TOXICS RELEASE INVENTORY

BASIC PLUS DATA FILES DOCUMENTATION

FILE TYPE 2B: DETAILED ON-SITE WASTE TREATMENT

Updated for RY 2023

August 2024

OVERVIEW OF TRI BASIC PLUS DATA FILES

The TRI "Basic Plus" data files include 10 file types that collectively contain all the data fields from the TRI Reporting Form R and Form A (except Form R Schedule 1). The 10 file types are tab-delimited text (.txt) files packaged into a .zip file.

File	Example	Description of Contents	Form R/Form A Reference
Type 1	CA_1A_2017.txt	Facility data, chemical identification, chemical uses, on- site releases and management, off- site transfers, summary information	Part I (all), Part II (section 1, 3, 4, 5, 6.1.A, 6.2ABC, 7B, 7C, 8.2.B, 8.4.B, 8.6.

The Basic Plus Data Files are identified (named) by state, file type, and reporting year.

File Name = State + File Type + Reporting Year

For example, the file "CA_1A_2017.txt" contains facility, chemical identification, chemical use, on-site release and waste management, off-site transfer, and summary information (File Type 1A) for all facilities located in California (CA) for reporting year 2017.

In addition to the set of data files for each state, there are two other Basic Plus file sets: Federal and National. The Federal files (FED_1A_2017.txt, FED_2A_2017.txt, etc.) contain TRI data for all government-owned-and-operated federal sites. The National files (US_1A_2017.txt, US_2A_2017.txt, etc.) contain TRI data for all U.S. states and territories for a specific year.

DESCRIPTION OF FILE TYPE 2B CONTENTS

File Type 2B contains data about waste treatment methods and their efficiency from Section 7A of the TRI Reporting Form R, as shown in the table below. Each record in File Type 2B represents data from a single chemical reporting form (i.e., Form R) submitted by a facility.

All Type 2B files contain data from the following parts and sections of the Form R:

Part	Section	Description
I	1	Reporting Year
I	1	Revision Codes
I	2.1	Trade Secret Indicator
I	4	Facility Identification Information
I	5	Parent Company Information
II	1	Chemical Identification Data
II	7.A.a	General Waste Stream Identification Code
II	7.A.b	Waste Treatment Methods
II	7.A.c	Range of Influent of Concentration
II	7.A.d	Waste Treatment Efficiency Estimate
II	7.A.e	Based on Operating Data

Note: In 2005, the TRI Program stopped collecting underground injection control (UIC) identification numbers from facilities on the TRI reporting forms. UIC IDs identify facilities that received permits from state governments to dispose of or release chemical waste into Class I through Class V underground injection wells.

The TRI Program does have some historical UIC IDs that were collected prior to 2005. Many of these, however, are outdated and inaccurate. The TRI Program is also missing UIC IDs for facilities that began reporting to TRI in or after 2005. EPA does not store nor have access to current UIC IDs. Because of this lack of current, accurate and complete data, the TRI Program removed the UIC ID data fields from the TRI Basic Data Files in 2019.

To learn more about UIC permits and underground injection wells see the "Protecting Underground Source of Drinking Water from Underground Injection (UIC)" website at https://www.epa.gov/uic

WHAT'S IN THIS DOCUMENT

The rest of this document is organized as a four-column data table. It describes what information you will find when you download and open any of the "TRI Basic Plus Data: File Type 2B" files.

Column	Description
Number (No.)	The sequential number of the data element in the record
Field Name	The name of the data element (Note: these names correspond to the various column headings in the data files themselves.)
Data Type	'C' for character data (alphanumeric) 'N' for numeric data 'D' for date
Description	A brief statement of what the data element represents, plus its TRI System Source (in **Table Name**. Field Name format) and where on the TRI Reporting Form R the data element is reported (i.e., *reference*). TRI System Source refers to the data element's physical location within EPA's Envirofacts online data warehouse.

