in the state healthcare facilities is estimated at:
 - District hospitals (Average 100 beds) - 25 kg / day
 - Community Health Centre (30 beds) - 7.5 kg/day



WHERE

IS BIOMEDICAL WASTE GENERATED

Within healthcare facilities, different work areas generate different types of biomedical wastes. Broadly waste is generated in operation theatres & surgical wards, medical wards, laboratories, pharmaceutical & chemical stores, and dental clinics.

WHY

SHOULD BIOMEDICAL WASTE BE SEGREGATED, TREATED & DISPOSED

Anyone who either generates, handles or disposes biomedical waste or comes in contact due to accidental exposure is exposed to the risk of infection. The key risk groups include medical doctors, nurses, health-care auxiliaries, hospital maintenance personnel, visitors to health-care establishments, patients in health-care establishments or receiving home care, workers in support services allied to health-care establishments, such as laundries, waste handling, and transportation, and workers in waste disposal facilities (such as landfills or CBWTFs), including scavengers.

Risk Group	Nature of Hazard
<ul style="list-style-type: none">• Health Care Providers (HCPs)• Staff handling BMW in HCF and waste treatment/disposal facility	<ul style="list-style-type: none">• Infection• Injury• Toxicity
Visitors to Hospitals <ul style="list-style-type: none">• Patients• Relatives• Support Service Providers (laundries, transportation etc.)	<ul style="list-style-type: none">• Hospital Acquired Infection (HAI)• Blood-borne infection
Community <ul style="list-style-type: none">• Residents of areas neighboring HCFs, waste treatment/disposal facility, garbage dumps• Society at large	Pollution <ul style="list-style-type: none">• Air• Water• Soil



WHEN

SHOULD BIOMEDICAL WASTE BE SEGREGATED

BMW should be segregated at the POINT OF GENERATION.

If this is not done, it can result in:

- Infecting all waste (including general uninfected waste).
- It is very difficult to segregate BMW after it has got mixed.
- Increases risk of injury and infection for persons engaged in waste handling.

WHO

SHOULD SEGREGATE BIOMEDICAL WASTE

Persons generating the waste should segregate it/waste segregation at source

Doctors 	Nursing Staff 	Paramedical Staff 
Lab Technicians 	Ward Boy 	Sanitary Staff 
Patient 	Patient's Relative 	



HOW

SHOULD BIOMEDICAL WASTE BE SEGREGATED, TREATED & DISPOSED

Biomedical waste should be segregated into different categories to enable proper treatment and final disposal in accordance with Bio-Medical Waste Management Rules, 2016 and Bio-Medical Waste Management (Amendment) Rules, 2018. Given below are the different categories of bio-medical waste most likely to be generated in public health care facilities, and their prescribed segregation, treatment and final disposal method. For any other type of bio-medical waste not mentioned in the table below or any further clarification on segregation, treatment and disposal, refer to Schedule 1 of Bio-Medical Waste Management Rules, 2016 and Bio-Medical Waste Management (Amendment) Rules, 2018.

General waste should be collected separately and handed over to the municipal body.

Waste Category (Type)	Colour Code	Prescribed Treatment	Final Disposal
Human Anatomical Waste (human tissues, organs, body parts, fetus below viability period (as per Medical Termination of Pregnancy Act 1971, amended from time to time))	Yellow non-chlorinated plastic bag/bin	Incineration	Ash disposal in municipal landfill
Soiled Waste (items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs, discarded linen, mattresses, routine mask & gown, and bags containing residual or discarded blood and blood components)	Yellow non-chlorinated plastic bag/bin	Incineration	Ash disposal in municipal landfill
Expired or Discarded Medicines (Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.)	Yellow non-chlorinated plastic bag/bin	Incineration	Ash disposal in municipal landfill



<p>Microbiology, Biotechnology and other Clinical Laboratory Waste</p> <p>(Blood bags, laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures)</p>	<p>Yellow non-chlorinated autoclave/ microwave/ hydroclave safe plastic bag/bin</p>	<p>Pre-Treatment to sterilize/disinfect on-site as per WHO Guidelines*; thereafter incineration</p>	<p>Ash disposal in municipal landfill</p>
<p>Contaminated (Recyclable) Waste</p> <p>(disposable items other than sharps like tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes), vacutainers (with their needle cut) and gloves)</p>	<p>Red coloured non-chlorinated bag/bin</p>	<p>Sterilisation followed by shredding</p>	<p>Registered or authorised recyclers</p>
<p>Metallic Waste Sharps</p> <p>(needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpel, blades)</p>	<p>White translucent puncture proof, leak proof, tamper proof containers</p>	<p>Autoclaving followed by shredding</p>	<p>Iron foundries or sanitary landfill or designated concrete waste sharp pit</p>
<p>Glass Waste (intact & broken)</p> <p>(Broken/discarded and contaminated glass including medicine vials and ampoules except those contaminated with cytotoxic wastes)</p>	<p>Blue puncture proof and leak proof boxes or containers</p>	<p>Disinfection/sterilization</p>	<p>Recycler</p>
<p>Liquid waste</p>	<p>-</p>	<p>Pre-Treatment with Disinfectant/ 1-2% Hypochlorite Solution</p>	<p>Discharge in drains or ETP</p>

* WHO Guidelines on Safe Management of Wastes from Health-care activities and WHO Blue Book, 2014



Note: According to Bio-Medical Waste Management Rules, 2016 laboratory waste, microbiological waste, blood samples and blood bags are to be pre-treated through disinfection or sterilization on-site in the manner as prescribed by the World Health Organization (WHO) Guidelines on Safe Management of Wastes from Health-care activities and WHO Blue Book, 2014, and then sent to the common bio-medical waste treatment facility for final disposal.

Also, disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio-medical waste treatment facility. This is to be done with prior approval from the prescribed authority and as per the Standards specified in Schedule-II. The deep burial facility is to be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

Standards for Deep Burial

- Yellow (a), (b) and (c) wastes namely human anatomical, animal anatomical and soiled waste are permitted for deep burial only in rural or remote areas where there is no access to common bio-medical waste treatment facility after obtaining authorization from SPCB/PCCs.
- A pit or trench should be dug about two meters deep. It should be half filled with waste, and then covered with lime within 50 cm of the surface, before filling the rest of the pit with soil.
- It must be ensured that animals do not have any access to burial sites. Covers of galvanized iron or wire meshes may be used.
- On each occasion, when wastes are added to the pit, a layer of 10 cm of soil shall be added to cover the wastes.
- Burial must be performed under close and dedicated supervision.
- The deep burial site should be relatively impermeable and no shallow well should be close to the site.
- The pits should be distant from habitation, and located so as to ensure that no contamination occurs to surface water or ground water. The area should not be prone to flooding or erosion.
- The location of the deep burial site shall be authorized by the prescribed authority i.e CPCB/ SPCB or District Pollution Control Board Office.
- The institution shall maintain a record of all pits used for deep burial.
- The ground water table level should be a minimum of six meters below the lower level of deep burial pit.



SECTION 3

LEGAL & ADMINISTRATIVE FRAMEWORK FOR BIOMEDICAL WASTE MANAGEMENT

Management of Bio-Medical Waste (BMW) from generation to final disposal is regulated by the Bio-Medical Waste Management Rules 2016 and Bio-Medical Waste Management (Amendment) Rules, 2018. These rules regulate generation, handling, collection, storage, transport, treatment and disposal of BMW.

Main features of these Rules are given below:

1. These rules apply to all persons who generate, collect, receive, store, transport, treat, dispose, or handle bio medical waste in any form including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, ayush hospitals, clinical establishments, research or educational institutions, health camps, medical or surgical camps, vaccination camps, blood donation camps, first aid rooms of schools, forensic laboratories and research labs.
2. The Rules define an "**occupier**" as the person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever name they are called. The Occupier is duty-bound under the Rules to take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules.
3. The Rules define the "**operator** of a common bio-medical waste treatment facility" as a person who owns or controls a Common Bio-medical Waste Treatment Facility (CBMWTF) for the collection, reception, storage, transport, treatment, disposal or any other form of handling of bio-medical waste. The Operator is duty-bound under the Rules to take all necessary steps to ensure that the bio-medical waste collected from the occupier is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment, in accordance with these rules and guidelines issued by the Central Government or, as the case may be, the central pollution control board from time to time.
4. The Rules define the duties of Prescribed Authorities at the central, state, district and sub-district levels in Schedule III of the Rules. The State Pollution Control Board / Pollution Control Committee is the designated prescribed authority for the implementation of the Rules in the States / Union Territories.
5. The Rules describe the procedure for authorization of healthcare facilities and common bio-medical waste treatment facilities. Applications for authorization are to be submitted in



Form II and authorization is granted in Form III. The validity of authorization has been synchronized with the validity of consents.

6. The administrative framework and procedure for monitoring of BMW has been defined in the Rules. It includes the Ministry of Environment, Forest and Climate Change through Central and State Pollution Control Boards and State Health Secretaries. For this states are required to constitute a Advisory Committee at the state-level and District Monitoring Committees at the district-level.
7. Record keeping and reporting on BMW is mandatory, and is in the form of Annual Report (Form IV), Accident Reports (Form 1), and records related to the generation, collection, reception, storage, transportation, treatment, disposal or any other form of handling of bio-medical waste. The records and annual reports of health care facilities and common bio-medical waste treatment facilities are to be made available on their website.
8. The Rules mandate that vehicles for collection and transportation of BMW are to be fitted with GPS systems and bag/containers containing BMW are to have bar coding system for waste tracking.
9. Biomedical waste is to be segregated, collected, stored, transported, treated and disposed in accordance with Schedule I of the Rules. Standards for treatment and disposal are to be in accordance with Schedule II.
10. BMW is not to be mixed with other wastes. The Rules mandate that untreated BMW cannot be stored beyond a period of 48 hours without permission of the appropriate authority. Solid waste other than BMW is to be segregated and disposed-off in accordance with concerned solid waste management rules.
11. Non-chlorinated plastic bags are to be used for handling, storage and transportation of bio-medical waste.
12. Occupiers and operators of HCFs and CBWTFs are required to ensure that health care workers and others involved in handling of BMW are trained, provided necessary personal protective equipment, immunized and made to undergo periodic health check-ups.

In addition to these rules, the Central Pollution Control Board is entrusted with responsibility of developing technical standards and guidelines. Of these, the **“Guidelines for Common Treatment Facilities”** and **“Guidelines for Incinerators”** are directly applicable to biomedical waste management at the healthcare facilities. The guidelines for CBWTF provide detailed information on the various equipment and facilities standards required to be in place at CBWTF sites. The guidelines on Incinerators specify specifications for new incinerators to be installed at CBWTF.

In addition, under the **National Green Tribunal Act, 2010**, a National Green Tribunal (NGT) consisting of judicial members and technical experts in environment has been constituted with powers to effectively expedite environment related legal issues. Management of biomedical wastes in healthcare facilities has been taken with high priorities under such issues.



Penalties for Non-Compliance of Regulations

Biomedical waste management and handling rules have been framed under the **Environment (Protection) Act, 1986**. The occupier or an operator of a common bio-medical waste treatment facility shall be liable for all the damages caused to the environment or the public due to improper handling of bio- medical wastes. The occupier or operator of common bio-medical waste treatment facility shall be liable for action under section 5 and section 15 of the Environment Protection Act and Rules, 1986 in case of any violation.

The provisions for non-compliance under the rules are very strict and must be clearly understood by everyone responsible for managing biomedical wastes at the facilities.

Under Environment Protection Act, Clause 15, “whoever fails to comply with or contravenes any of the provisions of this act, or the rules made or the orders or directions issued there under shall, in respect of each such failure or contravention be responsible for each such failure or contravention, be punishable with imprisonment for a term which may extend to five years with a fine which may extend to one lakh rupees, or with both, and in case the failure or contravention continues, with additional fine which may extend to five thousands rupees for every day during which such failure or contravention continues after the conviction for the first such failure or contravention.”



SECTION 4

KEY ROLES AND RESPONSIBILITIES IN BIOMEDICAL WASTE MANAGEMENT

Management of biomedical wastes is a complex activity that involves many stakeholders within as well as external to healthcare sector. Apart from healthcare sector, other sectors organizations such as State Pollution Control Board and Municipal Bodies are other major stakeholders in biomedical waste management.

1. STATE LEVEL BODIES

1.1 Advisory Committee

The Advisory Committee is to be constituted at the state-level under the chairmanship of the health secretary to oversee implementation of the Rules in their respective state and to advise any improvements. The Advisory Committee is to include representatives from the Departments of Health, Environment, Urban Development, Animal Husbandry and Veterinary Sciences of that State Government or Union territory Administration, State Pollution Control Board or Pollution Control Committee, urban local bodies or local bodies or Municipal Corporation, representatives from Indian Medical Association, common bio-medical waste treatment facility and non-governmental organization. The Ministry of Health may co-opt representatives from the other governmental and non-governmental organizations having expertise in the field of bio-medical waste management.

The Advisory Committee is to meet at least once in six months and review all matters related to implementation of the provisions of the BMW Management Rules in the State.

