# **Toxics Release Inventory File type 4**

(Details of Facility Information)

## Basic Plus Data File Format Documentation v15



The Environmental Protection Agency Office of Environmental Information Office of Information Analysis and Access Toxics Release Inventory Program Division Information and Outreach Branch

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#### 1.0 Overview

The Toxics Release Inventory (TRI) Basic Plus Data Files are a set of seven files that collectively contain all the data that were submitted on the TRI Reporting Form R or Certification Statement (Form A) by facilities in a selected state. The data in these files have been extracted from the Envirofacts database system. The seven files and their contents are as follows:

<u>File</u>	<u>Example</u>	<b>Description of Contents</b>	Form R or A Referen
Type 4	CA_4_2015_v15.txt	Facility Information Directory	Part I (sections 1,3,4,5)

The Basic Plus Data Files are identified (named) by state, file\_type, reporting year and version number.

For example, the file "CA\_1\_2015\_v15.txt" contains the Facility, Chemical identification, Chemical uses, On-site Releases and Management, Off-site Transfers and Summary Information (File Type 1) for all facilities located in California (CA) for reporting year 2015. The version

number is "v15". The "v15" signifies that the file was created with Reporting Year 2015 data.

Similarly, the file "CA\_2a\_2015\_v15.txt" contains Reporting Year 2015 Detailed Source Reduction Activities and Methods data for the state of California. It was created with Reporting Year 2015 data.

In addition to the set of files for each state, there are also 2 more file sets. There is a Federal file set (FED\_1\_2015\_v15.txt, FED\_2A\_2015\_v15.txt, etc.) which contains data for all government owned and operated federal sites. A third set of files, known as the National Data File set, contains all the TRI data (for all States and US Territories) for a specific year. The national data files are named US\_1\_2015\_v15.txt, US\_2A\_2015\_v15.txt, etc.

Many of the data elements described in the Basic Plus Data Files documentation refer to the TRI Form R and Form A Certification Statement. These are the forms that facilities use to submit data to the TRI Program. The TRI Reporting Forms and Instructions document contains the actual forms and the complete instructions for filling them out. The Reporting Forms and Instructions is available at <a href="http://www2.epa.gov/toxics-release-inventory-tri-program/tri-reporting-forms-and-instructions">http://www2.epa.gov/toxics-release-inventory-tri-program/tri-reporting-forms-and-instructions</a>. Complete lists of values for many of the data fields in the Basic Plus Data Files can be found in this document.

#### 1.1 Detailed Description: File Type 4

File Type 4 contains the basic facility identification information for all facilities, for a specific state, that have ever reported to TRI. The file lists the last reporting year the Facility submitted active and valid data to the TRI program. Everything from Part I of the Form R or the Form A certification statement (except section 2) is listed in this file.

The data in this file is a "reconciliation" of all the data the TRI Program has collected from a facility over the course of its participation in the TRI program. Most facilities have sent in several chemical reports (form Rs and As) each year, for a number of years. When the data are collected at the TRI Data Processing Center, differences from form to form and year to year are identified, researched and reconciled. The result is a database of facility identification information that is consistent and up-to-date.

Some of the data that appear in this file are not a result of facility reconciliation. The "Title of the Certifying Official", "Certifying Official's Name", "Entire Facility Ind", "Partial\_Facility\_Ind", "Federal Facility Ind", "GOCO Facility Ind" and the SIC codes are all taken from the last active and valid form the facility submitted. All other data are the result of the reconciliation process.

Part	Section	Description
I	1	Reporting Year (of the last form the facility submitted)
I	4	Facility Identification Information
I	5	Parent Company Information

2.0 Noted Changes to	this Year's Tl	RI Basic Plus	Data File
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## 3.0 Mapping the Form R/A Sections to each File

	Part I					Pa	rt II													
	1	2	3	4	5	1	2	3	4	5	6.1.A	6.1.B	6.2	6.2ab	7A	7B	7C	8	Total	
														С					Fields	
File 4	*		*	*	*															49

#### Notes:

- P1- Section 8, data elements (8.2.B, 8.4.B, 8.6.B).
  These data elements are Current Year Energy Recover, Recycled and Treated on-site quantities.
- P2 Only 2.1 Trade Secret Indicator
- P3 Only Additional Information (Section 8.11) that was submitted via electronic reporting (TRI-ME web, CDX or Diskette submissions)

