

Resource Conservation and Recovery Act (RCRA)



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**U.S. Environmental
Protection Agency (EPA)**

Region 1 New England

MOST COMMON RCRA VIOLATIONS IN HEALTHCARE

Hazardous waste determinations

Improper disposal

Open containers

Unmarked/unlabeled containers

Satellite accumulation

Hazardous waste training

Contingency plan

Universal Waste

Note: Don't forget contractors and consultants



RCRA BASICS

RCRA Basics I

HAZARDOUS WASTE DETERMINATIONS

- Generator's responsibility
 - annually or when process changes
- Process knowledge
- Analysis
- MSDS
- Expiration dates

RCRA Basics I

HAZARDOUS WASTE DETERMINATIONS

- Process knowledge
- Analysis
- MSDS
- Expiration dates















I am,
for disposal
4/10/02

42302

RCRA Basics II

Waste Activity Notification

RCRA Basics III

GENERATOR CLASSIFICATION - VOLUME

- ❑ Large Quantity

 - > 1000 kg

- ❑ Small Quantity

 - 100kg –1000kg, < 1kg acute and no more than 1000kg at any time

- ❑ Conditionally Exempt

 - < 100 kg, < 1kg acute and no more than 1000 kg at any time

RCRA Basics III

GENERATOR CLASSIFICATION - TIME

Large Quantity - 90 Days

Small Quantity – 180 Days

Conditionally Exempt - no time limit

RCRCA Basics IV

Container Management

RCRA Basics V

Satellite vs. Non-Satellite Storage

RCRA Basics VI

SATELLITE STORAGE

- At or near point of generation
- Under the control of the operator of the process
- Less than 55-gallons of wastes - total

RCRA Basics VII

SATELLITE STORAGE

- Labeled "Hazardous Waste" and other words that describe contents
- Keep container closed

RCRA Basics VIII

CONTAINER MANAGEMENT

- Labeling (“hazardous waste” and other words that describe contents)
- Dating
- Compatibility
- Aisle space