1.2 UP Pollution Control Board (UPPCB)

State pollution Control Board is entrusted with monitoring and ensuring compliance to environmental regulations including Biomedical Waste Management Rules, 2016. The board has regional offices operating in different cities in the state. The key activities of importance to healthcare facilities under these rules include:

- Grant, renewal, suspension, refusal or cancellation of authorization to facilities under the Rules.
- Grant of authorization to Common Biomedical Waste Treatment Facilities.
- Action against health care facilities or common bio-medical waste treatment facilities for violation of these rules.
- Monitoring CBWTFs and Healthcare Facilities to ensure compliance to BMW Rules, 2016, and issue of notices, orders and penalties etc. for non-conformance as per Environment Protection Act, 1986.
- Organize training programs for staff of health care facilities and common bio-medical waste treatment facilities and State Pollution Control Boards or Pollution Control



Committees Staff on segregation, collection, storage, transportation, treatment and disposal of bio-medical wastes.

- Inventorisation of Occupiers and data on bio-medical waste generation, treatment & disposal.
- Compilation of data and submission of the same in Annual Report to Central Pollution Control Board within the stipulated time period.
- Grant consent to and publish the list of registered or authorized Recyclers.
- Undertake and support third party audits of the common bio-medical waste treatment facilities in their State.

1.3 Directorate- Medical & Health

Directorate of Medical Health & Family Welfare is the apex organization for administration of state's healthcare delivery system. An Environment Management Cell has been established in the Directorate under the World Bank funded U.P. Health System Strengthening Project (UPHSSP). The roles and responsibilities of the cell include the following:

- To ensure implementation of the rule in all health care facilities.
- To ensure allocation of adequate funds to government health care facilities for bio-medical waste management and for procurement of consumables for bio-medical waste management.
- Constitute Committees under the District Magistrate or Additional District Magistrate to oversee the bio- medical waste management in the Districts.
- Advise State Pollution Control Committees on implementation of these Rules.
- To ensure implementation of recommendations of the Advisory Committee in all the health care facilities.
- To provide oversight on services which are outsourced to private service providers, including waste treatment and disposal companies. This is to be undertaken in coordination with regulatory authorities and municipalities.
- To develop and implement an Information, Education and Communication (IEC) Plan to disseminate information and educational material so as to create awareness on sanitation, hygiene and good environmental practices among healthcare staff and workers, patients and the general community,
- To coordinate capacity building on environmental management practices and develop, implement and monitor training activities among healthcare staff and workers through development and implementation of a Training Plan.
- To serve as focal point for information on Environment Management in Healthcare sector by collection and compilation of information on Environmental Management experiences, best practices, technology innovations and emerging issues.



2. DISTRICT LEVEL BODIES

2.1 District Monitoring Committee (DMC)

The DMC has been constituted in each district to ensure compliance with Biomedical Waste Management Rules, 2016. It is chaired by the concerned District Magistrate (DM).

The Rules provide that the DMC shall comprise of Chief Medical Officer (CMO), representatives from State Pollution Control Board or Pollution Control Committee, Public Health Engineering Department, local bodies or municipal corporation, Indian Medical Association, common bio-medical waste treatment facility and registered non-governmental organizations working in the field of bio-medical waste management and the Committee may co-opt other members and experts, if necessary. The Chief Medical Officer (CMO) shall be the Member Secretary of this Committee.

The DMC is required to meet every quarter to monitor compliance of the provisions of these rules in the health care facilities generating bio-medical waste and in the common bio-medical waste treatment and disposal facilities, where the bio-medical waste is treated and disposed of. Its report shall be submitted once in six months to the State Advisory Committee, and a copy forwarded to State Pollution Control for taking further necessary action.

2.2 Municipal Bodies

Municipal bodies in different cities are responsible for safe transportation and disposal of general i.e. municipal waste as per Municipal Waste Rules, 2000. The municipal waste consists of non-hazardous wastes such as commercial wastes, garbage and household wastes. This also includes general waste such as paper, wrappers, plastic covers, vegetable etc. generated at hospitals and healthcare facilities by patients, visitors and employees. Municipal bodies also have a role in identification and provision of suitable land for establishment of Common Waste Treatment Facilities in their area of jurisdiction.

2.3 Chief Medical Officer

Chief Medical Officer of the district is responsible for the primary healthcare delivery system in the entire district. In relation to biomedical waste management, CMO has following specific roles and responsibilities:

- To enter into contract agreement with the successful bidder for provision of Common Treatment facility operating in the district.
- To provide financial resources to the district health facilities for payment of CBWTF services from allocated funds for the district.
- As Member Secretary of District Monitoring Committee (DMC).
- To monitor operational performance of CBWTF in association with State Pollution Control Board officials from Regional Offices of SPCB before award of contract and subsequently, by periodic inspections of CBWTF.



- To monitor biomedical waste management in District Healthcare facilities by periodic reporting as well as by site inspections of the facilities by officials deputed from CMO office.

3. FACILITY LEVEL BODIES

3.1 Healthcare Facility (HCF)

Role of Head of HCF: The Rules have designated the head of the HCF as “Occupier”. His role and responsibilities have been identified as:

- Assigning responsibility of Nodal officer in charge of biomedical waste management.
- Formation of Biomedical waste management committee and team.
- Allocation of resources- financial, personnel and equipment etc. for management of wastes.
- Ensuring monitoring of the activities.
- Take all necessary steps to ensure that bio-medical waste is handled without any adverse effect to human health and the environment and in accordance with these rules.
- Make a provision within the premises for a safe, ventilated and secured location for storage of segregated biomedical waste in colored bags or containers in the manner as specified in Schedule I, to ensure that there shall be no secondary handling, pilferage of recyclables or inadvertent scattering or spillage by animals and the bio-medical waste from such place or premises shall be directly transported in the manner as prescribed in these rules to the common bio-medical waste treatment facility or for the appropriate treatment and disposal, as the case may be, in the manner as prescribed in Schedule I.
- Pre-treat the laboratory waste, microbiological waste, blood samples and blood bags through disinfection or sterilization on-site in the manner as prescribed by the World Health Organization (WHO) Guidelines on Safe Management of Wastes from Health-care activities and WHO Blue Book, 2014, and then sent to the common bio-medical waste treatment facility for final disposal.
- Phase out use of chlorinated plastic bags (excluding blood bags) and gloves by the 27th March, 2019.
- Dispose of solid waste other than bio-medical waste in accordance with the provisions of respective waste management rules made under the relevant laws and amended from time to time.
- Not to give treated bio-medical waste with municipal solid waste.
- Provide training to all its health care workers and others, involved in handling of bio



medical waste at the time of induction and thereafter at least once every year and the details of training programmes conducted, number of personnel trained and number of personnel not undergone any training shall be provided in the Annual Report.

- Immunize all its health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National Immunization Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time.
- Establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or for the further treatment and disposal in accordance with the guidelines issued by the Central Pollution Control Board by 27th March, 2019.
- Ensure segregation of liquid chemical waste at source and ensure pre-treatment or neutralization prior to mixing with other effluent generated from health care facilities.
- Ensure treatment and disposal of liquid waste in accordance with the Water (Prevention and Control of Pollution) Act, 1974 (6 of 1974).
- Ensure occupational safety of all its health care workers and others involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipment's.
- Conduct health check up at the time of induction and at least once in a year for all its health care workers and others involved in handling of bio- medical waste and maintain the records for the same.
- Maintain and update on day to day basis the bio-medical waste management register and display the monthly record on its website according to the bio-medical waste generated in terms of category and colour coding as specified in Schedule I.
- Report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority **and also** along with the annual report.
- All the health care facilities (any number of beds) shall make available the annual report on its web-site within a period of two years from the date of publication of Bio-Medical Waste Management (Amendment) Rules, 2018.
- Inform the prescribed authority immediately in case the operator of a facility does not collect the bio-medical waste within the intended time or as per the agreed time.
- Establish a system to review and monitor the activities related to bio-medical waste management, either through an existing committee or by forming a new committee and the Committee shall meet once in every six months and the record of the minutes of the meetings of this committee shall be submitted along with the annual report to the prescribed authority and the healthcare establishments having less than thirty beds



shall designate a qualified person to review and monitor the activities relating to bio-medical waste management within that establishment and submit the annual report.

- Maintain all record for operation of incineration, hydro or autoclaving etc., for a period of five years.
- Existing incinerators to achieve the standards for treatment and disposal of bio-medical waste as specified in Schedule II for retention time in secondary chamber and Dioxin and Furans within two years from the date of this notification.

Role of Biomedical Waste Management Committee/Nodal Officer

- **Developing a facility level BMW Management Plan.**
- **Ensuring training of key staff associated with biomedical waste management.**
- **Ensure availability of waste management materials such as bags, bins, trolleys, personal protective equipment, chemical disinfectants, cleaning equipment etc.**
- **Ensure recording of quantity and types of different categories of waste generated for transportation and disposal.**
- **Ensure proper transportation of wastes to temporary storage area and from facility to common treatment facility on specified durations as per regulations.**
- **Ensure implementation of incident and mitigation control procedures for needle injuries, waste spills, etc. associated with waste handling.**
- **Ensure immunization of all health care personnel in the health care facility.**

Role of Departmental Heads

Departmental heads are responsible for the segregation, storage and disposal of wastes generated in their departments.

Role and Responsibilities of Medical Officers

The medical officers are responsible for protecting their own patients from other infected patients and from hospital staff who might be infected and notifying cases of hospital acquired infections to authorities.

They have a special role in ensuring good waste segregation practices.

Role of Nursing in-Charge of Ward

- Ensuring good waste segregation practices.
- Maintaining hygiene and good nursing practices in the ward.
- Monitoring septic techniques such as hand washing and isolation practices.
- Reporting any case of infection development immediately to the concerned physician.
- Limiting patient's exposure to infections from visitors, hospital staff, other patients or equipment used for diagnosis.



Role of Housekeeping Department

The housekeeping services are responsible for regular cleaning of all surfaces to maintain a high standard of hygiene at the facility. The department with Biomedical Waste Management Committee must develop practices, usage of specific containers, frequency of cleaning and wastes transfer and storage for disposal.

The staff is responsible for:

- Internal collection of waste containers, replacement of used bags with new bags and containers and their transport to central storage facility of the site on daily basis.
- Coordinate with stores and supply department to ensure availability of appropriate quantities of bags and containers, personal protective clothing and waste collection and transportation trolleys at all times.
- Prevent unsupervised dumping of waste containers on the hospital grounds.
- Ensure regular transport of general wastes to area dedicated for their storage in the facility.
- Ensure regular transportation of general wastes from the facility to municipal disposal sites by municipal vehicles.

Role of Central Sterilization Services

The department is responsible to clean, decontaminate, test, prepare for use, sterilize and store aseptically all sterile equipment.

Role of food service department

The department must ensure appropriate handling, storage and disposal of food wastes.

Role of laundry service

The department must ensure appropriate flow of linen and separation of 'clean' and 'dirty' areas.

3.2 Common Biomedical Waste Treatment facilities (CBWTF)

Common Biomedical Waste Treatment facilities (CBWTF) are facilities established to collect, treat and dispose biomedical waste from healthcare facilities. The facilities operate incinerator, autoclave and shredders etc. to treat different types of biomedical wastes. These provide safe and economical options for treatment and disposal of wastes. Approximately twenty such facilities are currently registered with UP Pollution Control Board in the state of Uttar Pradesh. Each facility is required to provide services for an area of 150 km around the facility as per CPCB guidelines.

Their specific roles and responsibilities include:

- Take all necessary steps to ensure that the bio-medical waste collected from the occupier



is transported, handled, stored, treated and disposed of, without any adverse effect to the human health and the environment, in accordance with these rules and guidelines issued by the Central Government or, as the case may be, the central pollution control board from time to time.

- Ensure timely collection of bio-medical waste from the occupier as prescribed under these rules.
- Establish a Bar- Code System for bags or containers containing bio-medical waste to be sent out of the premises or for the further treatment and disposal in accordance with the guidelines issued by the Central Pollution Control Board by 27th March, 2019.
- Inform the prescribed authority immediately regarding the occupiers which are not handing over the segregated bio-medical waste in accordance with these rules.
- Provide training for all its workers involved in handling of bio-medical waste at the time of induction and at least once a year thereafter.
- Assist the occupier in training conducted by them for bio-medical waste management.
- Undertake appropriate medical examination at the time of induction and at least once in a year and immunize all its workers involved in handling of bio-medical waste for protection against diseases, including Hepatitis B and Tetanus, that are likely to be transmitted while handling bio-medical waste and maintain the records for the same.
- Ensure occupational safety of all its workers involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipment.
- Report major accidents including accidents caused by fire hazards, blasts during handling of bio-medical waste and the remedial action taken and the records relevant thereto, (including nil report) in Form I to the prescribed authority **and also** along with the annual report.
- Maintain a log book for each of its treatment equipment according to weight of batch; categories of waste treated; time, date and duration of treatment cycle and total hours of operation.
- Allow occupier, who are giving waste for treatment to the operator, to see whether the treatment is carried out as per the rules.
- Shall display details of authorization, treatment, and annual report etc on its web-site.
- After ensuring treatment by autoclaving or microwaving followed by mutilation or shredding, whichever is applicable, the recyclables from the treated bio-medical wastes such as plastics and glass, shall be given to recyclers having valid consent or authorization or registration from the respective State Pollution Control Board or Pollution Control Committee.
- Supply non-chlorinated plastic coloured bags to the occupier on chargeable basis, if required.