#### **Part & Section Definitions**

Part S	Section	Definition
I	1	Reporting Year
I		Revision Codes
I	2	Trade Secret
I	3	Certification
I	4	Facility Identification
I	5	Parent Company Info
II	1	Toxic Chemical Identity
II	2	Mixture Component Identity
II	3	Activities and Uses of the Toxic Chemical at the Facility
II	4	Maximum Amount of Chemical On-site at any time during the Calendar Year
II	5	Quantity of the Toxic Chemical Entering each Environmental Medium Onsite
II	6.1.A	Discharges to Publicly Owned Treatment Works (POTWs) - Total Transfer Quantity
II	6.1.B	Discharges to Publicly Owned Treatment Works (POTWs) - POTW name and location
II	6.2	Transfers to other Off-Site Locations - Name an location of Transfer site
II	6.2abc	Transfers to other Off-Site Locations - Total Transfer Quantities, Est.Basis, Type of
		Treatment/Disposal
II	7A	On-Site Waste Treatment Methods and Efficiency
II	7B	On-Site Energy Recovery Processes
II	7C	On-Site Recycling Processes
II	8	Source Reduction and Recycling Activities

### 4.0 Field Descriptions

The following sections contain the record structure for each of the **Toxics Release Inventory** (**TRI**) **Basic Plus Data Files.** The codes and definitions used in the following record descriptions are listed in the <u>Toxic Chemical Release Inventory Reporting Forms and</u> *Instructions* document.

The record descriptions in each of the following sections contain the following columns and information:

Column	Description				
Number	The sequential number of the data element in the record				
Field Name	The TRI System field name of the data element				
Data Type	'C' for character data (alphanumeric)				
	'N' for numeric data				
	'D' for date				
Description	A brief statement of what the data element represents along with its TRI System <i>Source</i> (in <b>Table Name</b> . Field Name format) and the Form R reference				

The data fields in each of the seven files are delimited by Tab (a tab is placed between each data element).

The first record (row) of each file contains column headers or field names.

## 4.1

**Type 4: Facility Information Directory** 

Mum.	<u>Field Name</u>	<u>Type</u>	<u>Description</u>
1	REPORTING YEAR	С	Calendar year in which the facility submitted its last report.  Source: TRI_REPORTING_FOMR.  REPORTING_YEAR  Reference: Part I, Section 1
2	TITLE OF CERTIFYING OFFICIAL	С	Corporate title of the senior official certifying the accuracy and completeness of information on the submission.  Source: TRI_REPORTING_FOMR.CERT_ OFFICIAL_TITLE Reference: Part I, Section 3
3	NAME OF CERTIFYING OFFICIAL	С	Name of the senior official certifying the accuracy and complete- ness of the information on the submission.  Source: TRI_REPORTING_FOMR.CERT_NAME Reference: Part I, Section 3
4	TRIFID	C	Facility identification in the format zzzzznnnnnsssss where usually zzzzz = facility zip code, nnnnn = first five consonants of the name, and sssss = first five non-special characters in the street address. The three sections of the format were separated by hypens prior to RY 2006. <b>NOTE:</b> The contents of this field is <u>not</u> changed to match facility ownership, or zip code changes Rather, the TRI Facility ID identifies a specific geographical location which is also identified by the latitude and longitude of that location.  Source: TRI_FACILITY.TRI_FACILITY_ID Reference: Part I, Section 4.1
5	FACILITY NAME	С	Name of the reporting facility.  Source: TRI_FACILITY.FACILITY_NAME  Reference: Part I, Section 4.1
6	FACILITY STREET	С	Street address of the reporting facility.  Source: TRI_FACILITY.STREET_ADDRESS  Reference: Part I, Section 4.1
7	FACILITY CITY	С	City in which the reporting facility is located.  Source: TRI_FACILITY.CITY_NAME  Reference: Part I, Section 4.1

