



Introduction to Hazardous Materials Training



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Introduction to Hazardous Materials Training



HCI Environmental & Engineering Service (HCI) is a full service environmental management company specializing in the following areas:

-Hazardous Waste Transportation & Disposal

-24/7 Emergency Chemical Spill Response

-Environmental Construction

-Demolition

-Decontamination

-Soil Excavation

-Lead & Asbestos Abatement

-Scrap Metal Recycling

The following training should be used for general informational purposes only. Please confirm all information with local regulatory agencies and/or an attorney prior to implementation.

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What is Hazardous Waste?



Hazardous waste is a material with properties that make it dangerous or capable of harming humans or the environment if not properly managed.

The universe of hazardous wastes is large and diverse. Hazardous wastes can be liquids, solids, or contained gases. They can be the by-products of manufacturing processes, discarded used materials, or discarded unused commercial products, such as cleaning fluids (solvents) or pesticides.

However, materials can be hazardous wastes even if they are not specifically listed or don't exhibit any characteristic of a hazardous waste. For example, "used oil," products which contain Materials on California's M-list, materials regulated pursuant to the mixture or derived-from rules, and contaminated soil generated from a "clean up" can also be hazardous wastes.

Characteristics of Hazardous Waste



Ignitable

Ignitable wastes can create fires under certain conditions, undergo spontaneous combustion, or have a flash point less than 60°C (140°F).

Corrosive

Corrosive wastes are materials, including solids, that are acids or bases, or that produce acidic or alkaline solutions. Aqueous wastes with a pH less than or equal to 2.0 or greater than or equal to 12.5 are corrosive.

Reactive

Reactive wastes are unstable under normal conditions. They can cause explosions or release toxic fumes, gases, or vapors when heated, compressed, or mixed with water.

Toxic

Toxic wastes are harmful or fatal when ingested or absorbed. When toxic wastes are disposed, the toxic constituents may leach from the waste and pollute ground water.

What Does a Hazardous Waste Look Like?



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Who Makes Up the Waste Disposal Process?



Hazardous Waste Generator

Entity that created the waste, property owner where the waste resides and/or Responsible Party. Responsible for Hazardous Material/Waste Disposal from “Cradle to Grave”.

Hazardous Waste Transporter

Licensed by the State of California Department of Toxic Substances Control. Transports the hazardous waste via a Uniform Hazardous Waste Manifest to a licensed Treatment, Storage, Disposal Facility (TSDF) .

Treatment, Storage, Disposal Facility (TSDF)

Licensed by the State of California Department of Toxic Substances Control. Receives and disposes of waste shipped on a Uniform Hazardous Waste Manifest.

Definition of “Cradle to Grave”



Responsibility to monitor every aspect of a product or program through its entire life cycle;
From design or acquisition to disposal, or from proposal to termination.



Environmental Protection Agency (EPA ID Number)



- EPA ID #'s are used to track the generation, transportation and disposal of hazardous waste
- EPA ID #'s are provided by the Environmental Protection Agency and/or the Department of Toxic Substances Control
- Any entity that generates a hazardous waste must obtain an EPA I.D. #
- All EPA I.D. #'s are site specific
- EPA ID #'s are made up of 12 characters. They consist of three letters and 9 numbers (CAL123456789)
- EPA ID #'s are listed on the Hazardous Waste Manifest under the Generator, Transporter and Disposal Facility Section

Hazardous Waste Inventory





Hazardous Waste Inventory



Step 1

Separate and consolidate all hazardous materials to one location

Step 2

Segregate materials into like waste streams
(i.e. paints, acids, caustics, petroleum products, etc.)