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- Common bio-medical waste treatment facility shall ensure collection of biomedical waste on holidays also.
 - Maintain all record for operation of incineration, hydroor autoclaving for a period of five years; and
 - Upgrade existing incinerators to achieve the standards for retention time in secondary chamber and Dioxin and Furans within two years from the date of this notification.



SECTION 5

STEP-WISE IMPLEMENTATION OF BIOMEDICAL WASTE MANAGEMENT PLAN AT HEALTHCARE FACILITY (HCF)

5.1 Constitution of the Biomedical Waste Management Committee and appointment of Nodal Officer

Person Responsible: Facility in-charge

For district-level (more than 30) and 30 beds HCFs, the BMW Committee should comprise the following:

- SMO/ CMO/ Medical Superintendent (Chairperson)
- District Quality Consultant/ District BMW Officer (Invitee Members)
- Quality Manager
- Hospital Infection Control Nurse/ Officer
- Nursing in-charge
- Medical Officer (Surgery)
- Medical Officer (Emergency)
- Medical Officer (Gynae & Obs)
- Microbiologist/ Pathologist
- OT Nurse / Technician/ Assistant
- Lab Technician
- Housekeeping in-charge
- Pharmacist

For block-level HCFs (less than 30 beds) the facility in-charge, i.e. Medical Superintendent (MS) or Medical Officer-in-charge (MOIC) should be designated as nodal officer for biomedical waste management.

The representative of CBWTF providing services to the HCF may also be invited for the BMW Committee meetings.

5.2 Contract with CBWTF for collection, transportation, Treatment & Disposal of BMW

Person Responsible: Facility in-charge with assistance from Nodal Officer

- In case a contract has been signed with a CBWTF, a copy of rate contract should be obtained from Chief Medical Officer(CMO).
- In case a contract has not been signed, a contract should be signed with a CBWTF at the earliest.
- Read the contract and understand the extent of services that are to be provided by the CBWTF. The contract should cover services (collection, transportation, treatment and disposal of BMW), and may also cover supply of consumables



(colour coded bags, colour coded bins, hub cutter, puncture-proof container, PPE etc.).

- In case the contract covers supply of consumables, obtain the list of consumables to be provided by the CBWTF. In case not, procure the required consumables otherwise.
- Should keep a record of BMW collected in a register. A format for the same is enclosed as Annexure 3.
- Should intervene if not satisfied with CBWTF services.

5.3 Obtaining Authorization from UPPCB

Person Responsible: Facility in-charge with assistance from Nodal Officer

Procedure for Authorization

In charge of health care facility responsible for Authorization under BMW Management Rules, 2016 from UPPCB is mandatory. Application for it should be made two months after signing the contract with the CBWTF. Application must be submitted to the UPPCB for fresh or renewal of authorization in prescribed format as per Form II as prescribed under Bio Medical Waste Management Rules, 2016 given at **Annexure 10 (Form II)**

Information requirements of Application

- Particulars of Health Care Facility: Name, Address, Contact Details etc.
- Validity of Consents under Water (Prevention and Control of Pollution) Act, 1974 and Air (Prevention and Control of Pollution) Act, 1981 (in case of bedded HCFs)
- Detail of HCF: Number of beds, Average number of patient treated per month
- Category wise Quantity of Waste Generated or disposed by the health care facility
- Detail of any treatment facility available in the premises of health care facility
- Submission of fees as per following table

No. of Beds	Fee Amount (Rs.) per annum For fresh Application/ Renewal	DD in favour of
Up to 49	500	Concerned RO, payable in concerned city
50 or above and less than 100	2000	Concerned RO, payable in concerned city
100 or above and less than 200	5000	Concerned RO, payable in concerned city
200 or above and less than 500	10,000	UPPCB, payable at Lucknow



500 or above	20,000	UPPCB, payable at Lucknow
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- Enclose a copy of the agreement with the CBWTF for collection, transportation, treatment & disposal of BMW.
- Enclose record of BMW (details) collected in the last two months from the HCF by the concerned CBWTF. For this, a copy of log book/register used for maintaining record of BMW handed over to CBWTF may be submitted.

Validity of Authorization

(a) For bedded Healthcare Facilities

The validity of this authorization is synchronized with the validity of:

- 1) Consent under Air (Prevention and Control of Pollution) Act, 1981
- 2) Consent under the Water (Prevention and Control of Pollution) Act, 197

(b) For non-bedded Healthcare Facilities

One-time authorization is required to be obtained from UPPCB respective in case of non-bedded health care facilities such as clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, etc. These HCFs have to apply for a fresh authorization to amend earlier authorization in case there is any change or variance in relation to the activities of HCF.

Authorization for non-bedded HCFs shall be deemed to have been granted, if not objected by the prescribed authority within a period of ninety days from the date of receipt of duly completed application along with such necessary documents.

Approval for Deep Burial Pits (For HCFs Not Under Agreement with CBWTF)

HCF if intends dispose BMW through deep burial pits, they shall obtain authorization from UPPCB office for establishment of deep burial pits and records of such pits needs to maintained.

Disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio-medical waste treatment facility. This will be carried out with prior approval from the prescribed authority and as per the Standards specified in Schedule-III. The deep burial facility shall be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

For bed strength upto 200, authorization is granted by the concerned Regional Office (RO) of UPPCB. For bed strength exceeding 200, the RO office recommends the case to UPPCB Head Office (Lucknow) from where the authorization is granted.

The list of Regional Offices of UPPCB, contact details of Regional Officers and districts falling within the jurisdiction of each Regional Office is given as Annexure 8.



5.4 Annual Report

Person Responsible: Facility in-charge

As per the Bio Medical Waste Management Rules, 2016, the healthcare facility is required to submit the Annual Report to the UPPCB on or before 30th June every year, for the period from January to December of the preceding calendar year.

The annual report contains details of following:

- Particulars of Occupier/ HCF
- Quantity of waste generated in kg/annum
- Details of storage, treatment, transportation, processing and disposal facility
- Details of training conducted on Bio Medical Waste Management
- Details of accident Occurred
- Details Emission and Effluent testing

Annual Report submitted to the UPPCB must also be enclosed with following details:

- Training imparted to the Health Care Workers involved in handling of bio-medical waste
- Minutes of Meeting of BMW Management Committee
- Details of Accident Occurred during one year, along with the remedial steps taken
- Records of testing of Emission of DG Sets / boilers
- Records of Effluent generated and its characteristics from health care facility
- Records of pre-treatment of specified waste categories Record of recyclable waste handed over to the authorized recycler in kg/annum (where captive treatment facility is allowed by the SPCB/PCC)
- Records of health status of the Health Care Workers involved in handling of biomedical waste
- Records of immunization of Health Care Workers involved in handling of biomedical waste

Each healthcare facility must also ensure that the annual report submitted to the concerned SPCB/PCC is also published in its own website

Please refer to Annexure 11: FORM IV: Annual Report

5.5 Facility Level BMW Management Plan

Person Responsible: Facility in-charge and Nodal Officer

The following steps may be followed for developing the plan:

- Identify points of BMW generation, i.e. wards, OTs, labour room, labs, OPDs, emergency etc.
- Identify and designate one responsible person for each point of generation. The person may be head of department/doctor/matron etc.
- Identify location at each point of BMW generation for placement of BMW collection bins and display (IEC) material/posters.
- Identify monthly requirements of waste bags, bins, needle cutters, trolleys etc. and ensure their availability.



- Monitor supply of consumables (waste bags, bins, needle cutters, trolleys etc.) as per Consumables Supply Record (Enclosed as Annexure 4)
- Ensure availability and display of IEC material/posters.
- Identify location of BMW Interim Collection Shed and ensure its construction and maintenance as per guidelines.
- Develop a schedule for Bag Replacement and transfer of bags containing BMW to interim collection shed.
- Develop and implement a facility level Training Plan.
- Develop and implement a facility level BMW Monitoring Plan.
- Develop a calendar for meetings of BMW Management Committee.
- Identify ways for incentivizing/rewarding good work.

5.6 General guidelines for the common sites of Placement of Bins & Containers at HCFs
Person Responsible: Nodal Officer and Members of BMW Management Committee

CHC/BPHC	No	DHM/DHF	No
OPD/Injection Room	1	OPD	2
Medicine distribution/Pharmacy	1	Medicine distribution	1
Immunization center	1	Immunization center	1
Dressing room	1	Dressing room	1
Pathology	1	Injection Room	1
Eye	1	Eye	1
OT + Delivery Room	2	OT + Delivery Room	3
In-Patients(1Set for every10 beds)	3	In-Patients(1Set for every10 beds)	10-25
Radiology	1	Radiology	1
TB/Malaria/Other Prog.	2	TB/Malaria/Other Prog.	2
Emergency	1	Pathology	2

For Sharps Management: Needle cutters / destroyers along with Polycarbonate Containers (PPCs) for storage of sharps must always be available at following minimum locations:

- OPD Injection room
- Immunization room
- Nursing station in each ward
- Operation theatre
- Pathology- sample collection room
- Labor room



- Blood Bank

5.7 List of Consumables/Materials/Equipment:

Person Responsible: Facility in-charge and Nodal Officer

The following list consumables/material/equipment may serve as a guideline for their procurement. The specifications for the same are attached as Annexure 9.

For district and block level hospitals, the consumables may be procured in accordance with the following table:

S.No.	Name of item	Periodicity of supply	Quantity for each DHM/DHF/DHC	Quantity for each Block level HCFs (30 bed)
1	Trolleys	One time	10 up to 100 beds +1 for every additional 25 beds	6
2	Wheel Barrows	One time	2 for up to 100 beds; 3 for up to 200 beds; 4 for up to 300 beds, 5 for greater than 300 beds	1
3	A set of Red, Yellow, Blue & Black color Bins of 12 lt	every year	12 sets for up to 100 beds + 1 set for every additional 20 beds	6 sets
4	A set of Red & Yellow color Bins of 40 lt	every year	25 sets for up to 100 beds + 1 set for every additional 25 beds	15 sets
5	One Blue color Bin of 25 lt	every year	25 for up to 100 beds + 1 set for every additional 25 beds	15
6	Manual Hub Cutter	every year	15 up to 100 beds +1 for every additional 25 beds	10
7	Gum Boot	every year	2 pairs for up to 100 beds; 3 pairs for up to 200 beds; 4 pairs for up to 300 beds, 5 pairs for greater than 300 beds	1 pair
8	Gloves	every year	2 pairs for up to 100 beds; 3 pairs for up to 200 beds; 4 pairs for up to 300 beds, 5 pairs for greater than 300 beds	2 pairs
9	Goggles	every year	2	1
10	Plastic Helmet	every year	2	1



11	Apron	every month	2 for up to 100 beds; 3 for up to 200 beds; 4 for up to 300 beds, 5 for greater than 300 beds	2
12	A set of Red & yellow color Bags of 12 lt	every day	24 sets for up to 100 beds + 2 sets for every additional 20 beds	6 sets
13	A set of Red & yellow color Bags of 40 lt	every day	40 sets for up to 100 beds + 2 sets for every additional 25 beds	20 sets
14	Polycarbonate Jars/White Puncture Proof Containers	every day	1 one liter PPC for up to 300 beds + 1 one liter PPC if bed strength exceeds 300	1 one liter PPC
15	Face Mask	every day	10 for up to 100 beds + 5 for every additional 100 beds	2

5.8 Display of Posters/IEC material

Person Responsible: Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

- Ensure that posters indicating BMW segregation are displayed above the BMW collection bins
- Ensure that posters indicating hand washing best-practices are displayed above wash-basins
- Ensure that name, designation, photo and contact number of designated responsible staff for each BMW generation station is prominently displayed at that station.
- Ensure that posters are replaced in case of damage or defacement

5.9 Plan for Bag Replacement & BMW Transfer to Collection Shed

Person Responsible: Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

- Ensure that BMW bins are emptied out periodically, as per requirement
- Bag replacement methodology:
 - Bag should be changed after it is full to 2/3rd capacity: this may entail change of bags more than once a day at some stations
 - The sanitation worker should be wearing necessary protective gear while emptying the bin and transporting the bag
 - Bag should be tied at the top while it is still in the bin
 - Bag should then be transferred from the bin into the wheelbarrow



- Contents of blue bin (glass sharps) and white puncture proof container/hub cutter (metallic sharps) should be transferred carefully into the big blue bin and puncture proof container respectively carried in the trolley.
- A fresh bag should be placed in the bin ensuring that its edges are folded outwards at the rim of the bin
- The sanitation worker should only load the trolley till the rim. He/she may return to collect other bags after transferring the load in the BMW interim collection shed.
- The sanitation worker should wheel the trolley along a designated route and avoid diverging from the route. The route should be identified keeping in mind its width so that the trolley may be wheeled without hitting walls or patients/passers-by.
- Red bags should be placed inside the red collections enclosure, the yellow bags in the yellow collection enclosure, and blue and white bins should be placed in the blue collection enclosure.
- Bag containing discarded/expired medicines should be collected periodically from the pharmacy/store, and placed in the yellow collection enclosure.