Mum.	<u>Field Name</u>	Type	<u>Description</u>
8	FACILITY COUNTY	С	County in which the reporting facility is located.  Source: TRI_FACILITY.COUNTY_NAME  Reference: Part I, Section 4.1
9	FACILITY STATE	С	Two-letter state code of the reporting facility.  Source: TRI_FACILITY.STATE_ABBR  Reference: Part I, Section 4.1
10	FACILITY ZIP CODE	С	ZIP code of the reporting facility.  Source: TRI_FACILITY. ZIP_CODE  Reference: Part I, Section 4.1
11	BIA_CODE	С	Three-letter code indicating the tribal land a facility is on.  Source: FACILITY.BIA_TRIBAL_CODE
12	TRIBE	С	INDIAN_COUNTRY_NAME The name of the Tribe. Source: V_INDIAN_COUTRY.
13	MAILING NAME	С	The first and second lines of the mailing name for the facility. <i>Source:</i> <b>TRI_FACILITY.</b> MAIL_NAME
14	MAILING STREET	С	Street address of the reporting facility's mailing address.  Source: TRI_FACILITY.  MAIL_STREET_ADDRESS  Reference: Part I, Section 4.1
15	MAILING CITY	С	City name provided by the reporting facility to which mail is to be sent Source: TRI_FACILITY.MAIL_CITY Reference: Part I, Section 4.1
16	MAILING STATE	C	State of the reporting facility's mailing address.  Source: TRI_FACILITY.MAIL_STATE_ABBR  Reference: Part I, Section 4.1
17	MAILING PROVINCE	С	Province of the reporting facility's mailing address.  Source: TRI_FACILITY.MAIL_PROVINCE  Reference: Part I, Section 4.1

Mum.	<u>Field Name</u>	<u>Type</u>	<u>Description</u>
18	MAILING ZIP CODE	С	ZIP code of the mailing address provided by the reporting facility.  Source: TRI_FACILITY.MAIL_ZIP_CODE  Reference: Part I, Section 4.1
19	ENTIRE FACILITY IND	C	Indicates whether the information covers an entire facility or part of a facility.  Yes = entire No = partial  Source: TRI_REPORTING_FORM.ENTIRE_FAC  Reference: Part I, Section 4.2a
20	PARTIAL FACILITY IND	C	Indicates whether the information covers an entire facility or part of a facility:  Yes = partial No = entire  Source: TRI_REPORTING_FORM.PARTIAL_FAC  Reference: Part I, Section 4.2b
21	FEDERAL FACILITY IND	C	Code indicating whether a facility is Federal or not:  Yes = Federal  No = non-Federal  Value reported by facility.  Source: TRI_REPORTING_FORM.FEDERAL_  FAC_IND  Form R: Part I Section 4.2c
22	GOCO FACILITY IND	С	Code indicating whether a facility is GOCO (Government-Owned, Contractor-Operated) facility or not:  Yes = GOCO No = non-GOCO  Source: TRI_REPORTING_FORM.GOCO_ FLAG Form R: Part I Section 4.2d
23	PUBLIC CONTACT NAME	С	Name of the person whom the public may contact if clarification of the information on the reporting form is required.  Source: TRI_FACILITY.  ASGN_PUBLIC_CONTACT  Reference: Part I, Section 4.4
24	PUBLIC CONTACT PHONE	С	Telephone number, including area code, of the public contact.  Source: TRI_FACILITY. ASGN_PUBLIC_PHONE  Reference: Part I, Section 4.4

Mum.	<u>Field Name</u>	<u>Type</u>	<u>Description</u>
25	PRIMARY SIC CODE	С	First four-digit Standard Industrial Classification (SIC) Code entered by facility  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5a
26	SIC CODE 2	С	Second four-digit Standard Industrial Classification (SIC) Code entered by facility.  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5b
27	SIC CODE 3	С	Third four-digit Standard Industrial Classification (SIC) Code entered by facility.  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5c
28	SIC CODE 4	С	Fourth four-digit Standard Industrial Classification (SIC) Code entered by facility.  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5d
29	SIC CODE 5	С	Fifth four-digit Standard Industrial Classification (SIC) Code entered by facility.  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5e
30	SIC CODE 6	С	Sixth four-digit Standard Industrial Classification (SIC) Code entered by facility.  Source: TRI_SUBMISSION_SIC.SIC_CODE  Reference: Part I, Section 4.5f
31	NAICS ORIGIN	С	Indicates whether NAICS codes were reported or assigned.  R = Reported A = Assigned
32	PRIMARY NAICS CODE	С	Primary six-digit North American Standard Industry Classification System (NAICS) Code.  Source: TRI_SUBMISSION_NAICS.NAICS_CODE Where: primary_ind => 1 Reference: Part I, Section 4.5a
33	NAICS CODE 2	С	Second six-digit North American Standard Industry Classification System (NAICS) Code entered by facility. Source: TRI_SUBMISSION_NAICS.NAICS_CODE Where: naics_sequence_num = 2 Reference: Part I, Section 4.5b

