Policy on Waste Disposal and Management of Hazardous Materials

2024



Shoolini University of Biotechnology and Management Sciences,

Solan, Himachal Pradesh, India-173229

1. Introduction

Shoolini University is committed to fostering an environmentally responsible campus through sustainable waste management practices that prevent pollution, minimize risk, and promote campus hygiene. The Waste Disposal and Hazardous Materials Policy establishes a systematic framework for the collection, segregation, storage, transport, and disposal of hazardous and non-hazardous waste generated on campus. The policy supports Shoolini University broader sustainability vision and aligns with the UN Sustainable Development Goals (SDG 12 and SDG 13), ensuring that waste management practices contribute to responsible production, environmental protection, and climate resilience.

2. Policy Statement

The University shall ensure that all categories of waste—biomedical, chemical, e-waste, solid, and recyclable materials—are collected, handled, transported, and disposed of in a scientific, safe, and environmentally compliant manner.

All operations shall conform to the provisions of:

- The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016
- The Biomedical Waste Management Rules, 2016
- The Solid Waste Management Rules, 2016
- The E-Waste Management Rules, 2022
- The Plastic Waste Management (Amendment) Rules, 2022

3. Objectives of the Policy

- To establish a systematic waste management process for all categories of waste.
- To ensure compliance with environmental and safety regulations.
- To minimize waste generation through reduce, reuse, and recycle (3Rs) strategies.
- To promote safe handling, segregation, and disposal of hazardous materials.
- To enhance campus cleanliness, hygiene, and environmental awareness.
- To encourage the use of green alternatives and eco-friendly materials in laboratories and operations.

4. Scope of the Policy

This policy applies to:

- All teaching and research laboratories generating chemical, biological, or electronic waste.
- All administrative offices, hostels, and canteens generating solid or recyclable waste.
- Maintenance and housekeeping units managing municipal and sanitary waste.
- External contractors or agencies engaged in waste collection or treatment.

5. Categories of Hazardous Waste

Hazardous waste generated at the university is categorized based on its characteristics and potential environmental impact:

5.1 Ignitable Waste

- Flammable liquids (e.g., alcohols, acetone, ethyl acetate, mineral spirits)
- Oxidizers (e.g., nitrates, perchlorates, bromates, peroxides)
- Organic peroxides (e.g., benzoyl peroxide, methyl ethyl ketone peroxide)

5.2 Corrosive Waste

- Liquids with pH <2 or >12.5 (e.g., hydrochloric acid, sulfuric acid, sodium hydroxide)
- Acids and bases capable of corroding metals or containers

5.3 Reactive Waste

- Materials reacting violently with water or producing toxic gases (e.g., sodium, potassium, cyanides, peroxides)
- Compounds prone to explosive polymerization or crystal formation

5.4 Toxic Waste

- Substances leaching harmful elements such as arsenic, mercury, cadmium, chromium, lead, or pesticides during disposal processes.

Note: Disposal of hazardous substances into sinks, drains, or sewage systems is strictly prohibited.

6. Biomedical Waste Management

Shoolini University follows a robust biomedical waste management protocol in accordance with the Biomedical Waste Management Rules (2016).

- Biomedical waste is segregated at the point of generation using color-coded containers (Yellow, Red, Blue, White) as per regulatory norms.
- A fixed collection point is maintained at the University Health Centre, where waste is temporarily stored.
- The waste is collected weekly by the authorized agency Enviro Engineers Pvt. Ltd., recognized by the Himachal Pradesh State Pollution Control Board.
- The waste is then transported to the Sandli Biomedical Waste Treatment Plant for eco-safe processing and disposal.
- The designated Biomedical Waste Management In-Charge, Dr. Rohit Sharma, oversees compliance, record-keeping, and coordination with the authorized disposal agency.

7. Waste Collection and Disposal System

Shoolini University has implemented a systematic and sustainable process for waste collection and disposal:

Segregation at Source:

- Waste is segregated at the generation point labs, hostels, canteens, or administrative areas into biodegradable, non-biodegradable, recyclable, and hazardous categories.

Collection Mechanism:

- The University uses handcrafted bamboo wooden "Kilta" baskets, symbolizing sustainability and Himachali cultural heritage, for waste collection.
- These baskets are durable, renewable, and environmentally friendly, minimizing plastic use on campus.

Storage and Labeling:

- Dedicated color-coded and labeled bins are provided for different waste categories.
- Special containers are installed in laboratories and health centers for hazardous and biomedical waste.

Authorized Disposal:

- General waste is sent for segregation and recycling, while hazardous and biomedical waste is handed over to licensed agencies for safe treatment and disposal.

8. Training and Awareness

To ensure effective implementation, Shoolini University conducts:

- Workshops and training programs for laboratory staff and students on hazardous waste handling.
- Campus-wide awareness campaigns under the themes “Green Shoolini,” “Zero Waste Campus,” and “Clean Lab Initiative.”
- Emergency drills and safety orientations to prevent accidents or chemical exposure incidents.

Shoolini University’s waste management practices reflect its strong dedication to sustainability, environmental compliance, and public health. Through a combination of traditional, eco-friendly collection methods, scientific waste handling, and continuous education, the University ensures a clean, safe, and green campus for all stakeholders.

REGISTRAR

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For Enviro Engineers

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Certificate No. IN-HP45199368622766X, dated 21-04-2025.

CONTRACTUAL AGREEMENT

This contractual agreement is entered on 21st April 2025 at Sandli, Solan (H.P).