Step 3

Categorize like waste streams into groups that can be packaged together

Step 4

Complete inventory list and submit for profiling to HCI disposal facilities

Hazardous Waste Profiling



| HAZARDOUS WASTE PROFILE SHEET | | |
|---|--|--|
| PART I | | |
| A. GENERAL INFORMATION | | |
| WASTE PROFILE NO. _____ | | |
| 1. GENERATOR NAME _____ | | |
| 2. FACILITY ADDRESS _____ | | 3. GENERATOR USEPA ID _____ |
| 6. ZIP CODE _____ | | 4. GENERATOR STATE ID _____ |
| 8. TECHNICAL CONTACT _____ | | 7. TITLE _____ PHONE (____) _____ |
| B. 1. NAME OF WASTE | | |
| 2. USEPA (or STATE) WASTE CODE(S) _____ | | |
| 3. PROCESS GENERATING WASTE _____ | | |
| 4. PROJECTED ANNUAL VOLUME/UNITS _____ | | 5. MODE OF COLLECTION _____ |
| 6. IS THIS WASTE A DIXON LISTED WASTE AS DEFINED IN 40 CFR 261.31 (a) g., F020, F021, F022, F023, F024, F025, OR F028? <input type="checkbox"/> YES <input type="checkbox"/> NO | | |
| 7. IS THIS WASTE RESTRICTED FROM LAND DISPOSAL (40 CFR 268)? <input type="checkbox"/> YES <input type="checkbox"/> NO | | |
| HAS AN EXEMPTION BEEN GRANTED? <input type="checkbox"/> YES <input type="checkbox"/> NO | | |
| DOES THE WASTE MEET APPLICABLE TREATMENT STANDARDS? <input type="checkbox"/> YES <input type="checkbox"/> NO REFERENCE STANDARD _____ | | |
| PART II | | |
| 1. MATERIAL CHARACTERIZATION (OPTIONAL NOT REQUIRED DATA) | | |
| COLOR _____ | 2. RCRA CHARACTERISTICS | |
| DENSITY _____ BTU/LB _____ | PHYSICAL STATE: <input type="checkbox"/> SOLID <input type="checkbox"/> LIQUID <input type="checkbox"/> SEMI-SOLID | |
| TOTAL SOLIDS _____ ASH CONTENT _____ | <input type="checkbox"/> GAS <input type="checkbox"/> OTHER _____ | |
| LAYERING <input type="checkbox"/> MULTILAYERED <input type="checkbox"/> BILAYERED <input type="checkbox"/> SINGLE PHASE | TREATMENT GROUP: <input type="checkbox"/> WASTEWATER <input type="checkbox"/> NON-WASTEWATER | |
| | <input type="checkbox"/> IGNITABLE (D001) <input type="checkbox"/> REACTIVE (D002) | |
| | <input type="checkbox"/> FLAMMABLE (F001) <input type="checkbox"/> WATER REACTIVE | |
| | <input type="checkbox"/> HIGH TOC (> 10%) <input type="checkbox"/> CYANIDE REACTIVE | |
| | <input type="checkbox"/> LOW TOC (< 10%) <input type="checkbox"/> SULFIDE REACTIVE | |
| | <input type="checkbox"/> CORROSIVE (D002) <input type="checkbox"/> TOXIC CHARACTERISTIC (SEE REVERSE-SIDE LISTING) | |
| | <input type="checkbox"/> CORRODES STEEL | |
| 3. CHEMICAL COMPOSITION (ppm mg/L) | | |
| COPPER _____ | PHENOLIC _____ | 5. SHIPPING INFORMATION DOT HAZARDOUS MATERIAL? <input type="checkbox"/> YES <input type="checkbox"/> NO PROPER SHIPPING NAME _____ HAZARD CLASS _____ U.N. or N.A. NO. _____ ADDITIONAL DESCRIPTION _____ METHOD OF SHIPMENT <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> OTHER _____ CERCLA REPORTABLE QUANTITY (RQ) _____ EMERGENCY RESPONSE GUIDE PAGE _____ DOT PUBLICATION 8800.4 PAGE NO. _____ EDITION (YR) _____ SPECIAL HANDLING INFORMATION _____ |
| NICKEL _____ | TOTAL HALOGENS _____ | |
| ZINC _____ | VOLATILE ORGANICS _____ | |
| CHROMIUM HEX _____ | PCB _____ | |
| OTHER: _____ | OTHER: _____ | |
| NOTE: EXPLOSIVES, SHOCK SENSITIVE, PYROPHORIC, RADIOACTIVE, AND ETIOLOGICAL WASTE NORMALLY ARE NOT ACCEPTED BY THE DRMO. | | |
| 6. GENERATOR CERTIFICATION | | |
| BASIS FOR INFORMATION | | |
| <input type="checkbox"/> CHEMICAL ANALYSIS (ATTACH TEST RESULTS) | | |
| <input type="checkbox"/> USER KNOWLEDGE (ATTACH SUPPORTING DOCUMENTS - Explain how and why these documents comply with RCRA requirements) | | |
| I, _____ (Print or Type Name), HEREBY CERTIFY THAT ALL INFORMATION SUBMITTED IN THIS AND ALL ATTACHED DOCUMENTS IS TO THE BEST OF MY KNOWLEDGE AN ACCURATE REPRESENTATION OF THE WASTE TURNED IN TO THE DRMO. ALL KNOWN OR SUSPECTED HAZARDS HAVE BEEN DISCLOSED. | | |
| SIGNATURE OF GENERATOR'S REPRESENTATIVE _____ | | DATE _____ |