Mum.	<u>Field Name</u>	<u>Type</u>	<u>Description</u>
34	NAICS CODE 3	С	Third six-digit North American Standard Industry Classification System (NAICS) Code entered by facility.  Source: TRI_SUBMISSION_NAICS.NAICS_CODE  Where: naics_sequence_num = 3  Reference: Part I, Section 4.5b
35	NAICS CODE 4	С	Forth six-digit North American Standard Industry Classification System (NAICS) Code entered by facility.  Source: TRI_SUBMISSION_NAICS.NAICS_CODE  Where: naics_sequence_num = 4  Reference: Part I, Section 4.5b
36	NAICS CODE 5	С	Fifth six-digit North American Standard Industry Classification System (NAICS) Code entered by facility.  Source: TRI_SUBMISSION_NAICS.NAICS_CODE  Where: naics_sequence_num = 5  Reference: Part I, Section 4.5b
37	NAICS CODE 6	С	Sixth six-digit North American Standard Industry Classification System (NAICS) Code entered by facility.  Source: TRI_SUBMISSION_NAICS.NAICS_CODE  Where: naics_sequence_num = 6  Reference: Part I, Section 4.5b
38	LATITUDE	N	The Latitude value that best represents the facility according to EPA's Facility Registry System (FRS). In RY 2005, TRI stopped collecting the Latitude value and began obtaining it from FRS. Format: signed 2 digit whole number, 6 digit decima positions (+nn.nnnnnn).  Source: EPA's Facility Registry System
39	LONGITUDE	N	The Longitude value that best represents the facility according to EPA's Facility Registry System (FRS). In RY 2005, TRI stopped collecting the Longitude value and began obtaining it from FRS. (Format: signed 3 digit whole number, 6 digit decimal positions +nnn.nnnnnn).  Source: EPA's Facility Registry System
40	D&B NR A	С	Unique identification number assigned by Dun and Bradstreet to the reporting facility.  Source: TRI_FACILITY_DB.DB_NUM  Reference: Part I, Section 4.7a

Mum.	Field Name	Type	<u>Description</u>
41	D&B NR B	С	Unique identification number assigned by Dun and Bradstreet to the reporting facility.  Source: TRI_FACILITY_DB.DB_NUM  Reference: Part I, Section 4.7b
42	RCRA NR A	С	Twelve-digit alphanumeric identifier assigned by EPA under the resource Conservation and Recovery Act. In RY 2005, TRI stopped collecting RCRA Ids and began obtaining them from EPA's Facility Registry System (FRS).  Source: EPA's Facility Registry System
43	RCRA NR B	С	Twelve-digit alphanumeric identifier assigned by EPA under the resource Conservation and Recovery Act. In RY 2005, TRI stopped collecting RCRA Ids and began obtaining them from EPA's Facility Registry System (FRS).  Source: EPA's Facility Registry System
44	NPDES NR A	С	Nine-digit alphanumeric identifier assigned to a facility under EPA's National Pollutant Discharge Elimination System. In RY 2005, TRI stopped collecting NPDES Ids and began obtaining them from EPA's Facility Registry System (FRS). <i>Source:</i> EPA's Facility Registry System
45	NPDES NR B	С	Nine-digit alphanumeric identifier assigned to a facility under EPA's National Pollutant Discharge Elimination System. In RY 2005, TRI stopped collecting NPDES Ids and began obtaining them from EPA's Facility Registry System (FRS). <i>Source:</i> EPA's Facility Registry System
46	UIC NR A	С	Underground injection identification number, assigned by EPA or the state, to a facility. In RY 2005, TRI stopped collecting UIC Ids and began obtaining them from EPA's Facility Registry System (FRS). <i>Source:</i> EPA's Facility Registry System
47	UIC NR B	С	Underground injection identification number, assigned by EPA or the state, to a facility. In RY 2005, TRI stopped collecting UIC Ids and began obtaining them from EPA's Facility Registry System (FRS). <i>Source:</i> EPA's Facility Registry System
48	PARENT COMPANY NAME	С	Name of the corporation or other business entity that owns or controls the reporting facility.  Source: TRI_FACILITY.PARENT_CO_ NAME Reference: Part I, Section 5.1