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

ACCUMULATION
START DATE _____

E.P.A.
WASTE NO. _____

D.O.T. PROPER
SHIPPING NAME _____

U.N. OR
N.A. NO. _____

GENERATOR
NAME _____

ADDRESS _____

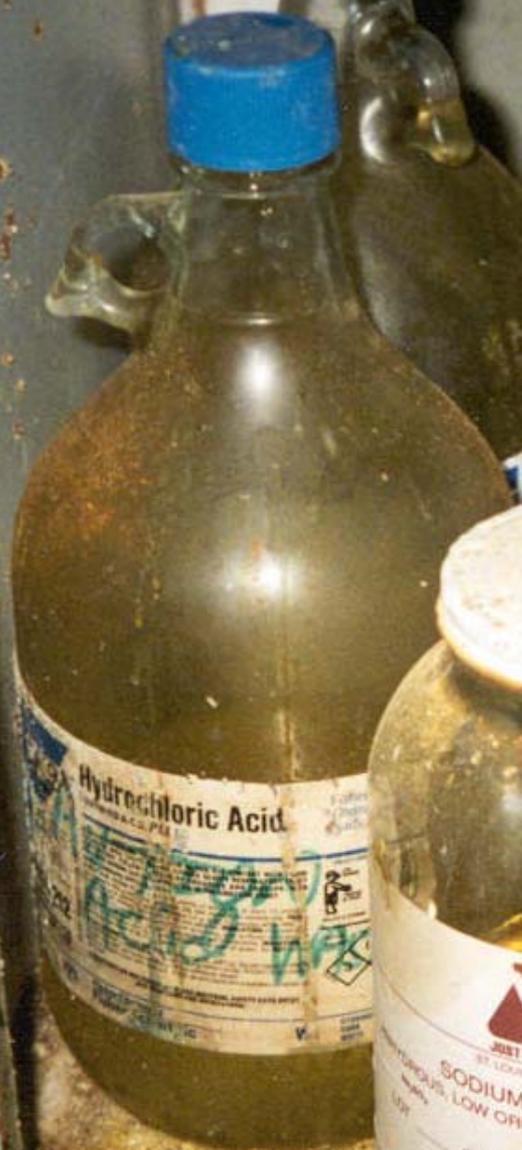
CITY _____ STATE _____

E.P.A.
I.D. NO. _____

MANIFEST
DOCUMENT NO. _____

HAZARDOUS WASTE HANDLE WITH CARE





6 14 '00



CORROSIVE NO SMOKING

3105

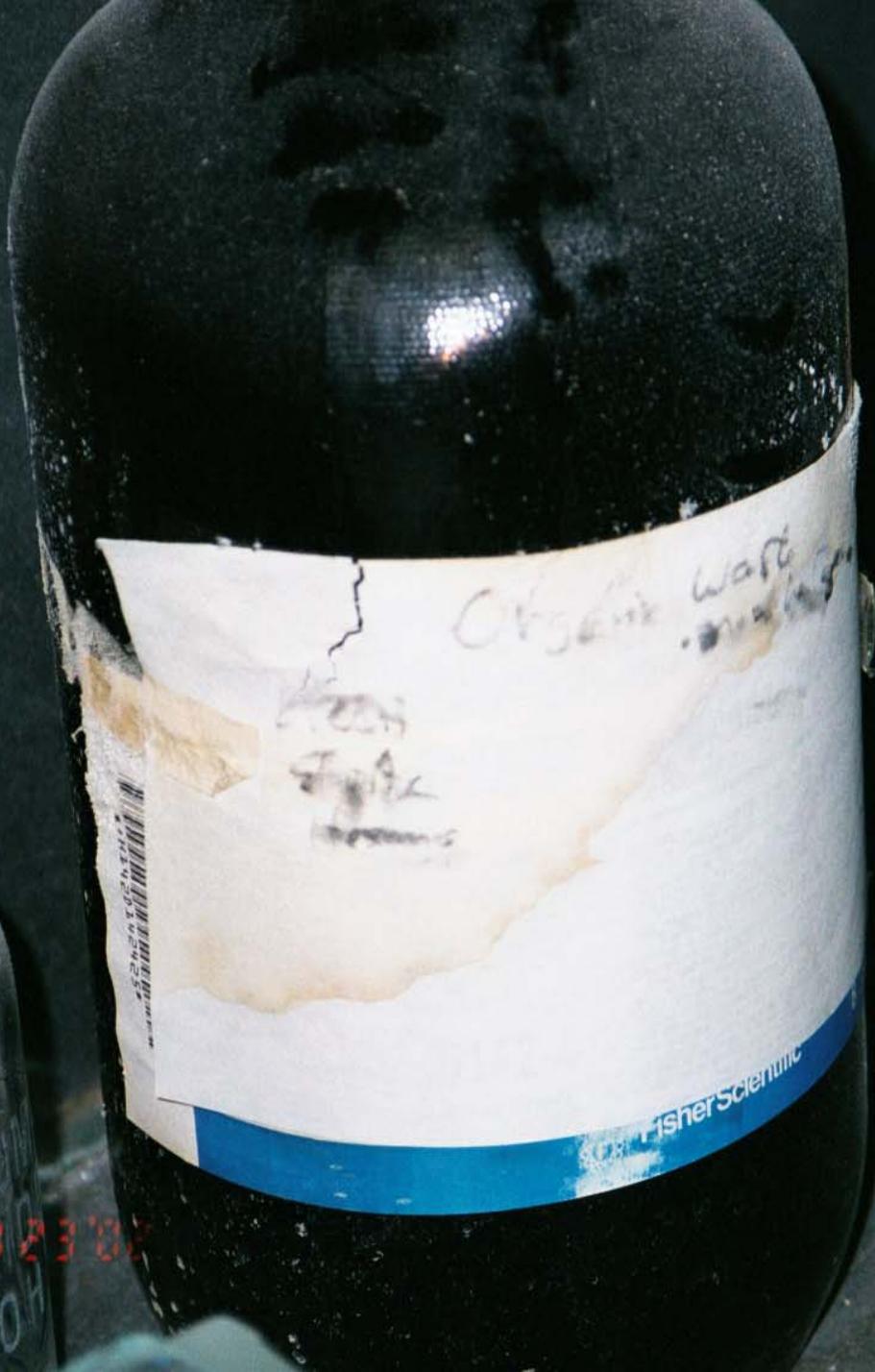
WARNING
CORROSIVE

4535

WARNING
CORROSIVE

4523

WARNING
CORROSIVE



4230

DO NOT OBLITERATE-REUSABLE DRUG-DO NOT DESTROY-NSSN FOR EMPTY DRUG

WARNING



HAZARDOUS WASTE

PAINT
CANS ONLY

3M

3M

12 HERRING BARR
12 CANS
12 CANS



4 991



RCRA Basics IX

CONTAINER MANAGEMENT

- Condition of containers
- closed
- Ignitable waste special requirements
- Air emission standards

