



Cornell University
Environmental
Health and Safety

Solid Waste Management Program

Written Program

Cornell University

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1. Introduction

This Cornell University Solid Waste Management Compliance manual is intended for use by personnel at Cornell University (CU) responsible for non-hazardous discarded (abandoned or considered waste-like) materials arising from human and animal activity. Solid wastes can be solid, liquid, semi-solid or containerized gaseous material and normally discarded as useless or unwanted, and require disposal. This manual is designed to assist University personnel in achieving and maintaining compliance with Federal, State and Local non-hazardous solid waste management regulations. It is not intended to be used by CU personnel responsible for hazardous solid waste management. Implementation of requirements and recommendations provided in this manual will help to ensure protection of the environment.

2. Definitions

- Hazardous wastes are solid wastes which either exhibit a hazardous characteristic (ignitability, corrosivity, reactivity or toxicity) or are listed in the NYS hazardous waste regulations (6NYCRR Part 371).
- Solid waste includes (but not limited to): waste tires, septage, scrap metal, latex paints, furniture and toys, domestic refuse (garbage), discarded appliances and vehicles, uncontaminated used oil and anti-freeze, empty aerosol cans, paint cans and compressed gas cylinders, construction and demolition debris, asbestos
- Discarded material is abandoned by being: disposed of; burned or incinerated, including being burned as a fuel for the purpose of recovering usable energy; or accumulated, stored or physically, chemically or biologically treated (other than burned or incinerated) instead of or before being disposed of.
- A material is disposed of if it is: Discharged, deposited, injected, dumped, spilled, leaked or placed into or on any land or water so that such material or any constituent thereof may enter the environment or be emitted into the air or discharged into groundwater or surface water.
- Pathological waste is defined at CU as any recognizable human or animal body part and tissue. The most common pathological waste found at CU is an animal carcass.
- An autoclave is a chamber for sterilizing with steam under pressure.
- Construction and Demolition Debris means uncontaminated solid waste resulting from the construction, remodeling, repair and demolition of utilities, structures and roads; and uncontaminated solid waste resulting from land clearing.
- Hazardous waste is a waste that appears on one of the four hazardous wastes lists (F-list, K-list, P-list, or U-list), or exhibits at least one of four characteristics—ignitability, corrosivity, reactivity, or toxicity.

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- Special Wastes are various special wastes, including Waste Tires, Asbestos, Lumber Pressure Treated with Chromated Copper Arsenate, Used Electronics, Fluorescent and HID Lamps, and Used Oil.

3. Roles and Responsibilities

3.1 EHS

- Communicate regulatory requirements and any changes which will impact operations.
- Act as Cornell liaison with treatment facility, regulatory agency and CU counsel's office as needed.
- Remind treatment facilities of upcoming testing/reporting requirements. Contribute administrative oversight and review of required reporting submittals to regulatory agencies.
- Provide support and guidance during regulatory inspections.
- Train, as needed, respective operations employees on inspection requirements and release reporting
- Provide regulatory assistance for systems upgrades, replacement projects or changes to existing operations which would impact current solid waste treatment management operations.
- Provide regulatory and technical oversight of contractual agreements and facility audits.

3.2 College/Unit

- Inform EHS of any change in operations to ensure conditions of permits or exemptions are not compromised at solid waste treatment operations.
- Only accept manure, bedding and acceptable solid waste to be processed at the respective treatment facility (CALs, CVM).
- Manage retention pond water and leachate run off in compliance with best management practices and beneficial use requirements (compost).
- Properly segregate and dispose of non-compostable, unauthorized incoming solid waste (CALs Compost Facility).
- Submit the annual compost report (completed and on time) to the NYS DEC Regional Office.
- Provide EHS with a copy of the annual compost report submitted to the NYS DEC.
- Submit the CVM treatment facility quarterly and annual report (completed and on time) to the NYS DEC authorities (CVM Part 360).
- Provide EHS with copies of the quarterly and annual reports submitted to the NYS DEC.
- Manage procedures and processes for receiving and segregating pathological waste and Regulated Medical Waste.
- Management of Regulated Medical Waste by shipping off site to an approved (NYS DEC, NYS DOH) regulated medical waste treatment facility; on-site treatment of conventional regulated medical waste.

4. Regulatory and Operational Scope

The following program areas are administered by the Environmental Health and Safety Office (EHS) to assure Cornell University-wide compliance with the associated federal, state and local regulations.