Mum.	<u>Field Name</u>	<u>Type</u>	<u>Description</u>
49	PARENT COMPANY D&B NR	С	Unique identification number assigned by Dun and Bradstreet to the parent company of the reporting facility.  Source: TRI_FACILITY.PARENT_CO_ DB_NUM Reference: Part I, Section 5.2
50	ASSIGNED FED. FACILITY FLAG	С	Code indicating whether the Facility is federal or not. Assigned by TRI.  Yes = Federal  No = Non-Federal  Source: TRI_FACILITY.ASGN_FEDERAL

#### **Appendix A: List of Values**

#### Section 7A. On-Site Waste Treatment Methods and Efficiency

#### **General Waste Stream**

- A Gaseous (gases, vapors, airborne particulates)
- W Wastewater (aqueous waste)
- L Liquid waste streams (non-aqueous waste)
- S Solid waste streams (including sludges and slurries)

#### Waste Treatment Methods (New list for Codes for RY 2006)

#### **Air Emissions Treatment**

- A01 Flare
- A02 Condenser
- A03 Scrubber
- A04 Absorber
- A05 Electrostatic Precipitator
- A06 Mechanical Separation
- A07 Other Air Emission Treatment

#### **Chemical Treatment**

- H040 Incineration--thermal destruction other than use as a fuel
- H071 Chemical reduction with or without precipitation
- H073 Cyanide destruction with or without precipitation
- H075 Chemical oxidation
- H076 Wet air oxidation
- H077 Other chemical precipitation with or without pre-treatment

#### **Biological Treatment**

H081 Biological treatment with or without precipitation

#### **Physical Treatment**

- H082 Adsorption
- H083 Air or steam stripping
- H101 Sludge treatment and/or dewatering
- H103 Absorption
- H111 Stabilization or chemical fixation prior to disposal
- H112 Macro-encapsulation prior to disposal
- H121 Neutralization
- H122 Evaporation
- H123 Settling or clarification
- H124 Phase separation
- H129 Other treatment

#### Section 7B. On-Site Energy Recovery Processes

U01 Industrial KilnU02 Industrial FurnaceU03 Industrial Boiler

#### Section 7C. On-Site Recycling Processes

- H10 Metal recovery (by retorting, smelting, or chemical or physical extraction)
- H20 Solvent recovery (including distillation, evaporation, fractionation or extraction)
- H39 Other recovery or reclamation for reuse (including acid regeneration or other chemical reaction process)

#### Crosswalk for Section 7A, Column B. Waste Treatment Method (s) Sequence

	Air Emissions Treatment (applicable to gaseous waste streams only) No change - same as previous codes)			
A01	Flare			
A02	Condenser			
A03	Scrubber			
A04	Absorber			
A05	Electrostatic Precipitator			
A06	Mechanical Separation			
A07	Other Air Emission Treatment			
Previo	ous Codes		odes (adapted from RCRA Hazardous Waste ement Codes)	
Biolog	gical Treatment:			
B11	Aerobic	H081	Biological treatment with or without precipitation	
B21	Anaerobic	H081	Biological treatment with or without precipitation	
B31	Facultative	H081	Biological treatment with or without precipitation	
B99	Other Biological Treatment	H081	Biological treatment with or without precipitation	

	Previous Codes		des (adapted from RCRA Hazardous Waste ment Codes)
Chem	ical Treatment:		
C01	Chemical Precipitation B Lime or Sodium Hydroxide	H071	Chemical reduction with or without precipitation
C02	Chemical Precipitation B Sulfide	H071	Chemical reduction with or without precipitation
C09	Chemical Precipitation B Other	H077	Other chemical precipitation with or without pre-treatment
C11	Neutralization	H121	Neutralization
C21	Chromium Reduction	H071	Chemical reduction with or without precipitation
C31	Complexed Metals Treatment (other than pH adjustment)	H129	Other treatment
C41	Cyanide Oxidation B Alkaline Chlorination	H073	Cyanide destruction with or without precipitation
C42	Cyanide Oxidation B Electrochemical	H073	Cyanide destruction with or without precipitation
C43	Cyanide Oxidation B Other	H073	Cyanide destruction with or without precipitation
C44	General Oxidation (including Disinfection) B Chlorination	H075	Chemical oxidation
C45	General Oxidation (including Disinfection) B Ozonation	H075	Chemical oxidation
C46	General Oxidation (including Disinfection) B Other	H075	Chemical oxidation
C99	Other Chemical Treatment	H129	Other treatment

Incineration/Thermal Treatment: (Note: Only report combustion for the purposes of incineration/thermal treatment in Section 7A. If the method involves combustion for the purposes of energy recover, report as U01, U02, or U03 in Section 7B. If the method involves combustion for the purposes of materials recovery, report as H39 in Section 7C.)