5.10 BMW Interim Collection Shed

Person Responsible: Facility in-charge and Nodal Officer

The following guidelines may be followed for construction and maintenance of the BMW interim storage shed:

- The location of interim collection shed must be away from the public/ visitors access.
- Exhaust fans should be provided in the waste collection room for ventilation.
- The shed shall have separate enclosure for each bag colour, i.e. three enclosures one each for yellow bags, red bags and blue bins/PPCs.
- The door of each enclosure shall be colour coded to reflect contents, and should have a prominently displayed biohazard sign.
- The shed shall be covered.
- The shed shall be located near the gate of the facility so that it may be easily accessible by the BMW collection vehicle of the CBWTF.
- The shed shall enough sufficient open, un-encroached space in front of it to allow for parking and free movement of CBWTF vehicle and staff.
- It is to be ensured by the health care facility that such collection shed is safety inspected for potential fire hazard and based on such inspection preventive measure has to be taken by the health care facility like installation of fire extinguisher, smoke detector etc.
- The shed should have a water supply in its vicinity that may be used for washing of the floor and walls of the shed.



- Sign boards indicating relevant details such as contact person and the telephone number should be provided.
- A record of cleaning the shed shall be maintained. Format for the same is enclosed as Annexure 5.
- The floor and walls of the shed shall be lined with tiles to enable easy cleaning, have proper sloping and have a drain through which wash water/drained liquids may be drained into the HCF ETP.
- It is to be ensured that no general waste is stored in the central waste collection area.
- To ensure there is no pilferage of recyclables biomedical waste
- The door of each enclosure shall be kept locked at all times. It shall be opened only to allow for storage of BMW bags, for handing over waste to CBWTF, for cleaning and inspection. Keys of locks shall be kept in triplicate, one set each with the sweeper, CBWTF and a member of the BMW Committee.

5.11 Effluent Treatment Plant

Effluent Treatment Plant should be provided in every HCF to treat the wastewater generated from the hospital in order to comply with the effluent standards prescribed under the BMWM Rules, 2016. Sources of wastewater generation from the hospital are wards, laboratories, used disinfectants, floor washing, washing of patient's area, hand washing, laundry, discharge of accidental spillage, firefighting, bathroom/toilet etc. Liquid waste generated due to use of chemicals or discarded disinfectants, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities should be collected separately and pre-treated prior to mixing with rest of the wastewater from HCF.

The combined wastewater should be treated in the ETP having three levels of treatment; primary, secondary and tertiary;

- Primary Treatment: equalization, neutralization, precipitation and clarification
- Secondary Treatment: High rate aerobic biological treatment, secondary settling tank
- Tertiary Treatment: Pressure Filtration, Disinfection and disposal to drain/sewer



5.12 Spill Management

Person Responsible: Nodal Officer, Members of the BMW Management Committee and ward in charge

Healthcare Facilities have to ensure environmentally sound management of mercury or other chemical spills.

In case of mercury spill, the following steps as given in CPCB guidelines on “Environmentally Sound Techniques for Mercury Waste Generated from Healthcare Facilities” shall be followed;

- Evacuate area: As far as possible, keep people who are not involved in the cleanup away from spill area to limit exposures and to prevent the spread of contamination.
- Put on face mask: In order to prevent breathing of mercury vapour, wear a protective face mask.
- Remove jewelry so that the mercury cannot combine (amalgamate) with the precious metals.
- Put on rubber or latex gloves. If there are any broken pieces of glass or sharp objects, pick them up with care. Place all broken objects on a paper towel, fold the paper towel and place in a puncture proof yellow bag or container. Secure the plastic bag/container and label it as items contaminated with mercury.
- Locate all mercury beads and look for mercury in any surface cracks or in hard-to-reach areas of the floor. Check a wide area beyond the spill. Use the flashlight to locate additional glistening beads of mercury that may be sticking to the surface or in small cracked areas. Cardboard sheets may be 'used to push the spilled beads of mercury together'
- A syringe (without a needle) shall be used to suck the beads of mercury. Collected mercury should be placed slowly and carefully into an unbreakable plastic container/glass bottle with an airtight lid half filled with water. After removing larger beads, use sticky tape to collect smaller hard-to-see beads. Place the sticky tape in a punctured proof yellow bag and secure properly. Commercially available powdered sulfur or zinc stains mercury a darker color and can make smaller beads easier to see (powder sulfur may be used because (i) it makes the mercury easier to see since there may be a color change from yellow to brown and (ii) it binds the mercury so that it can be easily removed and suppresses the vaporization of any missing mercury).
- Place all the materials used during the cleanup, including gloves, mercury spills collected from the spill area into a yellow plastic bag or container with lid and sealed properly and labeled as mercury containing waste.
- Sprinkle sulfur or zinc powder over the area. Either powder will quickly bind any remaining mercury. In case, zinc powder is used, moisten the powder with water after it is sprinkled and use a paper towel to rub it into cracks in the flooring. Use the cardboard and then dampened paper towels to pick up the powder and bound



mercury. Place all towels and cardboard in a yellow plastic bag and seal all the bags that were used and store in a designated area. All the mercury spill surfaces should be decontaminated with 10 % sodium thiosulfate solution. Keep a window open to ventilate after the cleanup. After ensuring all the mercury has been removed, resume normal vacuuming and utilize the cleaned area for routine operation.

- All the bags or containers containing items contaminated with mercury should be marked properly and labeled as waste mercury containing. This waste shall be categorized as yellow-e chemical waste and hand over to CBWTF or centralized storage area, disposal options are sale or auction mercury recycling/recover unit.
- Other chemical spills should be absorbed in suitable absorption media such as dry sand, proprietary booms, absorbent pads etc. and collected separately. Waste collected from chemical spills has to be categorized as yellow-e waste, which shall be collected in separate yellow bag and handed over to operator of CBWTF or Hazardous Waste TSDF,

5.13 Facility Level Training Plan

Person Responsible: Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

Continuous training and awareness programs are must for ensuring success of waste management activities. The key groups of personnel at facilities in need of continuous awareness and training include medical officers, nurses, technicians and waste handlers.

The following considerations may be incorporated in the training plan:

- Training shall cover an overview of **WHY, WHERE, WHAT, WHO, WHEN** and **HOW** of BMW (given at the start of the manual).
- Identify batch size and composition: training may be conducted ward-wise and each batch may cover doctors, nursing staff, ward boys etc. of that ward in one batch.
- Identify time for imparting training: it may be conducted after hospital hours.
- Training duration may be decided by the trainers. It is suggested that duration of training session be 2 hours. However, it should be ensured that it is sufficient for sensitization, imparting required information and testing trainees.
- Flip Chart: flip charts or any audio-visual tool shall be used for imparting training.
- Demonstration during training: the trainer is advised to use demonstration techniques to impart training, for which a set of colored bins, real waste samples and other material may be used.
- Training shall be repeated every six months.
- Trainer may use a method of rewards to reward trainees who answer questions correctly.
- A record of trainings on BMW conducted by the BMW Management Committee shall be maintained (Annexure 6)



Training flip chart material available with the nodal officer covers the following:

- What is and isn't Biomedical waste
- When, where and who should segregate biomedical waste
- Biomedical waste segregation (Yellow bin, Red bin, Blue bin, Puncture proof container)
- Sharps management
- Needle stick injury prevention and management
- Liquid spill management
- Personnel protective equipment
- WHO recommended hand washing steps

5.14 Facility level BMW Monitoring Plan

Person Responsible: Facility in-charge, Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

In order to ensure successful implementation of biomedical waste management plan at HCF level, regular (daily/weekly/monthly) monitoring is highly essential. Monitoring shall done:

- **Daily** during daily rounds by facility in-charge, NO, members of BMW Management Committee and designated responsible persons/departmental heads of BMW generation stations.

Key points for daily monitoring:

- Availability of biomedical waste collection and transportation materials
 - Availability and use of needle cutters at different work stations.
 - Segregation of waste into appropriate bags and bins.
 - Availability and use of personal protective gears by waste handlers.
 - Regular transport of biomedical wastes from generation stations interim BMW storage shed
 - Regular collection of BMW by CBWTF.
 - Regular cleaning of walls, surfaces and equipment etc. by housekeeping staff.
- **Monthly** with the help of the Healthcare Facility BMW Monitoring Form (enclosed in Annexure 1)
 - **Monthly** during monthly meeting of BMW Management Committee
- Key discussion points for monthly meetings:



- Maintenance of records/log books/registers
 - Feedback from healthcare persons
 - Redressal of complaints
 - Availability of bags/bins/equipment etc.
 - Regular collection of BMW by CBWTF (The BMW Collection Record format is enclosed as Annexure 3).
 - Reporting of incidents of needle stick injuries and mercury spills and their follow up.
 - Regular cleaning of walls, surfaces and equipment etc. by housekeeping staff.
- **Six-monthly** during training sessions
 - Feedback from healthcare persons
 - Redressal of complaints
 - Availability of bags/bins/equipment etc.
 - Reporting of incidents of needle stick injuries and mercury spills and their follow up.
- **Six-monthly** during meeting with designated responsible persons/departmental heads of BMW generation stations
 - Feedback from healthcare persons
 - Redressal of complaints
 - Availability of bags/bins/equipment etc.
 - Reporting of incidents of needle stick injuries and mercury spills and their follow up.
 - Regular cleaning of walls, surfaces and equipment etc. by housekeeping staff.

5.15 Record Keeping

Person Responsible: Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

The following records shall be maintained:

- Biomedical waste collection records (Annexure 3)
- Consumables supply records (Annexure 4)
- Biomedical waste storage shed cleaning record (Annexure 5)
- Health Care Facility Biomedical Waste(BMW) Internal Monitoring Form(Annexure 1)
- Biomedical waste (BMW) Generation Station Monthly Scoring Records (Annexure 2)
- Healthcare Facility Level Training Record (Annexure 6)
- Reporting of Major Accidents and Remedial Action Taken (Form 1/page 28 of BMW Management Rules, 2016)



- Submit an Annual Report (Form IV/page 33 of BMW Management Rules, 2016) to the UPPCB on or and publish the same on its website. The report is to include training status of healthcare personnel, major accidents and remedial action taken, minutes of BMW Committee meetings.

5.16 Bio-Medical Waste Management Information System (BMWMIS)

Person Responsible: Nodal Officer

The Biomedical Waste Management System (BMWMIS) has been developed with the objective of comprehensively capturing data relevant for effective management of Bio-medical waste by Health Care Facility(HCF). The system captures the following data:

- One-time data on HCF (composition and contact details of HCF, facility in-charge, NO and BMW Management Committee members, agreement with CBWTF, facilities available for BMW management in the HCF etc.),
- Consumables supplied by CBWTF(schedule and quantity)
- Bio-medical waste collection (date and amount collected by CBWTF)
- Record of Minutes of BMW Committee Meetings
- Record of trainings conducted
- Record of internal monitoring activities

The system serves the following purpose:

- It enables quick generation of reports without having to do repeated manual data entry or cumbersome copying from existing record maintained in registers.
- Serves as a platform for dissemination latest information/reading and training material/formats in order to keep the stakeholders well informed on the subject.
- Provides a platform for acknowledging good performers.
- Monitoring and review of BMW management in HCFs.

User of the System

The system is designed to be operated under the supervision of the Nodal Officer of the Bio-medical Waste Management Committee. Data entry can be done by the NO, trained Computer Operator/Data Entry Operator posted in the hospital or related staff.

System Requirements

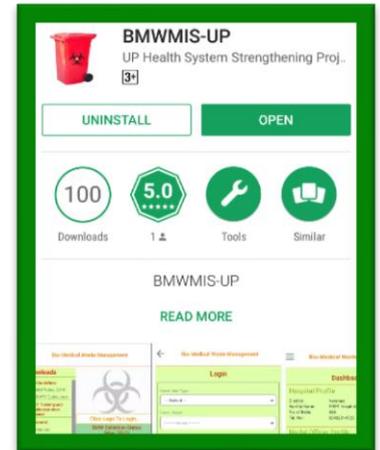
- Computer, Printer and UPS
- Internet Connection
- Username & Password (can be obtained from UPHSSP)

How to get started?

- Ensure that you have an internet connection.
- Go to www.uphssp.org and click on the Bio-Medical Waste Management Information System link.



- You will arrive on the webpage/screen shown below. The various displays visible on the page are also explained.
- The system will prompt you to enter your login, password and Captcha Code. Captcha Code is set of alphabets given below the 'Enter Below Captcha Code'. In case if any of these values submitted by you are incorrect, the system will prompt you to try again to login to the system.
- Data can also be entered using the Android Mobile App BMWMIS_UP (screenshot of App Icon given alongside).



