Colorado Hazardous Waste Regulations

Part 264

Standards for Owners and Operators of Permitted Hazardous Waste Treatment, Storage, and Disposal Facilities

Appendix I, Appendices II and III are reserved; Appendices V and VI, and Appendices VII and VIII are reserved

To obtain more information regarding the Colorado Hazardous Waste Regulations, please contact the Hazardous Materials and Waste Management Division at 303-692-3300.
APPENDIX I -- RECORDKEEPING INSTRUCTIONS

The recordkeeping provisions of § 264.73 specify that an owner or operator must keep a written operating record at his/her facility. This appendix provides additional instructions for keeping portions of the operating record. See § 264.73(b) for additional recordkeeping requirements.

The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility in the following manner:

Records of each hazardous waste received, treated, stored, or disposed of at the facility which include the following:

1. A description by its common name and the EPA Hazardous Waste Number(s) from Part 261 of these regulations which apply to the waste. The waste description also must include the waste's physical form, i.e., liquid, sludge, solid, or contained gas. If the waste is not listed in Part 261, Subpart D, of these regulations, the description also must include the process that produced it (for example, solid filter cake from production of ___, EPA Hazardous Waste Number W051). Each hazardous waste listed in Part 261, Subpart D, of these regulations, and each hazardous waste characteristic defined in Part 261, Subpart C, of these regulations, has a four digit EPA Hazardous Waste Number assigned to it. This number must be used for recordkeeping and reporting purposes. Where a hazardous waste contains more than one listed hazardous waste, or where more than one hazardous waste characteristic applies to the waste, the waste description must include all applicable EPA Hazardous Waste Numbers.

2. The estimated or manifest-reported weight, or volume and density, where applicable, in one of the units of measure specified in Table 1;

3. The method(s) (by handling code(s) as specified in Table 2) and date(s) of treatment, storage, or disposal.
<table>
<thead>
<tr>
<th>Unit of measure</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gallons</td>
<td>G</td>
</tr>
<tr>
<td>Gallons per Hour</td>
<td>E</td>
</tr>
<tr>
<td>Gallons per Day</td>
<td>U</td>
</tr>
<tr>
<td>Liters</td>
<td>L</td>
</tr>
<tr>
<td>Liters Per Hour</td>
<td>H</td>
</tr>
<tr>
<td>Liters Per Day</td>
<td>V</td>
</tr>
<tr>
<td>Short Tons Per Hour</td>
<td>D</td>
</tr>
<tr>
<td>Metric Tons Per Hour</td>
<td>W</td>
</tr>
<tr>
<td>Short Tons Per Day</td>
<td>N</td>
</tr>
<tr>
<td>Metric Tons Per Day</td>
<td>S</td>
</tr>
<tr>
<td>Pounds Per Hour</td>
<td>J</td>
</tr>
<tr>
<td>Kilograms Per Hour</td>
<td>R</td>
</tr>
<tr>
<td>Cubic Yards</td>
<td>Y</td>
</tr>
<tr>
<td>Cubic Meters</td>
<td>C</td>
</tr>
<tr>
<td>Acres</td>
<td>B</td>
</tr>
<tr>
<td>Acre-feet</td>
<td>A</td>
</tr>
<tr>
<td>Hectares</td>
<td>Q</td>
</tr>
<tr>
<td>Hectare-meter</td>
<td>F</td>
</tr>
<tr>
<td>Btu's per Hour</td>
<td>I</td>
</tr>
</tbody>
</table>

FOOTNOTE: 1 Single digit symbols are used here for data processing purposes.
TABLE 2  HANDLING CODES FOR TREATMENT, STORAGE, AND DISPOSAL METHODS.

Enter the handling code(s) listed below that most closely represents the technique(s) used at the facility to treat, store, or dispose of each quantity of hazardous waste received.