F01	Liquid Injection	H040	Incineration B thermal destruction other than use as a fuel
F11	Rotary Kiln with Liquid Injection Unit	H040	Incineration B thermal destruction other than use as a fuel

F19	Other Rotary Kiln	H040	Incineration B thermal destruction other than use as a fuel
F31	Two Stage	H040	Incineration B thermal destruction other than use as a fuel
F41	Fixed Hearth	H040	Incineration B thermal destruction other than use as a fuel
Previo	us Codes		des (adapted from RCRA Hazardous Waste ment Codes)
F42	Multiple Hearth	H040	Incineration B thermal destruction other than use as a fuel
F51	Fluidized Bed	H040	Incineration B thermal destruction other than use as a fuel
F61	Infra-Red	H040	Incineration B thermal destruction other than use as a fuel
F71	Fume/Vapor	H040	Incineration B thermal destruction other than use as a fuel
F81	Pyrolytic destructor	H040	Incineration B thermal destruction other than use as a fuel
F82	Wet air oxidation	H076	Wet air oxidation
F83	Thermal Drying/Dewatering	H122	Evaporation
F99	Other Incineration/Thermal Treatment	H040	Incineration B thermal destruction other than use as a fuel
Physic	cal Treatment:		
P01	Equalization	H129	Other treatment
P09	Other blending	H129	other treatment
P11	Settling/clarification	H123	Settling or clarification
P12	Filtration	H123	Settling or clarification
P13	Sludge dewatering (non-thermal)	H101	Sludge treatment and/or dewatering
P14	Air flotation	H124	Phase separation
P15	Oil skimming	H124	Phase separation
P16	Emulsion breaking B thermal	H124	Phase separation
P17	Emulsion breaking B chemical	H124	Phase separation
P18	Emulsion breaking B other	H124	Phase separation
P19	Other liquid phase separation	H124	Phase separation