DORR-MANN
CARBON
ANALYZER



STOP

RESET

8 14 80



Chemlok

4 10 91







WARNING

HAZARDOUS WASTE



5766

WARNING

HAZARDOUS WASTE

4 9 9 1



2033
AMINE 1988 ALASKA

RCRA Basics XII

Manifesting Wastes

| UNIFORM HAZARDOUS WASTE MANIFEST | | 1. Generator's US EPA ID No. _____ | Manifest Document No. _____ | 2. Page 1 of _____ | Information in the shaded areas is not required by Federal law | | | |
|---|--|---------------------------------------|--------------------------------|---|--|--------------------|-----------------|--------------------|
| 3. Generator's Name and Mailing Address _____ | | | | A. State Manifest Document Number _____ | | | | |
| 4. Generator's Phone () _____ | | | | B. State Generator's ID _____ | | | | |
| 5. Transporter 1 Company Name _____ | | 6. US EPA ID Number _____ | | C. State Transporter's ID _____ | | | | |
| 7. Transporter 2 Company Name _____ | | 8. US EPA ID Number _____ | | D. Transporter's Phone _____ | | | | |
| 9. Designated Facility Name and Site Address _____ | | 10. US EPA ID Number _____ | | E. State Transporter's ID _____ | | | | |
| | | | | F. Transporter's Phone _____ | | | | |
| | | | | G. State Facility's ID _____ | | | | |
| | | | | H. Facility's Phone _____ | | | | |
| 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number) | | | | 12. Containers | | | | |
| | | | | No. | Type | 13. Total Quantity | 14. Unit Wt/Vol | 15. Waste No. |
| | | | | a. | | | | |
| | | | | b. | | | | |
| | | | | c. | | | | |
| 16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment. OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford. | | | | 17. Transporter 1 Acknowledgement of Receipt of Materials | | | | |
| | | | | Printed/Typed Name _____ | | Signature _____ | | Month Day Year |
| 18. Transporter 2 Acknowledgement of Receipt of Materials | | | | Printed/Typed Name _____ | | Signature _____ | | Month Day Year |
| | | | | Printed/Typed Name _____ | | Signature _____ | | Month Day Year |
| 19. Discrepancy Indication Space _____ | | | | Printed/Typed Name _____ | | Signature _____ | | Month Day Year |
| | | | | Printed/Typed Name _____ | | Signature _____ | | Month Day Year |

RCRA Basics XIII

CONTAINER STORAGE AREA INSPECTIONS

The owner or operator must inspect areas where containers are stored, at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

RCRA Basics XV

HAZARDOUS WASTE TRAINING

- Initial training
- Annual refresher training
- Documentation
- Relevant to job duties performed
- Training program led by qualified staff

RCRA Basics XVI

HAZARDOUS WASTE TRAINING

- Job titles
- Job descriptions
- RCRA vs OSHA

RCRA Basics XVII

CONTINGENCY PLAN

- Plan must be designed to minimize hazards to human health and the environment from fires, explosions, or release of hazardous waste or hazardous waste constituents.
- Plan must be carried out immediately.

RCRA Basics XVIII

CONTINGENCY PLAN

- Describe detailed response actions
- Arrangements with locals
- Emergency coordinators
- Emergency equipment
- Evacuation plans

RCRA Basics XIX

PREPAREDNESS AND PREVENTION

- Alarm system
- Communication device
- Extinguishers
- Adequate water
- Aisle space
- Arrangements with locals

RCRA Basics XX

PREPAREDNESS AND PREVENTION

Facilities must be maintained and operated to minimize the possibility of a fire, explosion or release of hazardous waste or hazardous constituents.



4608

WARNING

HAZARDOUS WASTE

| | | |
|-----|---|---|
| 3 | 2 | 3 |
| OXY | | |

WARNING

HAZARDOUS WASTE

| | | |
|-----|---|---|
| 3 | 2 | 3 |
| OXY | | |

4608

4 10 91



HD

SHAKE HANDS WITH CARE

SOLVENT

SOLVENT

Please open door
When Dumping Waste,
the smell has become
Overpowering Thanks.