BY AND BETWEEN:

Enviro Engineers, CBWTF Sandli Solan (H.P.) here in after, called as 1st party duly authorized by the H.P. State Pollution Control Board, Paryavaran Bhawan, New Shimla 171009 for the compliance of Bio-Medical Waste (Management & handling) Rules, 2016 through Mr. Het Ram Thakur, CEO, Enviro Engineers, who has been duly authorized to execute and sign this agreement for and on behalf of Enviro Engineers, on the one part.

AND

Shoolini University, Bajhol, Solan-Oachghat-Kumarhatti Highway, Solan H.P. 173229, hereinafter as 2nd Party, on the other part and is also referred to as **Lab/Clinic.**

Now the following terms of reference have been agreed upon by both the parties.

Responsibilities of Lab/Clinic

- Will take all steps to ensure that the waste is handled without adverse effect to human health and environment before collection by taking the steps to segregate the west at the point of generation in accordance with schedule 1 & 2 of Bio-Medical Waste (Management & handling) Rule, 2016 incompliance with the standard prescribed.
- Will maintain the record of Bio-Medical Waste Generated/Handed over.
- Will fix a Bio-Medical Waste lifting point (collection and point) and will also authorize a person, whose name designation will be submitted to 1st Party in writing to interact with Enviro Engineers/collection van staff and will sign the Enviro Engineers daily rout chart as acknowledgement of the visit/BMW handed over.
- Will intimate the absentee, if any, very next day to Enviro Engineers office.
- Will destroy, disinfect sharps and mutilate them in puncture proof containers before collection.
- Will provide color coded bags for BMW collection along with barcodes to

For Enviro Engineers

- Will renew their contractual agreement one month before the date of expiry.
- Will provide BMW by weight/electronic weig hing machine.

Responsibilities of Enviro Engineers

- Will receive, collect and transport the BMW handed over by **Lab/Clinic** in color coded bags.
- Will hand over the incinerable waste to Bio Medical Waste Treatment plant site at Sandli for final disposal.
- Will submit the monthly report of the waste collected/continuation of the services of related **Lab/Clinic** to the prescribed authority and also submit the annual report to the prescribed authority.

GENERAL TERMS AND CONDITIONS.

- The terms of this agreement shall be from **1st April 2025 to 31st March 2027.**
- Registration No. of this agreement is EE/25-26/..450..... on dated.1-4-2025
- Enviro-Engineers will charge Rs. 6050/month from unit for collection, Transportation and Disposal of the Bio Medical Waste.
- Manifest will be provided by the authorized person of collection team with date and weight.
- If the concerned unit don't hand over the waste up to 60 days, the agreement will be considered deem expired.
- Enviro-Engineers will discontinue the services of the waste generator in the event the waste generator is at default in responsibilities/payments with seven days prior notice.
- Bio Medical Waste should be segregated, leveled, tagged and tied in proper color & bar-coded bags i.e.: -
- **Yellow Bags:** (a) Human Anatomical (b) Human Anatomical Waste (c) Soiled waste: Items contaminated with blood, body fluids like dressings, plasters casts, cotton swabs and bags containing residual or discarded blood and blood components. (d)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.
- **Red bags:** Contaminated Waste (Recyclable) Waste generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and vacationers with their needles cut and gloves.

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other contaminated sharp object that may cause puncture and cuts. This includes used, discarded and contaminated metal sharps.

- The 1st party will not stop the services of collection without written intimation to HPSPCB **Parwanoo/Shimla/Paonta Sahib** in case of temporary closure/holidays of unit.
- As per NGT/ office order HPSPCB/BMW/02 notification/-27395-99 Dated 19/12/2019 and no waste will be lifted without barcode.
- Before handing over the Bio Medical waste the Lab/Clinic certificate of non-Chlorinated & thickness of micron must be given by 2nd party to 1st party.
- The service of collection & transportation will be started from 8:00 am to onward.
- The duplicate copy of agreement will be provided after written request along with Rs. 400/- in the shape of draft/cheque.
- Cheque bounce charges (in any shape) will be recovered from 2nd party i.e Rs.400/.
- No change or modification or waiver of any of the terms and conditions of this agreement shall be effective, unless agreed to in writing and shall be in force as agreed upon by the both parties here to.
- Neither party shall transfer and nor assign the rights granted under the contract agreement without the prior assignee/transferee agreeing to assume all the said parties obligations and covenants contained herein.
- In case of any dispute arising out of or in connection with this agreement, the courts of Shimla shall have exclusive jurisdiction.
- This agreement shall be governed by the law of India and shall be interpreted and construed in accordance with the laws of India and shall be in writing and delivered by hand against receipt, or send by registered post to the address of any of the parties.
- Any such notice or communication shall be deemed to have been duly given and served at the date and time or (1) delivery or of first refusal of delivery, if send by registered mail or delivered by hand or (2) either the date sent (if send during the receiving party's normal business hours) or next succeeding day, if sent by telefax.
- **Enviro Engineers will not pick up the Bio-medical Waste from Lab/Clinic if it is not segregated, packed and tied in proper color-coded bags marked with Bar code No. or mixed with other general waste as per the Bio-Medical (M&H) Rules,2016.**

IN WITNESS WHEREOF THE PARTIES HERETO HAVE SET THEIR HAND AND SEAL, THE DAY OF MONTH AND YEAR FIRST ABOVE WRITTEN.

On behalf of Lab/Clinic

Authorized Signatory

On behalf of Enviro Engineers

For Enviro Engineers

Authorized Signatory

Shoolini University of Biotechnology