When you open any of the Basic Plus data files, you'll see that the contents are delimited by tabs, meaning a tab is placed between each data element. The first row of each file contains column headers, which correspond to the "field names" in this document.

	A	B	C	D
1	REPORTING YEAR	TRADE SECRET INDICATOR	TRIFID	FACILITY NAME
2	2016	NO	37087TSHBM1420T	NOVAMET SPECIALTY PRODUCTS
3	2016	NO	2740WNVRNM837TR	ENVIRONMENTAL AIR SYSTEMS INC-TRIAD
4	2016	NO	7585WSNDRS485HI	SANDERSON FARMS OAKWOOD FEED MILL

Example of the first four rows of a Basic Plus data file

REMINDER: Quantities of dioxin and dioxin-like compounds are in grams. Quantities of all other TRI chemicals are reported in pounds. Facilities cannot use range codes to report quantities for dioxin and dioxin-like compounds and other Persistent Bioaccumulative Toxics (PBTs). For a list of PBT chemicals see Appendix E - Persistent Bioaccumulative Toxics (PBTs).

HELPFUL RESOURCES FOR USERS OF DOWNLOADABLE DATA FILES

When using any of the downloadable TRI data files, it will be helpful for users to refer to the TRI Reporting Form R, the TRI Reporting Forms & Instructions document, and the Envirofacts TRI data model. The Reporting Forms & Instructions document and sample reporting forms are available online in the GuideME application at www.epa.gov/tri/guideme. The Envirofacts TRI data model is found at https://enviro.epa.gov/envirofacts/metadata/model/tri. These resources provide useful context and have additional details about certain data elements.

FILE TYPE 2B CONTENTS

No.	Field Name	Type	Description
1	FORM TYPE	C	Indicates whether the Reporting Form R or Form A Certification Statement was submitted. R = Form R A = Form A Certification Statement *Source:* **TRI_REPORTING_FORM.**FORM_TYPE_IND *Reference:* Type of Form Used
2	REPORTING YEAR	C	The calendar year in which the reported activities occurred. *Source:* **TRI_REPORTING_FORM.**REPORTING_YEAR *Reference:* Part I, Section 1
3	TRADE SECRET INDICATOR	C	Flag indicating whether the reporting facility claims the identity of the chemical or chemical category as a trade secret. Yes = Checked (Trade Secret) No = Not checked *Note: Only sanitized trade secret submissions are stored in the TRI database.* *Source:* **TRI_REPORTING_FORM.**TRADE_SECRET_IND *Reference*: Part I, Section 2.1
4	TRIFD	C	The unique TRI facility identification (TRIFID) number assigned to each facility for TRI reporting purposes *NOTE: The content of this field is not changed to match facility ownership, or zip code changes. Rather, the TRIFD identifies a specific geographical location (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	C	Name of the reporting facility. *Source:* **TRI_FACILITY.**FACILITY_NAME *Reference:* Part I, Section 4.1
6	FACILITY STREET	C	Street address of the reporting facility. *Source:* **TRI_FACILITY.**STREET_ADDRESS *Reference:* Part I, Section 4.1
7	FACILITY CITY	C	City in which the reporting facility is located. *Source:* **TRI_FACILITY.**CITY_NAME *Reference:* Part I, Section 4.1
8	FACILITY COUNTY	C	County in which the reporting facility is located. *Source:* **TRI_FACILITY.**COUNTY_NAME *Reference:* Part I, Section 4.1
9	FACILITY STATE	C	Two-letter state code of the reporting facility. *Source:* **TRI_FACILITY.**STATE_ABBR *Reference:* Part I, Section 4.1
10	FACILITY ZIP CODE	C	ZIP code of the reporting facility. *Source:* **TRI_FACILITY.**ZIP_CODE *Reference:* Part I, Section 4.1