1. **Storage**
   
   - **S01** Container (barrel, drum, etc.)
   - **S02** Tank
   - **S03** Waste pile
   - **S04** Surface impoundment
   - **S05** Drip Pad
   - **S06** Containment Building (Storage)
   - **S99** Other Storage (specify)

2. **Treatment**
   
   (a) **Thermal Treatment**
   - **T06** Liquid injection incinerator
   - **T07** Rotary kiln incinerator
   - **T08** Fluidized bed incinerator
   - **T09** Multiple hearth incinerator
   - **T10** Infrared furnace incinerator
   - **T11** Molten salt destructor
   - **T12** Pyrolysis
   - **T13** Wet Air oxidation
   - **T14** Calcination
   - **T15** Microwave discharge
   - **T18** Other (specify)
   
   (b) **Chemical Treatment**
   - **T19** Absorption mound
   - **T20** Absorption field
   - **T21** Chemical fixation
   - **T22** Chemical oxidation
   - **T23** Chemical precipitation
   - **T24** Chemical reduction
   - **T25** Chlorination
   - **T26** Chlorinolysis
   - **T27** Cyanide destruction
   - **T28** Degradation
   - **T29** Detoxification
   - **T30** Ion Exchange
   - **T31** Neutralization
   - **T32** Ozonation
   - **T33** Photolysis
   - **T34** Other (specify)
(c) Physical Treatment

(1) Separation of components:
T35 Centrifugation
T36 Clarification
T37 Coagulation
T38 Decanting
T39 Encapsulation
T40 Filtration
T41 Flocculation
T42 Flotation
T43 Foaming
T44 Sedimentation
T45 Thickening
T46 Ultrafiltration
T47 Other (specify)

(2) Removal of Specific Components:
T48 Absorption-molecular sieve
T49 Activated carbon
T50 Blending
T51 Catalysis
T52 Crystallization
T53 Dialysis
T54 Distillation
T55 Electrodialysis
T56 Electrolysis
T57 Evaporation
T58 High gradient magnetic separation
T59 Leaching
T60 Liquid ion exchange
T61 Liquid-liquid extraction
T62 Reverse osmosis
T63 Solvent recovery
T64 Stripping
T65 Sand filter
T66 Other (specify)

(d) Biological Treatment
T67 Activated sludge
T68 Aerobic lagoon
T69 Aerobic tank
T70 Anaerobic tank
T71 Composting
T72 Septic tank
T73 Spray irrigation
T74 Thickening filter
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T75  Tricking filter
T76  Waste stabilization pond
T77  Other (specify)
T78-79  [Reserved]

(e) Boilers and Industrial Furnaces
T80  Boiler
T81  Cement Kiln
T82  Lime Kiln
T83  Aggregate Kiln
T84  Phosphate Kiln
T85  Coke Oven
T86  Blast Furnace
T87  Smelting, Melting, or Refining Furnace
T88  Titanium Dioxide Chloride Process Oxidation Reactor
T89  Methane Reforming Furnace
T90  Pulping Liquor Recovery Furnace
T91  Combustion Device Used in the Recovery of Sulfur Values from Spent Sulfuric Acid
T92  Halogen Acid Furnaces
T93  Other Industrial Furnaces Listed in § 260.10 (specify)

(f) Other Treatment
T94  Containment Building (Treatment)

3. Disposal
D79  Underground Injection
D80  Landfill
D81  Land treatment
D82  Ocean Disposal
D83  Surface Impoundment (to be closed as a landfill)
D99  Other Disposal (specify)

4. Miscellaneous (Subpart X)
X01  Open Burning/Open Detonation
X02  Mechanical Processing
X03  Thermal Unit
X04  Geologic Repository
X99  Other Subpart X (specify)
INSERT PART 264 APPENDIX IV HERE
Many hazardous wastes, when mixed with other waste or materials at a hazardous waste facility, can produce effects which are harmful to human health and the environment, such as (1) heat or pressure, (2) fire or explosion, (3) violent reaction, (4) toxic dusts, mists, fumes, or gases, or (5) flammable fumes or gases.

Below are examples of potentially incompatible wastes, waste components, and materials, along with the harmful consequences which result from mixing materials in one group with materials in another group. The list is intended as a guide to owners or operators of treatment, storage, and disposal facilities, and to enforcement and permit granting officials, to indicate the need for special precautions when managing these potentially incompatible waste materials or components.

This list is not intended to be exhaustive. An owner or operator must, as the regulations require, adequately analyze his/her wastes so that he/she can avoid creating uncontrolled substances or reactions of the type listed below, whether they are listed below or not.

It is possible for potentially incompatible wastes to be mixed in a way that precludes a reaction (e.g., adding acid to water rather than water to acid) or that neutralizes them (e.g., a strong acid mixed with a strong base), or that controls substances produced (e.g., by generating flammable gases in a closed tank equipped so that ignition cannot occur, and burning the gases in an incinerator).