Hazardous Waste Profiling



- All waste must be profiled and accepted into a disposal facility prior to delivery.
- Each disposal facility requires you to complete their own specific profile sheet based on their permit requirements.
- A profile is used to describe the hazardous waste that is being disposed of.
- Once the material is accepted, the facility issues a profile number. This number is used on the hazardous waste manifest to identify that particular waste stream.



Hazardous Waste Manifest



Please print or type. (Form designed for use on elite (12-pitch) typewriter.) 1 1 1 1 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number 2. Page 1 of 3. Emergency Response Phone 4. Manifest Tracking Number

5. Generator's Name and Mailing Address Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name U.S. EPA ID Number

7. Transporter 2 Company Name U.S. EPA ID Number

8. Designated Facility Name and Site Address U.S. EPA ID Number

Facility's Phone:

| 9a. Hbl | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group if any) | 10. Containers | | 11. Total Quantity | 12. LHM Wt./Vol. | 13. Waste Codes |
|---------|--|----------------|------|--------------------|------------------|-----------------|
| | | No. | Type | | | |
| 1. | | | | | | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |

14. Special Handling Instructions and Additional Information

15a. GENERATOR/SUPPLIER'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
 I certify that the waste minimization statement identified in 40 CFR 300.307(b) (P1) am a large quantity generator or (P2) (P1) am a small quantity generator) is true.

Generator's Operator's Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____

16. International Shipments Import to U.S. Export from U.S. Port of entry: _____ Date leaving U.S.: _____

17. Transporter Acknowledgment of Receipt of Materials
 Transporter 1 Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____
 Transporter 2 Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____

18. Discrepancy
 18a. Discrepancy Indication Space Quantity Type Residue Partial Rejection Full Rejection
 Manifest Reference Number: _____

18b. Alternate Facility (or Generator) U.S. EPA ID Number _____

Facility's Phone: _____

18c. Signature of Alternate Facility (or Generator) _____ Month _____ Day _____ Year _____

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

| | | | |
|----|----|----|----|
| 1. | 2. | 3. | 4. |
|----|----|----|----|

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
 Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete. **DESIGNATED FACILITY TO DESTINATION STATE (IF REQUIRED)**



Hazardous Waste Manifest



Pollution control procedures in which a hazardous material is identified and traced from its production, treatment, transportation and final disposal through a series of permanent and linked documents called Uniform Hazardous Waste Manifests.



Hazardous Waste Manifest



Item 1 Generator's EPA ID Number

Item 2 Page ____.

Item 3 Emergency Response Phone Number.

Item 4 Manifest Tracking Number.

Item 5 Generator's Name

Item 6 Transporter 1 Company Name & US EPA ID Number

Item 7 Transporter 2 Company Name & US EPA ID Number

Item 8 Designated Facility Name, Site Address & US EPA ID Number

Item 9 U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a If the waste identified in item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next the corresponding hazardous material identified in item 9b.

Item 9b Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR 172. Include technical name(s) and reportable quantity references, if applicable.



Hazardous Waste Manifest



- Item 10 Containers (Number and Type)
- Item 11 Total Quantity
- Item 12 Units of measure (Weight/Volume)
- Item 13 Waste Codes
- Item 14 Special Handling Instructions and Additional Information
- Item 15 Generator/Offer Certifications
- Item 16 International Shipments
- Item 17 Transporters' Acknowledgements of Receipt
- Item 18 Discrepancy
- Item 18a Discrepancy Indication Space
- Item 18b Alternate Facility (or Generator) for Receipt of Full Load Rejections
- Item 18c Alternate Facility (or Generator) Signature
- Item 19 Hazardous Waste Report Management Method Codes
- Item 20 Designated Facility Owner or Operator Certification of Receipt (Except as Noted in item 18a)



Hazardous Waste Manifest



Generators must mail a copy of their “Generator Copy” part of the manifest to the state within 30 days of the pick up. Generators need to keep all original manifests on file for 3 years.