**IF YOU START A NEW
WASTE DRUM NOT ON
THE RAISED PLATFORM,
YOU MUST WRITE THE
ACCUM. START DATE ON
THE WASTE LABEL.**

Thank you for your cooperation

8 14 00





EASTMAN
Ethylene
Oxide

SIHI
Master
Cleaning

NOTICE
PROHIBITED
202



6-19-08

HANDLE WITH CARE



4075-214

4075-214

EESI
4075-214

EESI
4075-214

EESI
4075-214

4075-214

EESI
4075-214

4075-214

6 14 00



PCl_3





RCRA Basics XXI

BIENNIAL REPORT

A large quantity generator is required to submit a biennial report by March 1st of each even numbered year. This report summarizes waste activities during the previous year.

RCRA Basics XXII

UNIVERSAL WASTE

Universal wastes are widely generated and widely recycled hazardous wastes. Management standards for these wastes are reduced to facilitate their recycling.

Universal Waste need not be counted towards your monthly generation rate

RCRA Basics XXIII

UNIVERSAL WASTE

- Batteries
- Pesticides
- Mercury containing thermostats
- Hazardous waste lamps
- Used electronics

RCRA Basics XXIV

UNIVERSAL WASTE

- Containerization
- Label describing content
- Dating
- Training
- Record keeping





J.T. Baker
Right from the Start!

Ship TO
BG-10

B-8
Sterilization
Flasks

GLASS
HANDLE WITH CARE

PHILIPS
Fluorescent
FASTER FOR THE
ALTO ENVIRONMENT

GE Lighting
Fluorescent

LOG

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

AUTHORITY

42 USC Section 6927 (SWDA 3007)

Gives EPA the authority to:

Enter at reasonable times any place where hazardous wastes are or have been generated, stored, treated, disposed of or transported from

Inspect and obtain samples

Review and copy records related to hazardous waste

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

**FEDERAL REGULATIONS
VS.
STATE REGULATIONS**

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

WHAT WE LOOK AT

Container management

Emergency planning

Training

Other records

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

WHEN WE ARRIVE

It will be a surprise

Plan on spending a day to several days with us

There will be at least two of us

Multi-media or not

An opening meeting – you describe your facility

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

FACILITY TOUR

Photos and lots of notes

Will go to any and all areas of the site

Will look at chemical and waste storage

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

RECORD REVIEW

Manifests

Waste determination documentation

Training records

Contingency plan

Biennial report

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

OUTBRIEF

Please have all relevant people at this meeting

Detailed review of areas of concern

Summary of time frames and enforcement follow-up

Ask questions and offer information on compliance determination.

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

WHEN WE LEAVE

Report and review findings with management

May ask for more information (informally or information request letter)

Prepare enforcement follow-up

WHAT TO EXPECT DURING AN EPA RCRA INSPECTION

TYPES OF ENFORCEMENT

Notice of Violation

Administrative Order with penalty (up to \$ 32,500 per day per violation)

Referral to the Department of Justice

7003 Order for imminent/substantial endangerment

Referral to State/other EPA program/other agency

Criminal referral

Note: EPA does not issue "compliance letters"

WHEN IS A WASTE A WASTE?

**WHEN YOU GENERATE IT OR
DETERMINE IT TO BE NO LONGER
USABLE**

WHEN IS A WASTE A WASTE?

A solid waste is any discarded material that is not otherwise excluded. A material is discarded if it is abandoned by being disposed of, burned or incinerated; accumulated, stored or treated before or in lieu of being abandoned by being disposed of, burned or incinerated; or recycled.

A person who generates a solid waste must determine if that waste is a hazardous waste.

WHEN IS A WASTE A WASTE?

40 CFR Section 261.2(f)

Documentation of claims that materials are not solid waste or are conditionally exempt from regulation. Respondents in actions to enforce regulations implementing subtitle C of RCRA who raise a claim that a certain material is not a solid waste, or is conditionally exempt from regulation must demonstrate that there is a known market or disposition for the material and that they meet the terms of the exclusion.

WHEN IS A WASTE A WASTE?