In the lists below, the mixing of a Group A material with a Group B material may have the potential consequence as noted.
### Part 264 Appendix V

#### Group 1-A

<table>
<thead>
<tr>
<th>Acetylene sludge</th>
<th>Acid sludge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alkaline caustic liquids</td>
<td>Acid and water</td>
</tr>
<tr>
<td>Alkaline cleaner</td>
<td>Battery acid</td>
</tr>
<tr>
<td>Alkaline corrosive liquids</td>
<td>Chemical cleaners</td>
</tr>
<tr>
<td>Alkaline corrosive battery fluid</td>
<td>Electrolyte, acid</td>
</tr>
<tr>
<td>Caustic wastewater</td>
<td>Etching acid liquid or solvent</td>
</tr>
<tr>
<td>Lime sludge and other corrosive alkalies</td>
<td>Pickling liquor and other corrosive acids</td>
</tr>
<tr>
<td>Lime wastewater</td>
<td>Spent mixed acid</td>
</tr>
<tr>
<td>Lime and water</td>
<td>Spent sulfuric acid</td>
</tr>
</tbody>
</table>

**Potential consequences:** Heat generation; violent reaction.

#### Group 2-A

<table>
<thead>
<tr>
<th>Aluminum</th>
<th>Any waste in Group 1-A or 1-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beryllium</td>
<td></td>
</tr>
<tr>
<td>Calcium</td>
<td></td>
</tr>
<tr>
<td>Lithium</td>
<td></td>
</tr>
<tr>
<td>Magnesium</td>
<td></td>
</tr>
<tr>
<td>Potassium</td>
<td></td>
</tr>
<tr>
<td>Sodium</td>
<td></td>
</tr>
<tr>
<td>Zinc powder</td>
<td></td>
</tr>
<tr>
<td>Other reactive metals and metal hydrides</td>
<td></td>
</tr>
</tbody>
</table>

**Potential consequences:** Fire or explosion; generation of flammable hydrogen gas.
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### Group 3-A
- **Alcohols**
- **Water**

### Group 3-B
- Any concentrated waste in Groups 1-A or 1-B
- Calcium
- Lithium
- Metal hydrides
- Potassium
- \( \text{SO}_2\text{Cl}_2, \text{SOCl}_2, \text{PCl}_3, \text{CH}_3\text{SiCl}_3 \)
- Other water-reactive waste

**Potential consequences:** Fire, explosion, or heat generation; generation of flammable or toxic gases.

### Group 4-A
- **Alcohols**
- **Aldehydes**
- **Halogenated hydrocarbons**
- **Nitrated hydrocarbons**
- **Unsaturated hydrocarbons**
- **Other reactive organic compounds and solvents**

### Group 4-B
- Concentrated Group 1-A or 1-B wastes
- Group 2-A wastes

**Potential consequences:** Fire, explosion, or violent reaction.

### Group 5-A
- **Spent cyanide and sulfide solutions**

### Group 5-B
- Group 1-B wastes

**Potential consequences:** Generation of toxic hydrogen cyanide or hydrogen sulfide gas.
## Part 264 Appendix VI

**APPENDIX VI -- POLITICAL JURISDICTIONS* IN WHICH COMPLIANCE WITH § 264.18(a) MUST BE DEMONSTRATED.**

### COLORADO

<table>
<thead>
<tr>
<th>Group 6-A</th>
<th>Group 6-B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorates</td>
<td>Acetic acid and other organic acids</td>
</tr>
<tr>
<td>Chlorine</td>
<td>Concentrated mineral acids</td>
</tr>
<tr>
<td>Chlorites</td>
<td>Group 2-A wastes</td>
</tr>
<tr>
<td>Chromic acid</td>
<td>Group 4-A wastes</td>
</tr>
<tr>
<td>Hyphochlorites</td>
<td>Other flammable and combustible wastes</td>
</tr>
<tr>
<td>Nitrates</td>
<td></td>
</tr>
<tr>
<td>Nitric acid, fuming</td>
<td></td>
</tr>
<tr>
<td>Perchlorates</td>
<td></td>
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<tr>
<td>Permanganates</td>
<td></td>
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<tr>
<td>Peroxides</td>
<td></td>
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<tr>
<td>Other strong oxidizers</td>
<td></td>
</tr>
</tbody>
</table>

Potential consequences: Fire, explosion, or violent reaction.


* These include counties, city-county consolidations, independent cities.