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Waste Disposal Policy (Landfill)

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Assam down town University
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S.No.	POLICY PARTICULARS:	
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Approved by		 Prof (Dr) Pranveer Singh Pro Vice-Chancellor Assam down town University 

Waste Disposal Policy (Landfill)

Introduction:

Waste Disposal Policy concerning landfills centers on managing the final destination for municipal solid waste (MSW) that cannot be reduced, reused, or recycled. Though historically a simple dumping practice, modern landfill policy mandates the creation of sanitary landfills, which are complex, highly engineered, and regulated facilities.

The core objective is to protect human health and the environment by isolating the waste from soil and groundwater through strict design features, such as impermeable liners and leachate collection systems. A critical policy goal, guided by the waste management hierarchy, is to minimize reliance on landfill, restricting it primarily to inert, non-biodegradable residues and waste processing rejects. This approach ensures that landfills are reserved only for materials that cannot be managed through more sustainable methods, while requiring strict monitoring of contaminants like landfill gas and groundwater.

Objective:

The objectives of a Waste Disposal Policy focused on landfills are fundamentally geared toward making landfilling the last resort option and ensuring that the unavoidable disposal process is conducted with the maximum level of environmental protection and public safety.

- ❖ The primary policy goal is to drastically reduce the volume of waste sent to landfills by prioritizing the upper levels of the waste hierarchy: Reduce, Reuse, and Recycle.
- ❖ Policy aims to restrict the landfilling of materials suitable for other processes to reduce the long-term volume, toxicity, and gas production at the site.
- ❖ A core objective is to prevent the contamination of groundwater and soil by requiring and regulating the design of sanitary landfills.
- ❖ The policy aims to minimize the release of harmful air emissions, especially methane, a potent greenhouse gas produced by decomposing organic matter.
- ❖ To prevent future failure, policies mandate stringent requirements for site selection and detailed engineering designs for cell development, waste compaction, and daily covering.

- ❖ A crucial objective is to mandate and finance long-term monitoring and maintenance for decades after a landfill stops accepting waste
- ❖ To promote the objective of final land use and site restoration, where the closed landfill is safely converted into public green space, parks, or other non-structural uses.

Role & Responsibilities:

The Waste Disposal Policy for landfills defines the role of the landfill in the overall waste management system and specifies the responsibilities of the entities involved to ensure safe, compliant, and environmentally sound operation. The policy establishes the landfill's role as the final, secure repository for waste that cannot be managed higher up the waste hierarchy (reduce, reuse, recycle, recover).

- ❖ The landfill serves as the mandated destination for residual waste (municipal solid waste, non-hazardous industrial waste, and processing residues) after all feasible minimization, recycling, and recovery efforts have been exhausted.
- ❖ Its primary function is to contain the waste and isolate it permanently from the surrounding environment—specifically the air, soil, and groundwater—through engineered systems like liners and capping.
- ❖ The modern sanitary landfill is required to function as an environmental control facility, actively managing the byproducts of waste decomposition, mainly leachate (toxic liquid) and landfill gas.
- ❖ Regulated Infrastructure: It provides the necessary, heavily regulated infrastructure (cells, roads, monitoring wells, gas systems) essential for the legal and safe disposal of society's unavoidable waste stream.
- ❖ Set the design, operation, closure, and post-closure standards and issue the necessary permits for the facility to operate.
- ❖ The University should ensure the regular conduct of inspections and audits to ensure the landfill operator's continuous compliance with the policy.
- ❖ The University is solely responsible for approving the location of new landfills to ensure they are built in geologically and environmentally suitable areas
- ❖ The University is also responsible for the design, construction, and daily operation of

the facility in strict adherence to policy and permit conditions.

- ❖ The University need to conduct continuous environmental monitoring (groundwater, air quality, gas emissions) and submit detailed, periodic reports to the regulatory body.
- ❖ The University is responsible for demonstrating financial capability to cover the costs of closure and long-term post-closure care (typically 30 years) to prevent the site from becoming a public liability.
- ❖ The University is responsible for implementing programs (recycling, composting) to meet the policy's objective of reducing the volume of waste sent to the landfill.
- ❖ The University should ensure that the waste they deliver meets the acceptance criteria of the landfill, certifying that prohibited items (like hazardous waste or liquids) are not illegally disposed of.
- ❖ The University should maintain proper records of the type and quantity of waste transported for disposal.

Application & Management:

The application and management of a Waste Disposal Policy focused on sanitary landfills is a highly engineered, regulated, and systematic process designed to contain waste and mitigate its environmental impact over the long term.

- ❖ Policy enforces strict rules for siting—landfills cannot be built in sensitive areas (e.g., wetlands, floodplains, fault zones) and must maintain mandated buffer distances from water bodies, highways, and residential areas.
- ❖ A leachate collection system (perforated pipes above the liner layer) is installed to capture the highly contaminated liquid formed when water percolates through the waste.
- ❖ Legally the University should require to provide financial assurance to guarantee that funds will be available for mandated closure activities and long-term post-closure care.
- ❖ Management is responsible for regular reporting to environmental regulators on the volume of waste received, monitoring results (gas, groundwater, leachate), and compliance with training and inspection requirements.
- ❖ Regular self-audits and government inspections are conducted to verify adherence to all operational and design permits, ensuring the policy is actively enforced.