4.1 Scope of Covered CU Facilities and Operations

NYS Endowed and Contract College Facilities & Operations, exclusive of properties and facilities managed by the Real Estate unit

4.2 Applicable Regulations and Aspect Overview

4.2.1 Compost Solid Waste Treatment Facility – University activities/operations centralize the composting of on-site generated plant and animal waste materials as well as dining residuals. All operations are required to comply with following regulations:

- Resource Conservation and Recovery Act 42 USC § 6691
- Solid Waste Disposal Act P.L. 89 - 272
- Title 10 NYS ECL § 17-1001
- 6NYCRR Part 360
- 6NYCRR Part 750

4.2.2 Pathological Solid Waste Treatment Facility – University activities/operations are designed to incinerate pathological waste, and infectious pathological waste (including bedding and carcass waste, and associated containers). (This will be replaced by caustic tissue digestion and steam sterilization). Additional operations include autoclaving to treat non-pathological regulated medical waste. All operations are required to comply with following regulations:

- Resource Conservation and Recovery Act 42 USC § 6691
- Solid Waste Disposal Act P.L. 89 - 272
- Title 10 NYS ECL § 17-1001
- 6NYCRR Part 360-10, Part 364

4.2.3 Used Oil – University activities/operations are designed to store, recycle, or burn used oil for energy recovery. All facilities are instructed to segregate any used oil so as not to mix it with other chemicals; mixing the oil with hazardous wastes or disposing the oil instead of recycling it invalidates the presumption that the oil will eventually be recycled. All operations are required to comply with the following regulation:

- Resource Conservation and Recovery Act 42 USC § 6691
- 40 CFR 279
- Solid Waste Disposal Act P.L. 89 – 272
- 6NYCRR Part 360-14
- 6NYCRR Part 374-2
- Part 201 and Subpart 225-2 of the Air regulations

4.2.4 Regulated Medical Waste (infectious and conventional) – University activities/operations treat conventional regulated Medical Waste generated in research or health care. Such treatment is achieved through autoclaving (steam sterilization) approved by New York State. All infectious conventional RMW is currently disposed and removed off site to a NYS DEC permitted facility. All operations are required to comply with the following regulations:

- Federal Medical Waste Tracking Act (MwTA) of 1988
- Public health Law 1993 Chapter 438
- ECL 27-1501
- 10NYCRR Part 70
- 6NYCRR Part 360
- 6NYCRR Part 364

4.2.5 Miscellaneous Waste (Special, C & D, Domestic) – University activities/operations for removal, disposal and recycling of special wastes, construction and demolition and domestic wastes are managed through various CU Departments (i.e., Purchasing, Contracts, Grounds). EHS provides regulatory and technical oversight through crafting of contractual agreements and facility audits. All operations are required to comply with following regulations:

- Resource Conservation and Recovery Act 42 USC § 6691
- Solid Waste Disposal Act P.L. 89 - 272
- Title 10 NYS ECL § 17-1001
- 6NYCRR Part 360

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5. Recordkeeping, Reporting & Monitoring

Program Area	Aspects	Recordkeeping, Reporting, or Monitoring	Frequency	Responsibility	Internal or External Deliverable
<i>Composting Solid Waste Treatment Facility</i>	Total 10/2012: on campus and remote research locations = One CALS central on campus composting facility	6NYCRR Part 360 Permitting exemption	Continuous	ECPA Confirm exemption status	None.
		Periodic site inspection	Continuous	Unit/facility manager: Visual inspection of site area	None
		Record retention for waste received by generator (by facility per month)	Continuous	Unit/facility manager: Record waste totals	None. On-site retention for use in yearly report
		Record and submit the annual compost report	Yearly	Unit/Facility Manager EHS retain copy of report	Internal –CU EHS office External – NYS DEC Region Office
<i>Pathological Solid Waste Treatment Facility</i>	Total 4/2008 on campus and remote research locations = One CVM central campus solid waste management facility	6NYCRR Part 360 Solid Waste Management Facility Permit	2 years	Unit/Facility Manager negotiates with regulatory authority ECPA assist as needed, retain copy of report	External Application to NYSDEC

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		Weighing and record retention for waste received by generator	Continuous	Unit/Facility Manager enter information into database	Internal
		Quarterly report	Quarterly	Unit/Facility Manager EHS retain copy of report	External to NYS DEC –central and regional offices Internal to EHS
		Yearly report	Yearly	Unit/Facility Manager EHS retain copy of report	External to NYS DEC –central and regional offices Internal to EHS
		Part 364 Transporter Permit CU	Yearly	Unit/Facility Manager EHS retain copy of permit	External to NYS DEC –central and regional offices Internal to EHS
		Weighing and Record retention for RMW waste shipped	Continuous	Unit/Facility Manager enter information into database	Internal
		Solid Waste facility waste approval ash disposal	Yearly	Unit/Facility Manager EHS retain copy of approval	Internal