DTSC Generator Manifests
P.O. Box 400
Sacramento, CA 95812-0400

Hazardous Waste Label



**HAZARDOUS
WASTE**

**STATE AND FEDERAL LAW PROHIBITS IMPROPER DISPOSAL.
IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY
AUTHORITY, OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY, OR
THE CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL.**

GENERATOR INFORMATION:

NAME _____

ADDRESS _____ PHONE _____

CITY _____ STATE _____ ZIP _____

EPA IDENTIFICATION NO. / MANIFEST TRACKING NO. _____ / _____

EPA WASTE NO. _____ CA WASTE NO. _____ ACCUMULATION START DATE _____

CONTENTS, COMPOSITION: _____

PHYSICAL STATE: SOLID LIQUID

HAZARDOUS PROPERTIES: FLAMMABLE TOXIC
 CORROSIVE REACTIVITY OTHER _____

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

Hazardous Waste Label



Any packaging containing a hazardous waste must have a hazardous waste label attached to it.

A hazardous waste label identifies the hazardous waste generator and the contents of the container.

The Accumulation Start Date must be completed when hazardous waste is put into the container.

The generator of hazardous waste is given 90 days from the accumulation start date to dispose of the waste once the container begins accumulating waste.

Labels should not be affixed to containers not containing hazardous waste.



Hazardous Waste Violations & Fines



Common Violations Found During Environmental Agency Inspections:

- Hazardous waste storage containers not stored in proper containment area
- Hazardous waste containers without lids or bungs in place
- Hazardous waste spilled and left on ground
- Hazardous waste thought to be “Non-Hazardous” is being thrown in trash (i.e. oil and absorbent, oil filters, paint filters, aerosols, contaminated rags, etc.)
- Annual analysis not being performed on various waste streams
- Hazardous waste labels not affixed to drums containing hazardous waste
- Accumulation Start Date not filled in properly on hazardous waste label
- Hazardous waste being kept on-site longer than 90 days
- Hazardous waste manifests not completed properly
- Hazardous waste manifests not kept on file for a period of three years
- Employees not properly trained to manage hazardous waste



Hazardous Waste Violations & Fines



Department of Toxic Substances Control (DTSC)

- Up to \$25,000 per day per violation

U.S. Department of Transportation (USDOT)

- \$275 - \$55,000 per violation/day (Damage)
- \$110,000 per violation/day (Fatality)
- \$110,000 per violation/day and/or 5 years jail (Willful

Damage)

- \$110,000 per violation/day and/or 10 years jail (Willful

Fatality)

Occupational Safety and Health Hazardous Material Training (OSHA)

- \$495 per violation/employee/day



Live Training



IF YOU ARE A CURRENT CLIENT AND WOULD LIKE TO SCHEDULE A
*FREE "LIVE" PRESENTATION OF THE "INTRODUCTION TO
HAZARDOUS WASTE" TRAINING COURSE PLEASE CONTACT YOUR
ACCOUNT REPRESENTATIVE TO SCHEDULE.

IF YOU ARE NOT A CURRENT CLIENT OF HCI PLEASE CONTACT
OUR CORPORATE OFFICE AT 800.988.4424 AND A QUOTE WILL BE
PREPARED FOR THE PRESENTATION.

*Based on location, travel expenses may apply.



Training Classes Provided By HCI Environmental & Engineering Service



40 Hour HAZWOPER

24 Hour HAZWOPER

8 Hour HAZWOPER Refresher Course

Confined Space Training

Respiratory Protection and FIT Testing

Equipment Training:

Forklift

Reachlift

Boomlift

Scissorlift

Skip Loader

Annual Hazardous Waste Manifest Training

Lead Awareness 8 Hr. Training

Lead Awareness 4 Hr. Training

First Aid/CPR Training

Preparation of Site Specific

Injury Illness Prevention Plan (IIPP)

IIPP Introduction Training Class

Monthly Training and Update of IIPP

*Custom Equipment Training Programs Available Upon Request



Training Classes Provided By HCI Environmental & Engineering Service



HCI Environmental & Engineering Service
800.988.4424

Hazardous Waste Transportation & Disposal

- Containerized
- Bulk

Environmental Construction

- Decontamination
- Demolition
- Contaminated Soil Excavation
- Scrap Metal Recycling

24/7 Emergency Chemical Spill Response

Supplies

- UN Approved Drums, Boxes, Totes and Pails
- Personal Protective Equipment
- Spill Response Supplies