Bag/Bin/CTF DH Nos.	Wt. in Kgs.
Red	17 | 123 | 7468 | 11603
Yellow	18 | 129 | 11685 | 25989
Blue	17 | 80 | 3736 | 5091
White	13 | 30 | 573 | 568
Total	16 | 129 | 23462 | 43251

Hospital
- Lucknow, Aurangabad
- Lucknow, Azad Nagar
- Lucknow, Balrampur
- Lucknow, Barawan Kala
- Lucknow, BMC Aishbagh
- Lucknow, BMC Alliganj
- Lucknow, BMC Chandar Nagar
- Lucknow, BMC Indiranagar

Menu

Registered users and number of users which used system on a day

Waste collection in the month and till date of the entire State

Notification Area: to inform users

Sign in area

Know Your Nodal Officer area



Change password

To change password, click on the 'Change Password' given on the Menu. The password has to be of 12 characters with atleast one uppercase character, one digit and a special character (*, &, #, \$, etc.). It is suggested that you change password when you login for the first time:

Change Password

User Name: <input type="text" value="dfhagr"/>	Current Password: <input type="text" value="Enter Current Password"/>	New Password: <input type="text" value="Enter New Password"/>	Confirm Password: <input type="text" value="Again Enter New Password"/>
<input type="button" value="Change Password"/>		<input type="button" value="Cancel or Reset"/>	

Note: Password should be 8 characters or more and must contain one alphabet,number and special character.

One-time Information

Prior to entering daily transaction data, you have to enter the Hospital profile, Occupier details, Nodal Officer details, details of Bio-Medical Waste Management Committee and Contract details with CBWTF. This data is required to be entered only one time. It needs to be updated only in case of any change in the above information.

a) Hospital profile

Select 'Hospital Profile' option from Menu.

Hospital Name

User Name, Designation, Date & time of login

Options to enter Hospital profile



Once you enter all details, press 'Update Hospital Profile' button.
Select options as shown in the above picture and enter/update details.

Authorized Person

Hospital Profile District Female Hospital Agra	Facility Authorised Person Profile
<ul style="list-style-type: none">Hospital ✓Authorised Person ✓Nodal Officer ✓CBWTF Contract ✗HCF Authorisation from UPPCB ✓BMW Committee Members ✓	<p>Authorised Person Name: <input type="text" value="Dr Madhur Singhal"/></p> <p>Designation: <input type="text" value="CMS"/></p> <p>Email Id: <input type="text" value="cmsagra@rediffmail.com"/></p> <p>Mobile No.: <input type="text" value="9319599991"/></p> <p>Update Facility Authorised Person Profile</p>

Similarly, you can enter details of 'Nodal Officer'.

b) CBWTF Contract

Hospital Profile District Female Hospital Agra	CBWTF Contract Status
<ul style="list-style-type: none">Hospital ✓Authorised Person ✓Nodal Officer ✓CBWTF Contract ✗HCF Authorisation from UPPCB ✓BMW Committee Members ✓	<p>Contract Exists: <input type="text" value="Please Select"/></p> <p>CBWTF Name: <input type="text" value="Please Select"/></p> <p>Valid From: <input type="text" value="Enter Date"/></p> <p>Valid To: <input type="text" value="Enter Date"/></p> <p>Rate (Rs.): <input type="text" value="Enter Rate"/></p> <p>Unit of Rate: <input type="text" value="Please Select"/></p> <p>Consumables Provided: <input type="text" value="Please Select"/></p> <p>Save CBWTF Contract Details</p>

c) Health Care Facility Authorisation from UP Pollution Control Board

District Female Hospital, Agra	Hospital Profile District Female Hospital Agra	Authorisation under the BMW Management Rules
<ul style="list-style-type: none">DashboardHospital ProfileCommitteeBMW CollectionConsumablesBMW Score CardBMW TrainingChange PasswordLogout	<ul style="list-style-type: none">Hospital ✓Authorised Person ✓Nodal Officer ✓CBWTF Contract ✗HCF Authorisation from UPPCB ✓BMW Committee Members ✓	<p>Status: <input type="text" value="No"/></p> <p>Application Date: <input type="text" value="Enter Date"/></p> <p>Authorisation No.: <input type="text" value="Enter No."/></p> <p>Valid Up To: <input type="text" value="Enter Date"/></p> <p>Consents under Water Act & Air Act</p> <p>Status of consents under Water Act: <input type="text" value="Applied For"/></p> <p>Valid Up To: <input type="text" value="Enter Date"/></p> <p>Status of consents under Air Act: <input type="text" value="Applied For"/></p> <p>Valid Up To: <input type="text" value="Enter Date"/></p> <p>Update HCF Authorisation Details</p>



d) Bio-Medical Waste Committee

#	Member Name	Designation	Email-Id	Mobile No.	Edit	Delete
1	Dr. Kalyani Misra	Consultant	sic.dwh.agra@gmail.com	9456432815		
2	Dr. Sudha Gupta		sic.dwh.agra@gmail.com	9457007116		

- To edit/delete an existing member, click on Edit / Delete button provided next to the name of the member.
- To add a new member, click on the 'Add Next Member Profile'.
- You can also edit or view Committee Member details from this option.

e) Committee Meeting Details

You can add details of meetings of BMW Committee by clicking on the 'Add Committee Meeting' sub-option of 'Committee'.

Names of existing Committee members which attended the meeting can be selected from the check box against each name. Details of other participants in the meeting can also be given. Minutes of the meeting can be uploaded. Minutes of the meeting should be in pdf file format.

Regular transactions

a) Waste collected by the CBWTF:

You have to enter the following data as and when the CBWTF lifts wastes from the hospital:

- Date of collection, Person handing over Bio-medical Waste, Vehicle registration no. which collected the waste
- Yellow colour bags – No. of bags and total weight of yellow colour bags
- Red colour bags – No. of bags and total weight of red colour bags
- Blue colour bins – No. of bins and total weight of blue colour bins
- White colour bins – No. of bins and total weight of white colour bins



BMW Collection Data Entry

Collection Date: Collection Time: : Person handing over BMW: Vehicle No.:

S. No.	Type of Bags/Bins	No. of Bags/Bins	Total Weight of Bags/Bins (in Kgs)
1.	Yellow Bag	<input type="text" value="Enter No."/>	<input type="text" value="Enter Weight"/>
2.	Red Bag	<input type="text" value="Enter No."/>	<input type="text" value="Enter Weight"/>
3.	Blue Bin	<input type="text" value="Enter No."/>	<input type="text" value="Enter Weight"/>
4.	White Bin	<input type="text" value="Enter No."/>	<input type="text" value="Enter Weight"/>
Total			

Remarks (if any):

To view the BMW Collection report, click on 'BMW Collection' option followed by 'View Data'. You can select the report between two dates. On the top, name of CBWTF is displayed.

District Female Hospital, Agra

BMW Collection Report - CBWTF - Synergy Waste Management (P) Ltd., Meerut

Collection Date - From: Collection Date - To:

Weight in Kgs.

#	Collection Date Time	Red Bags		Yellow Bags		Blue Bin	White Bin	Colour Bags used	BMW Collected	Person handing over BMW	Vehicle No.	Remarks
		Nos.	Weight	Nos.	Weight	Weight	Weight	Total Weight				
1	01/04/2016 11:00 AM	1	10	2	20	10	0	3	40			White/Black bag record Not Maintain in Hospital
2	02/04/2016 11:00 AM	2	20	1	10	10	0	3	40			
3	04/04/2016 11:00 AM	2	10	2	10	0	0	4	20			WHITE/BLACK RECORD NOT MAINTAIN IN HOSPITAL
4	08/04/2016 11:00 AM	2	10	2	10	10	0	4	30			as last
5	12/04/2016 11:00 AM	2	10	2	10	5	0	4	25			
6	13/04/2016 11:00 AM	2	10	2	10	5	0	4	25			do

b) Consumables supplied by the CBWTF

Click on the 'Consumables' option followed by 'Add Consumable' from the Menu.



Biomedical Waste MIS, Lucknow

Consumables Supply Record

Date Of Receipt of Supply: Person Receiving the supply:

#	Name Of Item	Quantity Received
1.	Set of Red,yellow, Blue & Black Color Bins of 12 lt	
2.	Set of Red & Yellow Color Bins of 40 lt	
3.	Blue Color Bins of 25 lt	
4.	Set of Red & Yellow Color Bags of 12 lt	
5.	Set of Red & Yellow Color Bags of 40 lt	
6.	Polycarbonate Jars / White Puncture proof Containers	
7.	Manual Hub Cutter	
8.	Trolleys	
9.	Wheel Barrows	
10.	Gum Boot	

#	Name Of Item	Quantity Received
11.	Face Mask	
12.	Gloves	
13.	Apron	
14.	Goggles	
15.	Plastic Helmet	

You have to enter the date of supply, person receiving the supply and quantity received.

To view list of consumables supplied, click on 'Consumables' followed by 'View Consumable'. The system will prompt you enter the period during which supplies are to be reported. There is an option to enter either one item or all items.

c) Monthly inspection score of Bio-medical waste generating stations.

To capture the score of Bio-medical Waste Generation stations, you have to click on the 'BMW Score Card'. The system permits to enter the total score of each BMW generating station.

Bio-medical Waste(BMW) Scoring Board

District: Hospital: Year: Month:

BMW Station Category: Generation Station Name: Score: Scoring Officer:

Date of Score: Remarks:

d) Training details

Details of training programs conducted for BMW handling are captured through this option.



District Female Hospital, Agra

BMW Training

Training Date:

Training Time: :

Organised By:

Total Participants:

Select Participants:

- Dr Madhur Singhal-CMS
- Dr Sudha-
- Dr. Kalyani Misra-Consultant
- Dr. Sudha Gupta-

Total Doctors:

Total Para-Medical Staff:

Total Other Staff:

Remarks:

List of participants from the BMW Committee members can be selected from the 'List'. Number of participants from each category can be captured. The list of participants can also be uploaded in PDF file format.

Downloads

Important documents associated the Bio-Medical Waste Management can be downloaded from this option.

Problem reporting

In case of difficulty in using the software, you can contact associated officers/consultants as per list provided in the 'Contact Us' option of the Menu.

5.17 Reward for Good Work

Person Responsible: Facility in-charge, Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point

It has been repeatedly found that outcomes are better where there is a system that acknowledges good work by way of public recognition or rewards. Hence it is suggested that this be built into the BMW management plan in each HCF.

Good performers (individuals and departments as a whole) can be identified during the periodic monitoring activities like filling of Monitoring Form (Annexure 1), during rounds and trainings and from feedback.

Recognition can be done through display of names and photos of good performers on bulletin boards, and award of green badges to good performers, which can be worn on apron/uniform.

5.18 Immunization, Periodic Health Check-ups and Personal Protective Equipment for Healthcare Personnel

Person Responsible: Facility in-charge, Nodal Officer, Members of the BMW Management Committee and designated responsible staff for each BMW generation point



The following activities shall be undertaken to ensure safety of healthcare personnel that are exposed to BMW:

- Immunization of all health care workers and others, involved in handling of bio-medical waste for protection against diseases including Hepatitis B and Tetanus that are likely to be transmitted by handling of bio-medical waste, in the manner as prescribed in the National Immunization Policy or the guidelines of the Ministry of Health and Family Welfare issued from time to time;
- Health check-ups at the time of induction and at least once in a year for all its health care workers and others involved in handling of bio- medical waste and maintain the records for the same;
- Ensure occupational safety of all its health care workers and others involved in handling of bio-medical waste by providing appropriate and adequate personal protective equipments (PPE).

5.19 BMW Management at Outreach Activities and By Occasional Generators

Person Responsible: The occupier of the health care facility organizing the outreach activities is totally responsible for ensuring that waste generated during such activity is properly segregated, collected, treated and disposed of as per BMW Rules, 2016

Out Reach Activities

Health Care Facility may provide any of the outreach services given below;

- Blood donation camps/Health camps
- Home delivery by Skilled Birth Attendant (SBA)
- Antenatal Care
- Point of care diagnosis
- Immunization
- Family Planning activities
- Other similar activity



ANNEXURE 1

Health Care Facility Biomedical Waste(BMW) Internal Monitoring Form

(This format should be filled for each BMW generation station/ward separately)

Name of the District:

Name of the HCF:

Name BMW Generation Station/Ward/Lab/OT:

Inspection Month:

Date:

Time:

Name of Monitoring Officer:

Designation:

Scoring Process: Response to the questions can be either yes, partial or no. Score of yes is to be taken as 2, of partial to be taken as 1, no to be taken as 0. No response is to be given in cells coloured black.

