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GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

GLOBAL HEALTHCARE WASTE PROJECT

MODULE 8: Walkthrough of a Healthcare Waste Treatment Facility

Field Visit



General Topics

- Collection
- Waste transportation
- Waste storage and movement in the CTF
- Condition of the CTF
- Process of treatment and treatment options
- Maintenance and record-keeping
- Final disposal

Waste Collection

- ❑ Frequency and time of pick up of waste
- ❑ Conditions of the containers at the pick-up sites
- ❑ Conditions of the pick-up site – location, storage conditions, accessibility to the public, distance to the parked collection vehicle, condition of the path from pick-up site to vehicle
- ❑ Process of waste collection – method used, equipment used for waste handling, ergonomic issues (proper lifting or handling), PPE, method of waste quantification if used, documentation

Waste Transport

- ❑ Condition of the vehicle (cleanliness)
- ❑ Collection route – road conditions, traffic, potential for accidents
- ❑ Waste collection workers – uniform, use of PPE, ID card, and behavior
- ❑ Waste tracking system, if used – GPS, RFID, barcode readers, etc.

Waste Transportation

- ❑ Ability to secure the waste bins inside the vehicle
- ❑ Compartments, if any, for different kinds of waste
- ❑ Flooring of the vehicles – easy to clean, leak proof
- ❑ Available waste spill clean-up kit, contents of the clean-up kit
- ❑ Vehicle operators' knowledge of clean-up procedures
- ❑ Emergency plans for traffic accidents, spills, accidental exposures

Healthcare Waste Treatment Facility

- Location of the facility – distance to residential areas
- Cleanliness of the facility
- Waste movement in the facility, potential for cross-contamination
- Handling of waste bags or bins – ergonomic issues, PPE
- Weighing of bags or bins before treatment
- Separate waste storage areas for untreated and treated wastes
- Ventilation, wastewater discharges
- Plans, procedures, kits and equipment (emergency stations) for spills and other accidents
- Cleaning of vehicles – frequency, type of cleaning materials, PPE, wastewater

Process of Treatment and Final Waste Disposal

What is the process for each of these categories of waste?

- Sharps
- Plastics
- Glass
- Metals
- Liquid waste
- Sludge
- Incineration ash
- Recycling or potential for recycling

Types of Treatment

- Autoclaving and other steam-based treatment systems
- Microwave treatment systems
- Frictional heating treatment systems
- Chemical treatment systems
- High-temperature incineration with pollution control
- Sharps treatment and disposal
- Shredding, compaction and other post-treatment processes
- Materials recovery, shredding/crushing, recycling of sterilized waste materials

Maintenance and Record-Keeping

- ❑ Types of records maintained and for how long
- ❑ Manifest records or consignment records
- ❑ Authorization for waste collection and treatment
- ❑ Landfill disposal records
- ❑ Other regulatory record-keeping requirements
- ❑ Occupational safety
- ❑ Periodic refresher training program for workers
- ❑ Preventive maintenance plans, frequency of periodic maintenance, documentation of repairs of technology

Final Waste Disposal

- ❑ Conditions relating to the transport of treated waste to the landfill
- ❑ Materials recovery and recycling program at the landfill
- ❑ Conditions at the landfill – location, landfill design, liners, leachate and gas collection, odor control
- ❑ Operation of the landfill – controlled access, monitoring of incoming waste, waste handling and placement, traffic control, compaction, daily earth cover
- ❑ Special procedures for incinerator ash
- ❑ Occupational safety – ergonomics, PPE, worker safety training, emergency procedures
- ❑ Record-keeping and maintenance