11	BIA CODE	C	Three-letter Bureau of Indian Affairs (BIA) code indicating the tribal land on which the facility is located. *Source:* **TRI_FACILITY.**BIA_TRIBAL_CODE
12	TRIBE NAME	C	Name of the tribe on whose land the reporting facility is located. *Source:* **TRI_TRIBE_DESC**.TRIBE
13	ENTIRE FACILITY IND	C	Flag indicating 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
14	PARTIAL FACILITY IND	C	Flag indicating 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
15	FEDERAL FACILITY IND	C	Flag indicating whether the facility is a federal facility or not. Yes = federal No = non-federal *Source:* **TRI_REPORTING_FORM.**FEDERAL_ FAC_IND *Reference:* Part I, Section 4.2c
16	GOCO FACILITY IND	C	Code indicating whether a facility is a GOCO (Government-Owned, Contractor-Operated) facility or not. Yes = GOCO No = non-GOCO *Source:* **TRI_REPORTING_FORM.**GOCO_ FLAG *Reference:* Part I, Section 4.2d
17	ASSIGNED FED. FACILITY FLAG	C	Code indicating whether this is a federal facility or not. Yes = federal No = non-federal *Source:* **TRI_FACILITY.**ASGN_FEDERAL *Reference*: Assigned by the TRI Program.
18	ASSIGNED PARTIAL FACILITY FLAG	C	Flag indicating whether the facility is a multi-establishment and reports by part. Multi-establishment facilities may have more than one submission for the same chemical in one reporting year. Yes = Partial; No = entire *Source:* **TRI_FACILITY**. ASGN_PARTIAL_IND *Reference*: Assigned by the TRI Program.
19	PUBLIC CONTACT NAME	C	Name of the designated individual whom the public may contact if clarification of the facility's reported data is needed. *Source:* **TRI_REPORTING_FORM**.PUBLIC_CONTACT_PERSON *Reference:* Part 1, Section 4.4
20	PUBLIC CONTACT PHONE	C	Area code and telephone number of the public contact. *Source:* **TRI_REPORTING_FORM**.PUBLIC_CONTACT_PHONE *Reference:* Part 1, Section 4.4

21	PUBLIC CONTACT PHONE EXT	C	Phone extension of the public contact. *Source:* **TRI_REPORTING_FORM**.PUBLIC_PHONE_EXT *Reference:* Part 1, Section 4.4
22	PUBLIC CONTACT EMAIL	C	Email address of the designated individual whom the public may contact if clarification of the facility's reported data is needed. *Source:* **TRI_REPORTING_FORM**.PUBLIC_CONTACT_PERSON_EMAIL *Reference:* Part 1, Section 4.4
23	PRIMARY SIC CODE	C	Primary 4-digit Standard Industrial Classification (SIC) code. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* primary_ind = '1' *Reference:* Part I, Section 4.5a
24	SIC CODE 2	C	Second 4-digit Standard Industrial Classification (SIC) code entered by facility. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* sic_sequence_num = '2' *Reference:* Part I, Section 4.5b
25	SIC CODE 3	C	Third 4-digit Standard Industrial Classification (SIC) code entered by facility. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* sic_sequence_num = '3' *Reference:* Part I, Section 4.5c
26	SIC CODE 4	C	Fourth 4-digit Standard Industrial Classification (SIC) code entered by facility. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* sic_sequence_num = '4' *Reference:* Part I, Section 4.5d
27	SIC CODE 5	C	Fifth 4-digit Standard Industrial Classification (SIC) code entered by facility. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* sic_sequence_num = '5' *Reference:* Part I, Section 4.5e
28	SIC CODE 6	C	Sixth 4-digit Standard Industrial Classification (SIC) code entered by facility. *Note: SIC codes reported by facilities from RY 1987 through 2005.* *Source:* **TRI_SUBMISSION_SIC.**SIC_CODE *Where:* sic_sequence_num = '6' *Reference:* Part I, Section 4.5f
29	NAICS ORIGIN	C	Indicates whether North American Industry Classification System (NAICS) codes were reported or assigned. R = Reported; A = Assigned *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Reference:* Assigned by the TRI Program.