P21 Adsorption B Carbon H082 Adsorption P22 Adsorption B Ion exchange (other than for recovery/reuse) P23 Adsorption B Resin H082 Adsorption P29 Adsorption B Other H082 Adsorption P31 Reverse Osmosis (other than for recover/reuse) P31 Reverse Osmosis (other than for recover/reuse) P41 Stripping B Air H083 Air or steam stripping P42 Stripping B Steam H083 Air or steam stripping P43 Stripping B Other H083 Air or steam stripping P44 Stripping B Other H083 Air or steam stripping P45 Acid Leaching (other than for recover/reuse) P46 Solvent Extraction (other than recovery/reuse) P47 Solvent Extraction (other than recovery/reuse) P48 Other Physical Treatment H129 Other treatment P49 Other Physical Treatment H129 Other treatment P49 Other Physical Treatment H129 Other treatment P49 Other Pozzolonic Processes (including silicates) P49 Other Pozzolonic Processes (including silicates) P41 Asphaltic Techniques P41 Stabilization or chemical fixation prior to disposal P41 Asphaltic Techniques P41 Stabilization or chemical fixation prior to disposal P41 Asphaltic Techniques P41 Stabilization or chemical fixation prior to disposal P42 Other Solidification Processes P43 Other Solidification Processes P44 Stripping B Other Pozzolonic Processes P45 Stabilization or chemical fixation prior to disposal P46 Stabilization or chemical fixation prior to disposal P47 Other Solidification Processes P48 Other Solidification Processes P49 Other Solidification Processes P49 Other Solidification Processes P49 Other Solidification Processes				
recovery/reuse)  P23 Adsorption B Resin H082 Adsorption  P29 Adsorption B Other H082 Adsorption  P31 Reverse Osmosis (other than for recover/reuse)  P41 Stripping B Air H083 Air or steam stripping  P42 Stripping B Steam H083 Air or steam stripping  P43 Previous Codes New Codes (adapted from RCRA Hazardous Waste Management Codes)  P49 Stripping B Other H083 Air or steam stripping  P51 Acid Leaching (other than for recovery/reuse)  P51 Acid Leaching (other than for recovery/reuse)  P51 Acid Leaching (other than for recovery/reuse)  P52 Other treatment  P53 Other Poysical Treatment  P54 Solvent Extraction (other than recovery/reuse)  P55 Other Physical Treatment  P56 Solvent Extraction (other than recovery/reuse)  P57 Other Physical Treatment  P58 Other Pozzolonic Processes (including silicates)  P59 Other Pozzolonic Processes (including silicates)  P50 Other Pozzolonic Processes (including silicates)  P51 Asphaltic Techniques  P51 Stabilization or chemical fixation prior to disposal  P58 Other Solidification Processes  P59 Other Solidification Processes  P50 Other Pozzolonic Processes  P51 Stabilization or chemical fixation prior to disposal  P51 Stabilization or chemical fixation prior to disposal  P51 Stabilization or chemical fixation prior to disposal	P21	Adsorption B Carbon	H082	Adsorption
P29 Adsorption B Other P31 Reverse Osmosis (other than for recover/reuse) P41 Stripping B Air P42 Stripping B Steam P43 Stripping B Other P44 Stripping B Other P55 Acid Leaching (other than for recover/reuse) P66 Solvent Extraction (other than recovery/reuse) P67 Other Physical Treatment P68 Alignory Stabilization: P69 Other Pozzolonic Processes (including silicates) P60 Thermoplastic Techniques P61 Asphaltic Techniques P61 Asphaltic Techniques P62 Other Solidiffication Processes P63 Other Solidification Processes P64 Other Solidification prior to disposal P65 Other Pozzolonic Processes P66 Other Pozzolonic Processes P67 Other Pozzolonic Processes P68 Other Pozzolonic Processes P69 Other Solidification Processes P69 Other Solidification Processes P69 Other Solidification Processes P60 Other Solidification Processes	P22		H082	Adsorption
P31 Reverse Osmosis (other than for recover/reuse)  P41 Stripping B Air  P42 Stripping B Steam  P43 Air or steam stripping  Previous Codes  New Codes (adapted from RCRA Hazardous Waste Management Codes)  P49 Stripping B Other  P51 Acid Leaching (other than for recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P62 Other Physical Treatment  P63 Air or steam stripping  P64 Other treatment  P65 Solvent Extraction (other than recovery/reuse)  P66 Solvent Extraction (other than for recovery/reuse)  P79 Other Physical Treatment  P89 Other Physical Treatment  P80 Air or steam stripping  P80 Other treatment  P80 Other treatment  P80 Other reatment  P80 Other Physical Treatment  P80 Other Pozzolonic Processes (including silicates)  P80 Air or steam stripping  P80 Other treatment  P80 Other treatment  P80 Other reatment  P80 O	P23	Adsorption B Resin	H082	Adsorption
recover/reuse)  P41 Stripping B Air  P42 Stripping B Steam  H083 Air or steam stripping  Previous Codes  P49 Stripping B Other  P51 Acid Leaching (other than for recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P62 Other Physical Treatment  P63 Other Physical Treatment  P64 Cement processes (including silicates)  P65 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  P67 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  P68 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal  P69 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal  P69 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal  H111 Stabilization or chemical fixation prior to disposal  P69 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal  H111 Stabilization or chemical fixation prior to disposal  P69 Other Solidification Processes	P29	Adsorption B Other	H082	Adsorption
P42 Stripping B Steam H083 Air or steam stripping  Previous Codes New Codes (adapted from RCRA Hazardous Waste Management Codes)  P49 Stripping B Other H083 Air or steam stripping  P51 Acid Leaching (other than for recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P62 Other Physical Treatment H129 Other treatment  P63 Other Physical Treatment H129 Other treatment  P64 Stripping B Other H129 Other treatment  P65 Solvent Extraction (other than recovery/reuse)  P65 Other Physical Treatment H129 Other treatment  P66 Solvent Extraction (other than recovery/reuse)  P67 Other Physical Treatment H129 Other treatment  P68 Other Physical Treatment H129 Other treatment  P69 Other Pozzolonic Processes (including silicates)  P70 Other Pozzolonic Processes (including silicates)  P71 Stabilization or chemical fixation prior to disposal  P71 Other Treatment  P72 Other treatment  P73 Other treatment  P74 Other treatment  P75 Other treatme	P31		H129	Other treatment
Previous Codes  New Codes (adapted from RCRA Hazardous Waste Management Codes)  P49 Stripping B Other  H083 Air or steam stripping  P51 Acid Leaching (other than for recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P62 Other Physical Treatment  H129 Other treatment  Solidification/Stabilization:  H111 Stabilization or chemical fixation prior to disposal	P41	Stripping B Air	H083	Air or steam stripping
Management Codes     P49   Stripping B Other	P42	Stripping B Steam	H083	Air or steam stripping
P51 Acid Leaching (other than for recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P99 Other Physical Treatment  Solidification/Stabilization:  G01 Cement processes (including silicates)  G09 Other Pozzolonic Processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  G11 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal	Previou	us Codes		
recovery/reuse)  P61 Solvent Extraction (other than recovery/reuse)  P99 Other Physical Treatment  Solidification/Stabilization:  G01 Cement processes (including silicates)  G09 Other Pozzolonic Processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  G11 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal	P49	Stripping B Other	H083	Air or steam stripping
recovery/reuse)  P99 Other Physical Treatment  H129 Other treatment  Solidification/Stabilization:  G01 Cement processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  G09 Other Pozzolonic Processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  G11 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal	P51		H129	Other treatment
Solidification/Stabilization:  G01 Cement processes (including silicates)  G09 Other Pozzolonic Processes (including silicates)  G11 Asphaltic Techniques  G20 Thermoplastic Techniques  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal	P61		H129	Other treatment
G01 Cement processes (including silicates)  G09 Other Pozzolonic Processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  G11 Asphaltic Techniques  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to disposal	P99	Other Physical Treatment	H129	Other treatment
G09 Other Pozzolonic Processes (including silicates)  H111 Stabilization or chemical fixation prior to disposal  H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques  H111 Stabilization or chemical fixation prior to disposal  G39 Other Solidification Processes  H111 Stabilization or chemical fixation prior to	Solidifi	cation/Stabilization:		
silicates) disposal  G11 Asphaltic Techniques H111 Stabilization or chemical fixation prior to disposal  G20 Thermoplastic Techniques H111 Stabilization or chemical fixation prior to disposal  G99 Other Solidification Processes H111 Stabilization or chemical fixation prior to	G01	Cement processes (including silicates)	H111	
G20 Thermoplastic Techniques H111 Stabilization or chemical fixation prior to disposal  G99 Other Solidification Processes H111 Stabilization or chemical fixation prior to	G09		H111	
G99 Other Solidification Processes H111 Stabilization or chemical fixation prior to	G11	Asphaltic Techniques	H111	
l l	G20	Thermoplastic Techniques	H111	
	G99	Other Solidification Processes	H111	

