

Compliance monitoring, audits, and documentation

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Compliance

- Apart from obtaining Consent to Operate and authorization under BMWB Rules, 2016, the HCF and CBWTFs are responsible for environmentally safe handling of biomedical waste in its coverage area.
- Monitoring of compliance by HCFs/CBWTFs envisaged in following areas;
 - (a) Operational Compliance
 - (b) Adequacy of Infrastructure
 - (c) Reporting of data
 - (d) Inspections and Monitoring

Operational Compliance

Operational compliance is related to safe collection, handling, transportation, reception, treatment, and disposal, that include compliance to following activities/aspects;

- (a) Collection
- (b) Use of Personal Protective Equipment (PPEs)
- (c) Transportation of BMW
- (d) Tracking of BMW
- (e) Handling at CBWTFs
- (f) Compliance to norms

Adequacy of Infrastructure

The following infrastructure is essential for auditing performance at HCFs / CBWTFs.

- (a) Transportation / Vehicles
- (b) Area of operations / storage
- (c) Upgradation of Combustion Chamber for CBWTF
- (d) Upgraded APCDs for CBWTF
- (e) Waste reception
- (f) Treated waste handling

Data Submission

- Every HCF need to maintain the records wrt category wise BMW generation and its treatment disposal on daily basis.
- Maintenance of BMW registers/logbook
- Records on Annual Report on BMW management as per CPCB.
- Records on training on BMW management.
- Records for Accidental Report submission.

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- Record for Annual health check-ups of all the employees.
 - Records for the operation of the BMW treatment equipment installed.
 - Records of testing of Effluents generated from HCF
 - Records of the recyclable waste handed over to the authorized recycler.

FORMAT FOR EMPLOYEE HEALTH CHECK UP

Designation:.....Date:

Name: Father's name.....

Age.....years, Sex.....; Married/ Not Married. Blood group.....Rh.....

Address.....

Phone No....., E-Mail:.....

Present complaints with duration (if any):

- 1.
- 2.
- 3.
- 4.
- 5.

Vaccination history (Especially w.r.t Hepatitis-B and Tetanus):

Whether vaccination ever received in past? Yes/ No

Name of Vaccine	First dose	Second Dose	Third Dose	Booster	Booster	Booster	Booster
Hepatitis-B							
Tetanus Toxoid							

Past medical history (if any):

	Hypertension		Since When	Diabetes		Since When	
	Yes	No		Yes	No		
Asthma	Yes	No	Since When	Arthritis	Yes	No	Since When
Tuberculosis	Yes	No	Since When	Allergies	Yes	No	Since When
Cancer	Yes	No	Since When	Others	Yes	No	Since When

Surgical history (if any):

Annexure 9

Log book for Operating the captive Incinerator/Plasma Pyrolysis

Date	Time of operation of the Incineration		Quantity of hourly BMW charged in Kg (Total BMW charged in a day in Kg)	Temperature maintained in °C			Negative draft in primary chamber (in mm of water column) (Pl. indicate range i.e., min. to max)	Pressure drop across APCD (in mm of water column) (Pl. indicate range i.e., min. to max)	pH level of scrubbed liquid used (Pl. indicate range - min. to max.)	Average values of flue gas analysis results (continuous online) observed during the incineration/plasma pyrolysis process operation				Consumption of electricity/ Diesel whichever is applicable		Net Quantity of bio-medical waste received in Kg	Net Quantity of bio-medical Waste left over in a day (in Kg)	
				Primary Chamber	Secondary Chamber	After scrubbing in exit stack gas				CO in mg/Nm ³	O ₂ in %	CO ₂ in %	% combustion Efficiency	Power (indicate electricity meter reading)				Diesel in liters (pl. indicate daily or weekly diesel consumption)
	Start	End		Initial reading	Final reading	(15)				16	(17)	(18)	(19) = (18) - (4)					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	16	(17)	(18)	(19)

Note: Fill the details whichever is applicable

Inspections and Monitoring by UKPCB

- Periodic inspection of HCFs by UKPCB is carried out to monitor compliance.
- UKPCB may evolve their own schedule of monitoring and compliance verification, by ensuring the pre-defined minimal requirement for inspection and monitoring.
- Formats for compliance verification as per CPCB.