S.No.	Question	Response (code 2 for Yes, 1 for partial & 0 for No)			Score
		Yes	Partial	No	
1	Are colour coded bins & bags placed as per BMW management plan				
2	Do BMW bins have the right colour bags as per the guidelines (i.e. red bin has red bag etc.)				
3	On opening the BMW bins, did you find only properly segregated waste in it				
4	Are color bags replaced on regular basis				
5	Are BMW bins being filled in a proper way, i.e. no over-flowing was observed				
6	Does sweeper follow proper procedure in removing and changing BMW bags				
7	Are the BMW bins and wall behind them clean				
8	Are posters on BMW segregation displayed above BMW bins and hand washing displayed above washbasins				
9	Is disinfectant solution available in the ward				
10	Is the needle cutter in the ward functional				
11	Do Nurses/Lab technicians use the needle cutter on a regular basis				
12	Was staff able to answer the questions related to BMW segregation				
13	Have patients been told to discard general waste in black color bins bags				
14	Does the head of department monitor BMW segregation during rounds				
15	Does staffs use the personal protective equipment during duty (like mask, gloves, cap etc.)				
TOTAL SCORE (MAX 30)					

Any Other Comments:



ANNEXURE 3
BIOMEDICAL WASTE COLLECTION RECORD

(To be filled by NO/Staff/Nurse in-charge)

Name of the District:

Bio Medical Waste Management

Name of the HCF:

Register for Daily Collection of Bio-Medical Waste at the source

Name of the NO/Staff/Nurse in-charge:

Number of beds:

Date & Time of Collection	Segregated Bio Medical Waste						Total No. of colour bags used for the day	Total Bio Medical Waste Collected in Kgs.	Signature of the NO/Staff / Nurse in-charge	Signature of the Sweeper	Signature of the CTF Vehicle driver	CBWTF Vehicle No.
	Red Bags		Yellow Bags		Blue Bin	Puncture Proof Container (PPC)						
	No.	Wt.	No.	Wt.	Wt.	Wt.						
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(b+d)	(c+e+f+g)				

Remark (if any):



ANNEXURE 4

CONSUMABLES SUPPLY RECORD

PERSON RECEIVING THE SUPPLY				
DATE OF RECEIPT OF SUPPLY				
S.No.	NAME OF ITEM	UNIT	QUANTITY RECEIVED ON	QUANTITY RECEIVED ON
1	A set of Red, Yellow, Blue & Black color Bins of 12 lt	No. of Sets		
2	A set of Red & Yellow color Bins of 40 lt	No. of Sets		
3	One Blue color Bin of 25 lt	Nos.		
4	A set of Red & yellow colour Bags of 12 lt	No. of Sets		
5	A set of Red & yellow color Bags of 40 lt	No. of Sets		
6	Polycarbonate Jars/White Puncture Proof Containers	Nos.		
7	Manual Hub Cutter	Nos.		
8	Trolleys	Nos.		
9	Wheel Barrows	Nos.		
10	Gum Boot	Nos.		
11	Face Mask	Nos.		
12	Gloves	Nos.		
13	Apron	Nos.		
14	Goggles	Nos.		
15	Plastic Helmet	Nos.		



ANNEXURE 5

BIOMEDICAL WASTE STORAGE SHED CLEANING RECORD

Date of Cleaning	Name of Cleaner	Date of Inspection	Person Inspecting the Shed	Designation & Department	Remark			Signature
					Good	Average	Poor	



ANNEXURE 7

CONTACT DETAILS OF CONCERNED OFFICIALS AND RESOURCE PERSONS

S. No.	Name	Designation	Phone No.	Email
1	Dr.Savita Bhatt	Director, Medical Care	9415521221	director.medical.care.up@gmail.com
2	Dr.Rakesh Kumar	AdditionalDirector, Medical Care	9415912246	director.medical.care.up@gmail.com
3	Dr. Harsh Sharma	Additional Project Director	9415151422	apd.uphssp@gmail.com
4	Dr.DheerajTiwari	AD, UPHSSP	9839223880	adpppuphssp2018@gmail.com
5	Dr.ShipraPandey	AD , UPHSSP	8853002554	ademuphssp@gmail.com
6	Ms.SaloniGoel	EM Expert, TAP	9415406999	saloni.goel@ecorys.com
7	Dr.Saurabh Gupta	EM Consultant DGM&H	9455000113	sguptalko@gmail.com
8	Mr. Mahesh K. Dubey	EM Expert, TAP	8858066675	maheshdubey2010@gmail.com
9	Mr.MayankDubey	EM Consultant DGM&H	8858009154	Dmayank92@gmail.com
BMW MIS (Management Information System) Team				
10	Mr.AdiRanjan	HMIS & IT Expert, TAP	9999342423	Adi.ranjan@ecorys.com
11	Ms.Apoorva Singh	Programmer, UPHSSP	9935280902	aks.apoorva@gmail.com
12	Ms.KritiAgrawal	Programmer, UPHSSP	9044535510	kritiagrawal2010@gmail.com



ANNEXURE 8

LIST OF REGIONAL OFFICES OF UPPCB AND DISTRICTS COVERED

U.P. Pollution Control Board, Regional Office						
Sl. No.	Regional Offices	Name of Regional Officers	Telephone No.		E-Mail Address	Districts Covered
			Office/Fax	Residence		
1.	Agra : 14, Sector-3 B, AvasVikas, SikandraYojna, Agra	ShriAtuleshYadav	0562- 2275014, 78398916 75	2511984	roagra@uppcb.com	Agra
2.	Aligarh : J-1, GyanSarovar Colony, Ramghat Road, Aligarh	Shri Ram Gopal	0571- 2743510, 78398919 49	2354810	roaligarh@uppcb.com	Aligarh, Etah, Mahamaya Nagar (Hathras)
3.	Allahabad : Sector-10, Yojna No.-3 AvasVikasParisha d Colony, Jhusi, Allahabad	Shri S. K. Mishra	0532 -2569727, 78398914 52	2606288	roallahabad@uppcb.com	Allahabad, Fatehpur, Kaushambi
4.	Azamgarh : 159, Raodpur Colony,	ShriGhanshyam	05462- 247517, 78398914 55	--	rozamgarh@uppcb.com	Azamgarh, Ballia, Mau
5.	Bareilly : E-1219/1, E-Block Rajendra Nagar, AwasVikas Colony, Post-Izzat Nagar, Bareilly	Shri Anil Kumar Chaudhary (Incharge)	0581- 2585299, 78398914 68	443120	robareilly@uppcb.com	Bareilly, Shahjahanpur, Pilibhit
6.	Banda : A-39, AvasVikas Colony, Chilla Road, Banda- 210001	ShriNiranjan Singh Sharma (Incharge)	783989179 1	97210000 27	robanda@uppcb.com	Banda, Hamirpur, Chitrakoot, Mahoba
7.	Basti : Block Road, Buddha Puram, Basti	Shri S.B. Singh	783989196 6	--	robasti@uppcb.com	Basti, Siddhartha Nagar, Balrampur, SantKabir Nagar
8.	Bijnor : 108/11, AvasVikas Colony, Bijnor	ShriGirish Chandra Verma(Incharge)	0134- 260434, 78398916 88	--	robijnaur@uppcb.com	Bijnor, J.P. Nagar



9.	Bulandsahar : F-5, JamunaPuram Colony, Bulandsahar	ShriGovindShankerSrivas tava	05732- 259039, 78398917 72	--	robulandshahar@uppcb.com	Bulandshahar, Badaun
10	Faizabad : 1/17/104, Ram Nagar Colony, ParikramaMarg, Faizabad	ShriSwaminath Ram	05278- 225411, 78398914 53	--	rofaizabad@uppcb.com	Faizabad, Bahraich, Gonda, Ambedkar Nagar, Shravasti
11	Firojabad : H.No. 77 Gali No. 2 Mahaveer Nagar, Firojabad	ShriPremPrakashSrivasta va	05612- 230836, 78398919 79	--	rofirozabad@uppcb.com	Firozabad, Mainpuri, Etawah
12	GautamBuddh Nagar(Noida) : E-12/1, Sector 1, Noida, GautamBuddh Nagar	Shri R.K. Tyagi	0120- 2529157, 78398917 07	--	ronoida@uppcb.com	GautamBudh Nagar (Noida)
13	Greater Noida: A1-First Floor, Shoping Complex, Sector - BITA-2, Greater Noida, GautamBuddh Nagar	Shri Ashok Kumar Tiwari	0120- 2321024, 783989175 9	--	rogreaternoida@uppcb.com	Greater Noida
14	Ghaziabad : 2 I.N.S. Sector- 16, Vasundhra, Post- PralhadGarhi, Ghaziabad	Shri Ashok Kumar Tiwari	0120- 4160108, 78398917 59	--	roghaziabad@uppcb.com	Ghaziabad
15	Gorakhpur : JharkhandiMahad ev, AvasVikas Colony, KudaGhat, Dooria Road, Gorakhpur	ShriGhanshyam	0551- 2273937, 78398914 55	--	rogorakhpur@uppcb.com	Gorakhpur, Deoria, MaharajGanj, Kushi Nagar
16	Jhansi : AvasVikas Colony, TalparaYojna, Kanpur Road, Jhansi	Shri V.K. Misra	0510- 2320473, 78398919 16	--	rojhansi@uppcb.com	Jhansi, Jalaun, Lalitpur, Orai
17	Kanpur : 243, AvasVikas, Phase-III, Sadbhavna Nagar, Kalyanpur, Kanpur-17	ShriKuldeepMisra	0512- 2510999, 78398918 12	--	rokanpur@uppcb.com	Kanpur Nagar, Farrukhabad
18.	Kanpur Dehat :	ShriKalika Singh	0511-	-	rokanpurdehat@uppcb.com	Kanpur Dehat,



	844, FetehpurRoshnai, Rania Kanpur Dehat		1211710, 78398919 40		@uppcb.com	Kannauj, Auraiya
19	Lucknow : PicupBhawan B- Block, 4th Floor, VibhutiKhand, Gomti Nagar, Lucknow-226010	Dr. Ram Karan	0522- 2329539, 78398918 41	--	rolucknow @uppcb.com	Lucknow, Barabanki, LakhimpurKhiri, Sitapur
20	Mathura : 65, Baldevpuri, Maholi Road, Post-Krishna Nagar, Mathura	ShriArvind Kumar (Incharge)	0565- 2460921, 78398917 10	--	romathura @uppcb.com	Mathura
21.	Meerut : Pocket-T, C-3/2, PallavPuram, Phase-II, ModiPuram, Meerut	Shri R.K. Tyagi	0121- 2577676, 78398917 07	--	romeerut @uppcb.com	Meerut, Bagpat
22	Moradabad : 1-A/I.N.S.-1, AvasVikas Colony, Buddha Vihar, Delhi Road,Moradabad	Shri R. K. Singh	0591- 2485594, 78398917 80	--	romoradabad @uppcb.com	Moradabad, Rampur
23	Muzaffarnagar: Kamal Cinema Building, Railway Road, Muzaffarnagar	ShriVivekRai	0131- 2436493, 78398916 87	--	romuzaffarnagar @uppcb.com	Muzaffar Nagar, Shamli
24	Raebareli : C-Block, AvasVikas Colony, Indira Nagar, Raebareli	Shri U. N. Upadhyay (Incharge)	0535- 2203482, 78398914 60	--	roraebareli @uppcb.com	Raebareli, Sultanpur, ChhatrapatiSahujiMah araj Nagar (Amethi), Pratapgarh
25	Saharanpur : 2/1412-25 A, Ahmadbad, Saharanpur	Shri S. R. Maurya	0132- 2713526, 78398917 81	2764471	rosaharanpur @uppcb.com	Saharanpur
26	Sonebhadra: House No. 162, Uttar Mohal Robertsganj, Sonbhadra - 231216	Shri S. B. Franklin	05444- 222464, 78398919 22	--	rosonebhadra @uppcb.com	Sonebhadra, Mirzapur



27	Unnao : B-16, AvasVikas Colony, Unnao	ShriVimal Kumar	0515-2830488, 7893891961	-	rounnao@uppcb.com	Unnao, Hardoi
28	Varanasi : AvasVikas Office cum-commercial Complex Jawahar Nagar, Bhelupur, Varanasi	Dr. Anil Kumar Singh (Incharge)	0542-2275951, 7839891856	--	rovaranasi@uppcb.com	Varanasi, SantRavidas Nagar, Jaunpur, Chandauli, Ghazipur