A solid waste is a HAZARDOUS waste if it:

Is not excluded or deferred; and

Is LISTED; or

Exhibits a CHARACTERISTIC(S); or

Is mixed with a hazardous waste; or

Is derived from a hazardous waste; or

Is regulated by a State.

WHEN IS A WASTE A WASTE?

LISTED WASTES (CONT.)

P Wastes
P001-P123

Acutely hazardous
(e.g., nitric oxide,
dichloromethyl ether)

U Wastes
U001-U359

Toxic wastes
(e.g., acetone,
formaldehyde)

Discarded commercial chemical product, residues and spills
AND sole active ingredients

WHEN IS A WASTE A WASTE?

CHARACTERISTIC HAZARDOUS WASTES

- | | |
|-----------|---|
| D001 | Ignitable – liquids with a flash point < 140 degrees F |
| D002 | Corrosive – pH less than or equal to 2 or greater than or equal to 12.5 or corrodes steel .25 inches/year |
| D003 | Reactive – unstable, explosive, water reactive |
| D004-D043 | Toxic - TCLP |

WHEN IS A WASTE A WASTE?

HAZARDOUS WASTE MIXTURES

Hazardous waste mixtures that are still hazardous waste

Mix anything with a listed waste and it's all listed

Mix something with a characteristic waste and it retains characteristic

Spill residues, soil, water, debris mixed with listed waste

WHEN IS A WASTE A WASTE?

EMPTY CONTAINERS DO NOT HAVE TO BE
MANAGED AS HAZARDOUS WASTE

Compressed Gas – no pressure

P-listed Waste – triple rinse and manage rinsate as
HW

All else - all waste removed AND $< 1''$ of residue OR
 $< 3\%$ of the containers capacity (if container less
than 110 gallons)

WHEN IS A WASTE A WASTE?

DON'T FORGET

Expired chemicals and unused chemicals/pharmaceuticals (both active use and inactive use)

Facilities wastes

Dental wastes

Photographic wastes

REGION II HOSPITAL INITIATIVE – INSPECTIONS AND ENFORCEMENT

Region II includes New Jersey, New York, Puerto Rico, and U.S. Virgin Islands

Region II conducted at least 12 inspections and initiated four penalty actions

REGION II HOSPITAL INITIATIVE – INSPECTIONS AND ENFORCEMENT

North Shore University Hospital

Total Penalty - \$ 57,749

**Waste determination – chemo waste for
incineration, lamps in trash**

**Failure to minimize the threat of release –
abandoned chemicals not segregated**

REGION II HOSPITAL INITIATIVE – INSPECTIONS AND ENFORCEMENT

Atlantic Health Systems/Mountainside
Hospital

Total Penalty - \$ 64,349

Waste determination – chemo waste,
scrap amalgam, lamps, lab wastes,
dental clinic wastes in trash or down
sink or disposed of as medical waste

REGION II HOSPITAL INITIATIVE – INSPECTIONS AND ENFORCEMENT

Memorial Sloan Kittering

Total Penalty - \$ 214,423

**Storage of hazardous waste without a
permit**

Waste determination

REGION II HOSPITAL INITIATIVE – INSPECTIONS AND ENFORCEMENT

Nassau Health Care Corporation/Nassau University Hospital

Total Penalty - \$ 279,900

Storage of hazardous waste without a permit – old, unused chemicals stored for greater than one year

Failure to minimize the threat of release – abandoned chemicals not segregated, wastes stored in alphabetical order

RCRA REGULATED CHEMOTHERAPY DRUGS

Some drugs that are LISTED hazardous wastes:

Chlorambucil (U035)

Cyclophosphamide (U058)

Daunamycin (U059)

Melphalin (U150)

Mitomycin C (U010)

Streptozocin (U206)

Uracil Mustard (U237)

Arsenic Trioxide (P012!!!)

RCRA REGULATED CHEMOTHERAPY DRUGS

IV BAGS AND ASSOCIATED EQUIPMENT

Empty bags and equipment that are not acutely hazardous may be disposed as empty containers

Bags and equipment with material remaining must be managed as hazardous waste

The background of the slide is a photograph of a sunset over a vast ocean. The sun is partially visible on the left side, creating a bright glow and a rainbow that arches across the sky. The sky transitions from a pale yellow near the horizon to a deep blue at the top. The ocean surface is dark blue with gentle ripples.

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