Biomedical Waste Audit

- A crucial component of any healthcare facility is the management of biomedical waste.
- Every member of the healthcare team must possess the necessary training, experience, ability to mentor others and handling abilities for the collection and treatment of waste.
- The environment, the general population, and the health care workers are all at risk from the waste produced by hospitals and other healthcare facilities.
- Biomedical waste handling, treatment, and disposal is a growing concern that is being faced by health care facilities.

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- if BMW remains ill-treated and poorly managed, it may cause several health hazards and also contaminate the environment.
 - The entire stream could become toxic if a very small amount of unprocessed bio-medical waste is combined with municipal trash.
 - By following the BMW Rules 2016, total medical waste generation can be reduced and managed efficiently.

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- And, a **bio-medical waste audit** helps to supervise the whole process of management of biomedical waste including segregation, handling and dumping practices.
 - Biomedical waste audits act as a useful waste management tool for healthcare providers, allowing them to assess the effectiveness of their waste management systems and procedures across all of their generation sites.

Objectives of the Bio-medical waste audit

The main objectives of the bio-medical waste management audit are:

1. Quantification of medical waste generation.
2. To quantify the recyclable waste.
3. To estimate the waste being thrown away.
4. To segregate biomedical waste as per the category and colour-coded bins.

Objectives of the Bio-medical waste audit

5. To determine the adequacy of existing bio-medical waste management practices.
6. Waste management practices within the health care facility.
7. Handling and disposal mechanisms installed.
8. The objective was to understand how efficiently our biomedical waste management rules and standard procedures were being followed.
9. Identification of gap areas