ANNEXURE 9

DETAILED SPECIFICATIONS FOR CONSUMABLES

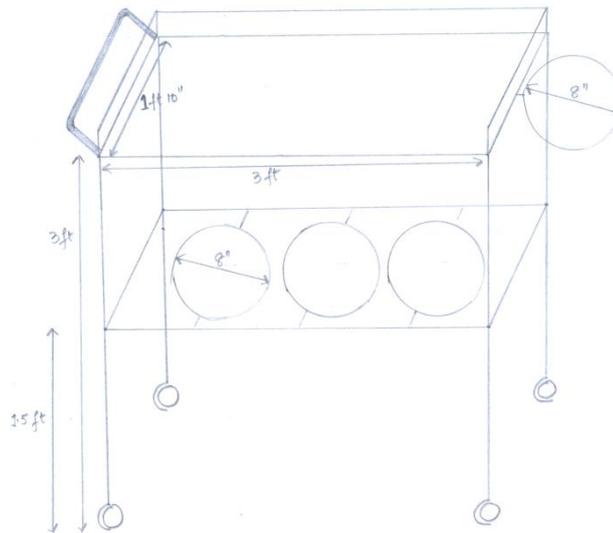
S.No.	Name of item	Specifications
1	A set of Red, Yellow, Blue & Black color Bins of 12 Lt	Plastic, 2 mm thickness, open bins
2	A set of Red & Yellow color Bins of 40 Lt	Plastic, 2 mm thickness, bins with swinging lids
3	One Blue color Bin of 25 Lt	Plastic, 2 mm thickness, bins with swinging lids
4	A set of Red & yellow color Bags of 12 Lt	BMW Rules 2016 compliant, leak-proof, capable of withstanding weight when 2/3rd full
5	A set of Red & yellow color Bags of 40 Lt	BMW Rules 2016 compliant, leak-proof, capable of withstanding weight when 2/3rd full
6	Polycarbonate Jars/White Puncture Proof Containers	1 lit capacity, white translucent, puncture proof, leak proof after capping, screw cap, autoclavable, container to have no constriction at the neck
7	Manual Hub Cutter	Hub cutter to have SS blade, container to be puncture proof and leak proof.
8	Trolleys	<ul style="list-style-type: none"> • Trolley design shall be as given in the attached drawing. • Trolley shall be made of stainless steel and sturdy to last at least the duration of the contract. • Trolley shall have 4 legs. • The solid platform at the top shall be at a height of approx. 3 ft. above ground level, and shall be approx. 3 ft. long and approx. 1ft. 10 inches wide. It shall be surrounded by a railing on three sides; one long side shall not have a railing. • There shall be a handle at the level of the top platform along the short edge. • There shall be a framework at a height of approx. 1.5 ft. above ground level. This framework shall have three rings as exhibited in the drawing. The diameter of each ring shall be approx. 8 inches, into which the 12 liter bins for collection of waste may be fitted. • One ring shall be welded at the level of the top platform, along the short edge away from the handle. The diameter of the ring shall be approx. 8 inches, into which the 12 liter black bin for collection of general waste may be fitted. • The trolley shall have sturdy wheels allowing free and smooth movement of trolley in every direction.



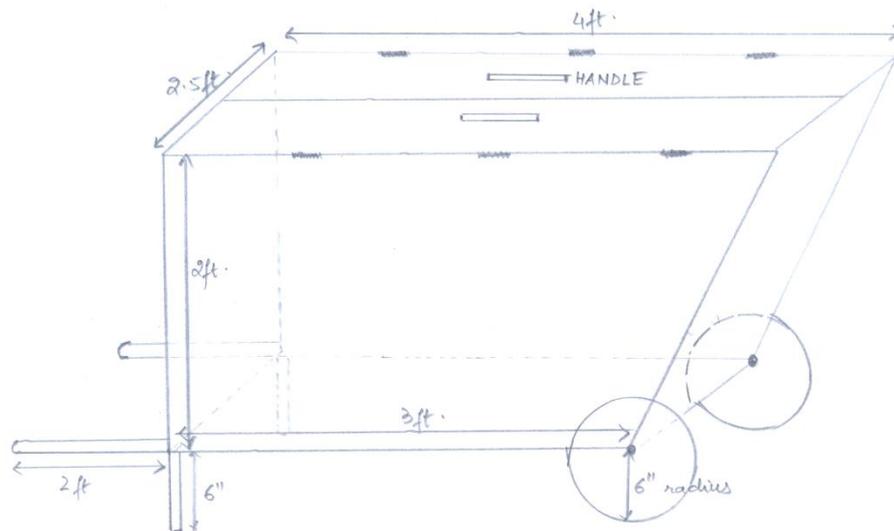
9	Wheel Barrows	<ul style="list-style-type: none"> • Wheel barrow design shall be as given in the attached drawing. • Wheel barrow shall be made of mild steel, sturdy to last at least the duration of the contract. • The shape of the wheel barrow shall be a trapezoidal box; the top surface being 4 ft x 2.5 ft (LxB); base being 3 ft x 2.5 ft (LxB); height of box being 2 ft. as depicted in the drawing. • The wheel barrow box shall be covered on top with a double door cover with handles. The covers shall be light to allow easy opening and closing. • The base and sides of the wheel barrow shall be strong enough to hold the waste and should be well sealed so that the box is leak-proof. • Two strong horizontal handles (approx. 2 ft. long) shall extend from one side of the base of the wheel barrow, to allow for easy handling by the user. • Two strong vertical stands (6 inch high) shall extend from the same side as above of the base of the wheel barrow. Two wheels (1 ft dia.) with rubber tyres shall be located at the other side of the base of the wheel barrow. When stationery or not in use, the two vertical stands and two tyres shall serve as the legs of the wheel barrow. • All interior surfaces of the wheel barrow shall be painted by corrosion resistant epoxy paint.
10	Gum Boot	Rubber, reusable
11	Face Mask	Disposable
12	Gloves	rubber, pierce-proof, reusable, elbow length
13	Apron	Plastic, reusable
14	Goggles	Plastic
15	Plastic Helmet	Plastic



Indicative Design of Trolley (not to scale)



Indicative Design of Wheel Barrow (not to scale)



- 6.3. All consumables shall be labelled with "This is Govt. of UP Supply and not for resale" or "यह उत्तर प्रदेश सरकार की संपत्ति है जिसे बेचना दंडनीय अपराध है".
- 6.4. All consumables, except face mask and goggles, shall be labelled with the name of CBWTF.
- 6.5. All bins (except black), bags, puncture proof containers (PPCs), wheelbarrow, shall be labelled with the biohazard symbol as given in Biomedical Waste Management Rules, 2016.



FORM – II
(See rule 10)

APPLICATION FOR AUTHORISATION OR RENEWAL OF AUTHORISATION

(To be submitted by occupier of health care facility or common bio-medical waste treatment facility)

To

The Prescribed Authority
(Name of the State or UT Administration)
Address.

1. Particulars of Applicant:

- (i) Name of the Applicant:
(In block letters & in full)
- (ii) Name of the health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
- (iii) Address for correspondence:
- (iv) Tele No., Fax No.:
- (v) Email:
- (vi) Website Address:

2. Activity for which authorization is sought:

- | | |
|-----------------------------|-------------|
| Activity | Please tick |
| Generation, Segregation | |
| Collection, | |
| Storage | |
| Packaging | |
| Reception | |
| Transportation | |
| Treatment or Processing or | |
| Conversion | |
| Recycling | |
| Disposal or destruction use | |
| Offering for sale, transfer | |
| Any other form of handling | |

3. Application for fresh or renewal of authorization (please tick whatever is applicable):

- (i) Applied for CTO/CTE Yes/No
- (ii) In case of renewal previous authorization number and date:

- (iii) Status of Consents:
 - (a) Under the Water (Prevention and Control of Pollution) Act, 1974

 - (b) Under the Air (Prevention and Control of Pollution) Act, 1981

- 4. (i) Address of the health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
- (ii) GPS coordinates of health care facility (HCF) or common bio-medical waste treatment



facility (CBWTF):

5. Details of health care facility (HCF) or common bio-medical waste treatment facility (CBWTF):
- (i) Number of beds of HCF:
 - (ii) Number of patients treated per month by HCF:
 - (iii) Number healthcare facilities covered by CBMWTF: _____
 - (iv) No of beds covered by CBMWTF: _____
 - (v) Installed treatment and disposal capacity of CBMWTF: _____ Kg per day
 - (vi) Quantity of biomedical waste treated or disposed by CBMWTF: _____ Kg/day
 - (vii) Area or distance covered by CBMWTF: _____
(Pl. attach map a map with GPS locations of CBMWTF and area of coverage)
 - (viii) Quantity of Biomedical waste handled, treated or disposed:

Category	Type of Waste	Quantity Generated or Collected, kg/day	Method of Treatment and Disposal (Refer Schedule-I)
(1)	(2)	(3)	(4)
Yellow	(a) Human Anatomical Waste:		
	(b) Animal Anatomical Waste:		
	(c) Soiled Waste:		
	(d) Expired or Discarded Medicines:		
	(e) Chemical Solid Waste:		
	(f) Chemical Liquid Waste:		
	(g) Discarded linen, mattresses, beddings contaminated with blood or body fluid.		
	(h) Microbiology, Biotechnology and other clinical laboratory waste:		
Red	Contaminated Waste (Recyclable)		
White (Translucent)	Waste sharps including Metals:		
Blue	Glassware:		
	Metallic Body Implants		

6. Brief description of arrangements for handling of biomedical waste (attach details):
- (i) Mode of transportation (if any) of bio-medical waste:
 - (ii) Details of treatment equipment (please give details such as the number, type & capacity of each unit)

No. of units

Capacity of each unit

Incinerators:

Plasma Pyrolysis:

Autoclaves:

Microwave:

Hydroclave:

Shredder:

Needle tip cutter or

Destroyer

Sharps encapsulation or

concrete pit:



Deep burial pits:
Chemical disinfection:
Any other treatment
Equipment:

7. Contingency plan of common bio-medical waste treatment facility (CBWTF) (attach documents):
8. Details of directions or notices or legal actions if any during the period of earlier authorization
9. Declaration

I do hereby declare that the statements made and information given above are true to the best of my knowledge and belief and that I have not concealed any information.

I do also hereby undertake to provide any further information sought by the prescribed authority in relation to these rules and to fulfill any conditions stipulated by the prescribed authority.

Date:

Signature of the Applicant

Place:

Designation of the Applicant



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		
1.	Particulars of the Occupier	:	
	(i) Name of the authorised person (occupier or operator of facility)	:	
	(ii) Name of HCF or CBMWTF	:	
	(iii) Address for Correspondence	:	
	(iv) Address of Facility	:	
	(v) Tel. No, Fax. No	:	
	(vi) E-mail ID	:	
	(vii) URL of Website	:	
	(viii) GPS coordinates of HCF or CBMWTF	:	
	(ix) Ownership of HCF or CBMWTF	:	(State Government or Private or Semi Govt. or any other)
	(x). Status of Authorisation under the Bio-Medical Waste (Management and Handling) Rules	:	Authorisation No.: valid up to
(xi). Status of Consents under Water Act and Air Act	:	Valid up to:	
2.	Type of Health Care Facility	:	
	(i) Bedded Hospital	:	No. of Beds...
	(ii) Non-bedded hospital (Clinic or Blood Bank or Clinical Laboratory or Research Institute or Veterinary Hospital or any other)	:	
	(iii) License number and its date of expiry	:	
3.	3. Details of CBWTF	:	
	(i) Number healthcare facilities covered by CBMWTF	:	
	(ii) No of beds covered by CBMWTF	:	
	(iii) Installed treatment and	:	_____ Kg per day



	disposal capacity of CBMWTF (iv) Quantity of biomedical waste treated or disposed by CBMWTF	:	_____ Kg/day				
4.	Quantity of waste generated or disposed in Kg per annum (on monthly average basis)		Yellow Category: Red Category : White: Blue Category : General Solid waste:				
5.	Details of the Storage, treatment, transportation, processing and Disposal Facility						
	(i) Details of the on-site storage facility	:	Size :			Capacity :	
			Provision of on-site storage : (cold storage or any other provision)				
	(ii) Disposal facilities			Type of treatment equipment	No of units	Capacity Kg/day	Quantity treated or disposed in kg per annum
				Incinerators			
				Plasma Pyrolysis			
				Autoclaves			
				Microwave			
				Hydroclave			
				Shredder			
			Needle tip cutter or destroyer				
			Sharps encapsulation or concrete pit				
			Deep burial pits:				
		Chemical disinfection:					
		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.)				
	(iv) No of vehicles used for collection and transportation of biomedical waste	:					
	(v) Details of incineration ash and ETP sludge generated and disposed during the treatment of			Quantity generated	Where disposed		



	wastes in Kg per annum		Incineration Ash		
			ETP Sludge		
	(vi) Name of the Common Bio Medical Waste Treatment Facility Operator through which wastes are disposed of				
	(vii) List of member HCF not handed over bio-medical waste				
6	Do you have bio-medical waste management committee? If yes, attach minutes of the meetings held during the reporting period				
7	Details trainings conducted on BMW				
	(i) Number of trainings conducted on BMW Management				
	(ii) number of personnel trained				
	(iii) number of personnel trained at the time of induction				
	(iv) number of personnel not undergone any training so far				
	(v) whether standard manual for training is available?				
	(vi) any other information)				
8	Details of the accident occurred during the year				
	(i) Number of Accidents occurred				
	(ii) Number of the 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?				
	Details of Continuous online emission monitoring systems installed				
10 .	Liquid waste generated and treatment methods in place. How many times you have not met the standards in a year?				



11	Is the disinfection method or sterilization meeting the log 4 standards? How many times you have not met the standards in a year?		
12 .	Any other relevant information	:	(Air Pollution Control Devices attached with the Incinerator)

Certified that the above report is for the period from

.....
.....
.....
.....
.....
.....
.....