## **Appendix B: Chemical Classifications**

Category 1 Metals
ANTIMONY
ANTIMONY COMPOUNDS
ARSENIC
ARSENIC COMPOUNDS
BERYLLIUM
BERYLLIUM COMPOUNDS
CADMIUM
CADMIUM COMPOUNDS
CHROMIUM
CHROMIUM COMPOUNDS
(EXCEPT CHROMITE ORE MINED IN THE TRANSVAAL REGION)  COBALT
COBALT COMPOUNDS
COPPER
COPPER COMPOUNDS
LEAD
LEAD COMPOUNDS
MANGANESE
MANGANESE COMPOUNDS
MERCURY
MERCURY COMPOUNDS
NICKEL
NICKEL COMPOUNDS
SELENIUM
SELENIUM COMPOUNDS
SILVER
SILVER COMPOUNDS
THALLIUM
THALLIUM COMPOUNDS
VANADIUM COMPOUNDS
ZINC COMPOUNDS

Category 2 Metals
ALUMINUM OXIDE (FIBROUS FORMS)
ALUMINUM PHOSPHIDE
ASBESTOS (FRIABLE)
BIS(TRIBUTYLTIN) OXIDE
BORON TRICHLORIDE
BORON TRIFLUORIDE
C.I. DIRECT BLUE 218
C.I. DIRECT BROWN 95
FENBUTATIN OXIDE
FERBAM
IRON PENTACARBONYL
LITHIUM CARBONATE
MANEB
METIRAM
MOLYBDENUM TRIOXIDE
OSMIUM TETROXIDE
POTASSIUM BROMATE
SODIUM NITRITE
THORIUM DIOXIDE
TITANIUM TETRACHLORIDE
TRIBUTYLTIN FLUORIDE
TRIBUTYLTIN METHACRYLATE
TRIPHENYLTIN CHLORIDE
TRIPHENYLTIN HYDROXIDE
ZINEB

Category 3 Metals	
BARIUM	
BARIUM COMPOUNDS	

Category 4 Metals
ALUMINUM (FUME OR DUST)
VANADIUM (EXPEPT WHEN CONTIANED IN AN ALLOY)
ZINC (FUME OR DUST)

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