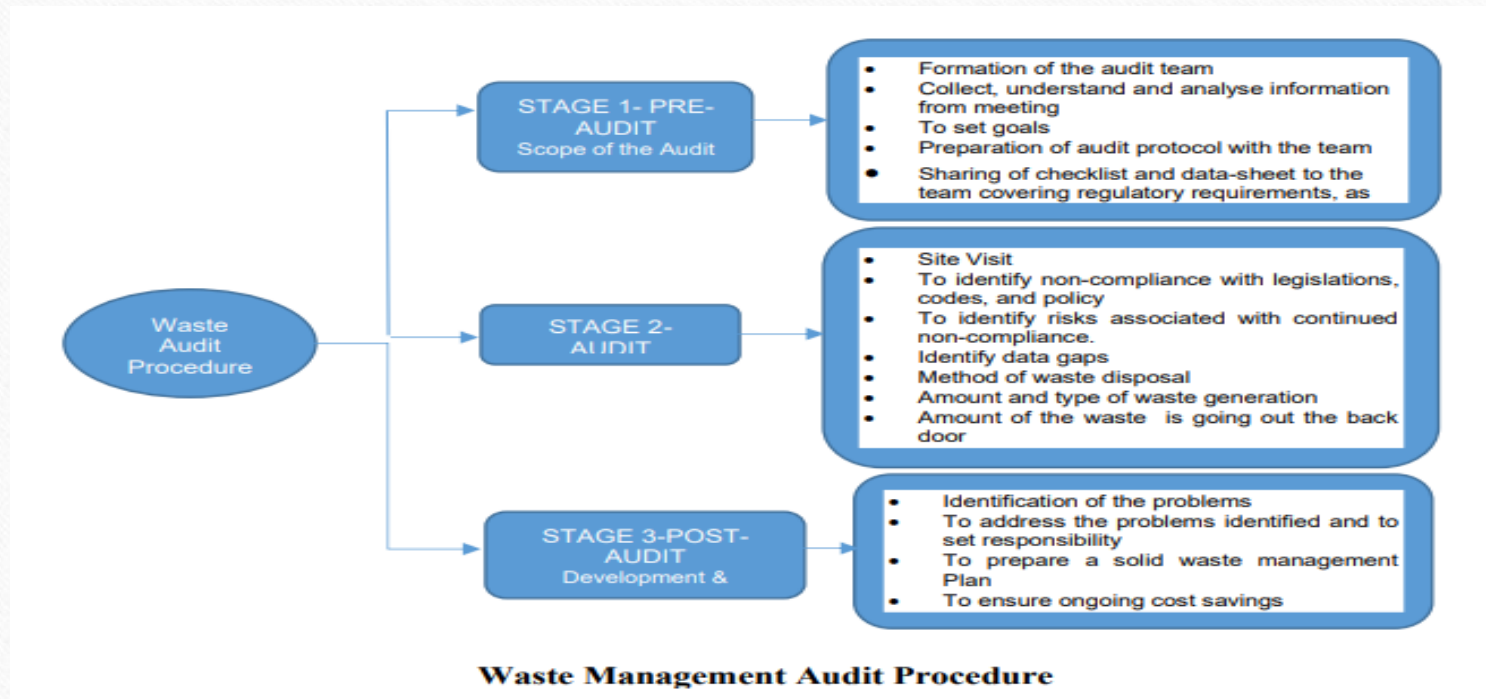
Benefits of Biomedical Waste Audit

1. In the bio-medical waste audit, existing volumes and categories of waste are evaluated.
2. Waste audits facilitate improved bio-medical waste segregation practices.
3. It helps to identify the opportunities for waste minimization.
4. It helps to identify the opportunities for potential cost savings.
5. A cost estimation for existing bio-medical waste management practices has been done.

Benefits of Biomedical Waste Audit

6. A waste audit helps keep compliance with regulation and waste minimization goals set by the central and local governments.
7. It reduces the risk of fines that may be caused due to non-compliance.
8. It aids in the identification of the need for awareness programmes and employee training.
9. Waste audits are aimed at reducing the amount of waste that ends up in landfills, as well as reducing dangers such as sharp injuries among healthcare workers and CO2 emissions.
10. helps in the protection of the environment

Waste Audit Procedure



Steps after Waste Auditing

After completion of the waste audit and waste stream analysis, the auditor should consider the following points:

- It should be double-checked that the dumpster size and frequency of pickup are still adequate for meeting needs. If waste output changes are observed, a different size or number of pickups might be economical.
- If a recycler should be involved, if no recycling services have been engaged until now, More focus should be on recycling more goods.
- Set waste recycling as a personal goal to increase the recycling rate.

Steps after Waste Auditing

- Recycling instructions or guidelines should be made and distributed among the employees to achieve this goal.
- Set a goal to decrease waste in the most important categories.
- Identify the steps necessary to achieve that goal and communicate them to the team (for example, to save paper, e.g., switch to online bill payment).

Steps after Waste Auditing

- Identify the objects that can be reused, e.g., repairing devices rather than purchasing new ones and reuse of packaging materials.
- It is also necessary to make a schedule for achieving your recycling and waste reduction objectives. A timeline for the achievement of the desired waste reduction can be set for one or two years.
- The next waste audit should be planned at that time to verify if the objectives were reached.



Government of Gujarat

“Quality Improvement Programme”

Bio Medical Waste Checklist

Name of the hospital:-----

No of beds:-----Date:-----Signature of Observer : -----

Basic Requirement for Biomedical waste

S. No.	Check Give your Answers in Yes/ No	OT / Labour Room / OPD / Emergency / Laboratory / ICU / NICU / Wards and Campus etc. (Yes / No)	Remarks
1	Adequate no. of BMW Bins as per BMW Guide line (Red, Yellow, Blue, and Black) & Green Bins for General Waste.		
2	Adequate no. of BMW Bags as per BMW Guide line (Red, Yellow, Blue, and Black) & Green bags for General Waste.		
3	Puncture proof Containers for Sharps / Blue Bags		
4	Mutilators (Needle / syringe cutters)		
5	Calibrated Weighing machine for BMW		
6	Personal protected equipments like Gloves, Caps, Masks, Aprons & Gum boots etc. used adequately As per BMW Guide line.		
7	1% fresh Sodium hypochlorite or Bleaching Powder Solution As per BMW Guide line.		
8	BMW Record Register		
9	Mercury Spill Management, kit		
10	Blood spill Management kit		
11	Post Exposure Prophylaxis Kit		
10	BMW Storage Rooms With Lock & Key		
12	BMW Licenses under GPCB (Gujarat Pollution Control Board)		
13	Different Forms & Formats (Needle Stick Injury & Annual Report, etc.)		
Man Power for BMW			
1	Availability of a trained dedicated person for BMW Management.		
2	Trained and skilled BMW person for BMW Collection & Transportation.		
3	Dedicated & Trained Infection Control Nurse		
Training for BMW			
1	Training for BMW Handlers		

Thank You