Name and Signature of the Head of the

Institution

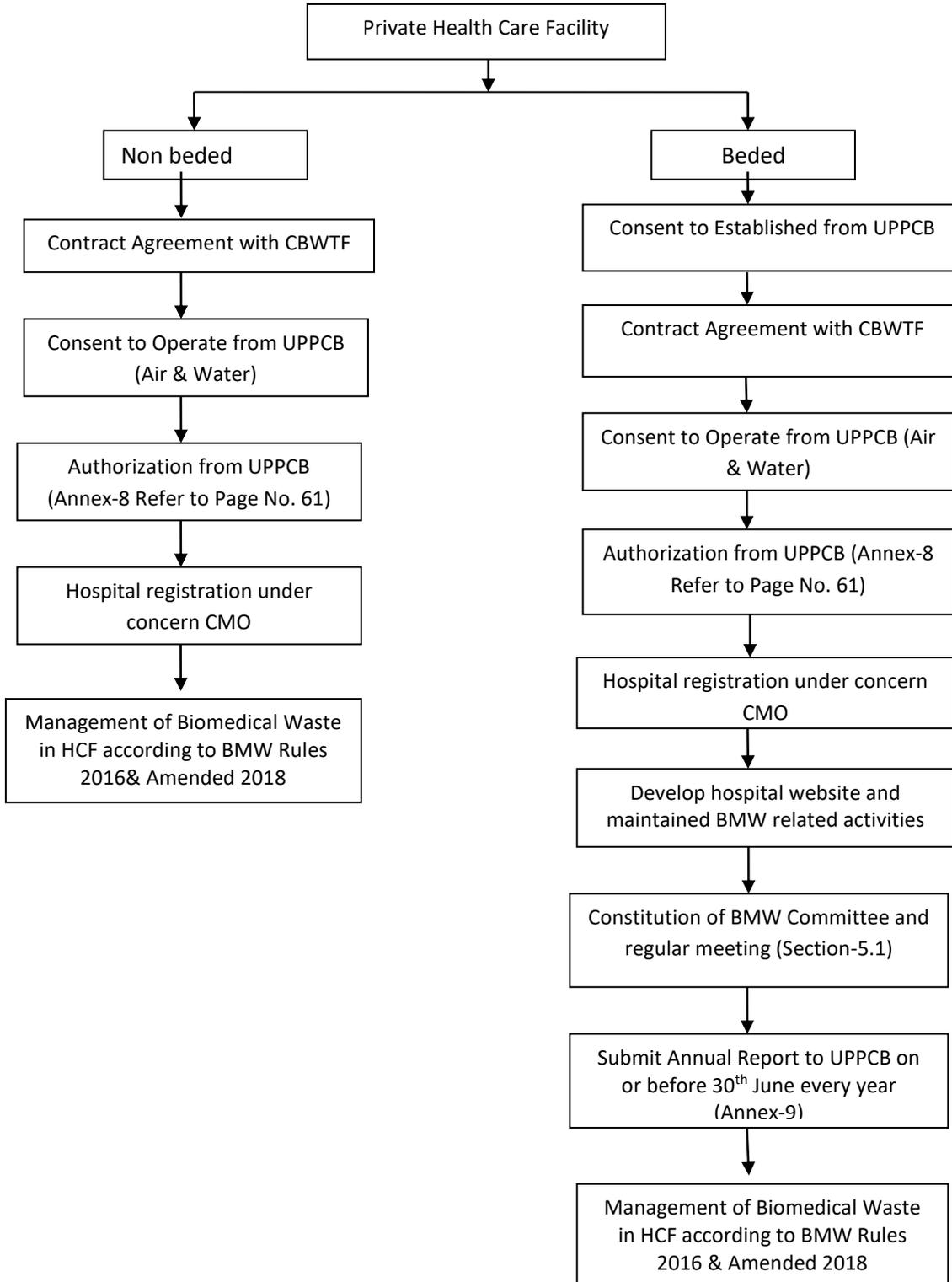
Date:

Place:



Mandatory Requirement for Private Health Care Facility in Uttar Pradesh

Management of Bio-Medical Waste in private health care facility through flow chart is given below:





कार्यालय मुख्य चिकित्सा अधिकारी, जनपद-....।

पता-.....

निजी चिकित्सा प्रतिष्ठानों सम्बन्धी सूचना

जनपदमें संचालित समस्त श्रेणी के निजी चिकित्सा प्रतिष्ठानों के संचालकों/प्रबन्धकों/स्वामियों को चिकित्सा प्रतिष्ठानों के पंजीकरण एवं नवीकरण पंजीकरण हेतु अनिवार्य अभिलेखों की सूची निम्नवत है—

क्लीनिक (केवल परामर्श) के पंजीकरण हेतु वाँछित अभिलेखों की सूची

1. आवेदक का प्रार्थना-पत्र एवं फोटोयुक्त शपथ पत्र।
2. आवेदक का वैध पहचान पत्र।
3. प्रतिष्ठान में कार्यरत चिकित्सक/पैरामेडिकल की डिग्री/डिप्लोमा एवं यू0पी0 स्टेट फ़ैकल्टी में कराये गये पंजीकरण प्रमाण पत्र की स्व-प्रमाणित प्रतियाँ तथा प्रतिष्ठान में कार्य करने की सहमति हेतु फोटोयुक्त 'पथ पत्र।
4. जैवचिकित्सा अपशिष्ट प्राधिकार पत्र की छायाप्रति।
5. सी0बी0डब्लू0टी0एफ0 से हुए अनुबंध की छायाप्रति।

नवीनीकरण हेतु वाँछित अभिलेखों की सूची

1. आवेदक का प्रार्थना-पत्र एवं फोटोयुक्त 'पथ पत्र।
2. मुख्य चिकित्साधिकारी द्वारा गत वर्ष/पूर्व में निर्गत मूल पंजीकरण की स्व-प्रमाणित छायाप्रति।
3. जैवचिकित्सा अपशिष्ट प्राधिकार पत्र की छायाप्रति।
4. सी0बी0डब्लू0टी0एफ0 से हुए अनुबंध की छायाप्रति।

निजी चिकित्सालय/नर्सिंग होम्स/डायग्नोस्टिक सेन्टर/पैथालॉजी/नर्सिंग होम/चिकित्सालय के पंजीकरण हेतु वाँछित अभिलेखों की सूची

1. आवेदक का प्रार्थना-पत्र एवं फोटोयुक्त 'पथ पत्र।
2. आवेदक का वैध पहचान पत्र।
3. अग्निशमन के मानकानुसार सम्बन्धित व्यवस्थाओं की चिकित्सालय में स्थापना सम्बन्धी स्व-लिखित प्रमाण-पत्र (फोटो सहित)
4. उत्तर प्रदेश प्रदूषण नियन्त्रण बोर्ड द्वारा निर्गत प्रमाण-पत्र।
5. सी0बी0डब्लू0टी0एफ0 से हुए अनुबंध की छायाप्रति।
6. प्रतिष्ठान में कार्यरत चिकित्सक/पैरामेडिकल की डिग्री/डिप्लोमा एवं यू0पी0 स्टेट फ़ैकल्टी में कराये गये पंजीकरण प्रमाण पत्र की स्व-प्रमाणित प्रतियाँ तथा प्रतिष्ठान में कार्य करने की सहमति हेतु फोटोयुक्त 'पथ पत्र।
7. चिकित्सा प्रतिष्ठान द्वारा प्रदान की जा रही समस्त सुविधाओं का उल्लेख अनिवार्य है।
8. आवेदनकर्ता द्वारा जिस श्रेणी में पंजीकरण कराया गया है, उसी के अनुरूप प्रतिष्ठान का नाम बोर्ड पर प्रदर्शित किया जाना अनिवार्य है, जिससे उसका औचित्य सिद्ध हो एवं जन-सामान्य को उसी प्रकार की ही सेवायें प्राप्त करायी जाये।

नवीनीकरण हेतु वाँछित अभिलेखों की सूची

1. आवेदक का प्रार्थना-पत्र एवं फोटोयुक्त 'पथ पत्र।
2. मुख्य चिकित्साधिकारी द्वारा गत वर्ष/पूर्व में निर्गत मूल पंजीकरण की स्व-प्रमाणित छायाप्रति।



3. अग्निशमन के मानकानुसार सम्बन्धित व्यवस्थाओं की चिकित्सालय में स्थापना सम्बन्धी स्व-लिखित प्रमाण-पत्र (फोटो सहित)
4. उत्तर प्रदेश प्रदूषण नियन्त्रण बोर्ड द्वारा निर्गत प्रमाण-पत्र।
5. सी0बी0डब्लू0टी0एफ0 से हुए अनुबंध की छायाप्रति।
6. यदि कोई भी चिकित्सक/पैरामेडिकल को सम्मिलित किया जाना है तो सम्बन्धित चिकित्सक/पैरामेडिकल की डिग्री/डिप्लोमा एवं यू0पी0 स्टेट फैकल्टी में कराये गये पंजीकरण प्रमाण पत्र की स्व-प्रमाणित प्रतियाँ तथा प्रतिष्ठान में कार्य करने की सहमति हेतु फोटोयुक्त 'पथ पत्र।

नोट : समस्त 'पथ-पत्र रु0 10/- के स्टैम्प पेपर पर नोटरी एफिडेविट होना अनिवार्य है। पंजीकरण अथवा नवीनीकरण के समस्त आवेदन केवल पंजीकृत डाक अथवा स्पीड पोस्ट के माध्यम से केवल कार्यालय के पते पर प्रेषित किये जायेंगे जिसके साथ वापसी पत्राचार हेतु आवेदन-पत्र के आकार के चिकित्सा प्रतिष्ठान का स्व-पता लिखे हुए 2 लिफाफे (जिस पर पंजीकृत/स्पीड पोस्ट हेतु वाँछित पोस्टेज स्टैम्प चस्पा हो) संलग्न होना अनिवार्य है।

आज्ञा से
मुख्य चिकित्सा अधिकारी
जनपद-

पंजीकरण हेतु आवेदन-पत्र (प्रारूप)
(समस्त अधिकृत चिकित्सकों एवं प्रतिष्ठान)

सेवा में,
मुख्य चिकित्सा अधिकारी

महोदय,

कृपया मेरी क्लिनिक/चिकित्सा प्रतिष्ठान, जिसका विवरण निम्नवत् है, का पंजीकरण/नवीनीकरण करने का कट करें :-

1. चिकित्सा प्रतिष्ठान का प्रकार :
 - अ. चिकित्सालय, नर्सिंग होम, मैटरनिटी होम, मेडिकल क्लिनिक, निजी चिकित्सक, चिकित्सा एवं स्वास्थ्य सेवार्यें प्रदान करने हेतु पैथालॉजी प्रयोगशाला, डायग्नोस्टिक, क्लिनिक व अन्य।
 - ब. अधिष्ठान व्यक्तिगत है अथवा फर्म, सोसाइटी, ट्रस्ट, प्रा0 लिमि0 या पब्लिक लिमि0 द्वारा संचालित है :
2. क्लिनिक/प्रतिष्ठान का पता :
3. प्रदत्त चिकित्सा सेवार्यें :
4. मांग किये गये समस्त अभिलेख संलग्न है:- (हाँ/नहीं)
5. पंजीकृत एवं अधिकृत चिकित्सक/चिकित्सकों का विवरण :-
(जो कार्यरत/नियुक्त/लगाये गये हैं)।

क्र0 सं0	नाम	पिता का नाम	योग्यता/विशेष योग्यता	संस्था का नाम	पंजी0 सं0/बोर्ड का नाम	अंशकालिक / पूर्णकालिक	निर्धारित समय
1							



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6. कार्यरत पैरामेडिकल्स का नाम :-

क्र० सं०	नाम	पिता का नाम	योग्यता/विशेष योग्यता	संस्था का नाम	पंजी० सं०/बोर्ड का नाम	अंशकालिक / पूर्णकालिक	निर्धारित समय

नोट : अपूर्ण फार्म स्वतः निरस्त हो जायेगा।

संलग्नक :-

1. योग्यता, डिग्री, डिप्लोमा, पंजीकरण प्रमाण-पत्र की राजपत्रित अधिकारी द्वारा प्रमाणित प्रतियाँ।
2. मेडिकल संस्थान को संचालित करने वाले अथवा संस्थान के प्रभारी का समर्थन नोटरी द्वारा सत्यापित पथ पत्र।
3. उ०प्र० प्रदूशन नियंत्रण बोर्ड द्वारा निर्गत प्राधिकार पत्र की छायाप्रति।
4. सी०बी०डब्लू०टी०एफ० से हुए अनुबंध की छायाप्रति।

(अवश्य भरें)

दिनांक :

स्थान :

वाले/चिकित्सा संस्थान के प्रभारी

दूरभाष संख्या :

मोबाइल नम्बर :

ई-मेल :

आवेदक के हस्ताक्षर
चिकित्सा सेवार्यें प्रदान करने

आवेदक का नाम :

निवास का पता :



Notes

UTTAR PRADESH HEALTH SYSTEM STRENGTHENING PROJECT
DEPARTMENT OF HEALTH AND FAMILY WELFARE
GOVERNMENT OF UTTAR PRADESH



**UPHSSP- SIHFV Campus. C-Block, Indira Nagar,
Lucknow. Uttar Pradesh-226016**

Ph.: 0522-2354318

www.uphssp.org.in