30	PRIMARY NAICS CODE	C	This represents the main business activity at the facility. See Appendix A for details. *Note: From RY 2006 to the present, NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* primary_ind = '1' *Reference:* Part I, Section 4.5a
31	NAICS CODE 2	C	Second 6-digit North American Standard Industry Classification System (NAICS) code entered by facility. *Note: NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* naics_sequence_num = '2' *Reference:* Part I, Section 4.5b
32	NAICS CODE 3	C	Third 6-digit North American Standard Industry Classification System (NAICS) code entered by facility. *Note: NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* naics_sequence_num = '3' *Reference:* Part I, Section 4.5b
33	NAICS CODE 4	C	Fourth 6-digit North American Standard Industry Classification System (NAICS) code entered by facility. *Note: NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* naics_sequence_num = '4' *Reference:* Part I, Section 4.5b
34	NAICS CODE 5	C	Fifth 6-digit North American Standard Industry Classification System (NAICS) code entered by facility. *Note: NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* naics_sequence_num = '5' *Reference:* Part I, Section 4.5b
35	NAICS CODE 6	C	Sixth 6-digit North American Standard Industry Classification System (NAICS) code entered by facility. *Note: NAICS codes reported by facilities from RY 2006 to present. Prior to RY 2006, NAICS codes were assigned by EPA.* *Source:* **TRI_SUBMISSION_NAICS.**NAICS_CODE *Where:* naics_sequence_num = '6' *Reference:* Part I, Section 4.5b
36	LATITUDE	N	The latitude value that best represents the facility according to EPA's Facility Registry System (FRS). Format: 2-digit whole number followed by a decimal point and 6 digits (+nn.nnnnnn). *Note: In RY 2005, EPA stopped collecting the latitude value and began obtaining it from FRS.* *Source:* **EPA's Facility Registry System**

37	LONGITUDE	N	The longitude value that best represents the facility according to EPA's Facility Registry System (FRS). Format: 3-digit whole number followed by 6 digits (+nnn.nnnnnn). *Note: In RY 2005, EPA stopped collecting the longitude value and began obtaining it from FRS.* *Source:* **EPA's Facility Registry System**
38	D&B NR A	C	Unique identification number assigned by Dun and Bradstreet to the reporting facility. Dun & Bradstreet is a private financial tracking and accounting firm. *Source:* **TRI_FACILITY_DB.**DB_NUM *Reference:* Part I, Section 4.7a
39	D&B NR B	C	Unique identification number assigned by Dun and Bradstreet to the reporting facility. Dun & Bradstreet is a private financial tracking and accounting firm. *Source:* **TRI_FACILITY_DB.**DB_NUM *Reference:* Part I, Section 4.7b
40	RCRA NR A	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
41	RCRA NR B	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
42	RCRA NR C	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
43	RCRA NR D	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
44	RCRA NR E	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
45	RCRA NR F	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**

46	RCRA NR G	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
47	RCRA NR H	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
48	RCRA NR I	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
49	RCRA NR J	C	Twelve-digit alphanumeric identifier assigned by EPA per the Resource Conservation and Recovery Act (RCRA). *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
50	NPDES NR A	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
51	NPDES NR B	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
52	NPDES NR C	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
53	NPDES NR D	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
54	NPDES NR E	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**

55	NPDES NR F	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
56	NPDES NR G	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
57	NPDES NR H	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
58	NPDES NR I	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
59	NPDES NR J	C	Nine-digit alphanumeric identifier assigned to a facility by EPA's National Pollutant Discharge Elimination System (NPDES) permit program. *Note: In RY 2005, TRI stopped collecting RCRA IDs on the Reporting Form R.* *Source:* **EPA's Facility Registry System**
60	PARENT COMPANY NAME	C	Name of the corporation or other business entity that controls the reporting facility. *Source:* **TRI_FACILITY.**PARENT_CO_NAME *Reference:* Part I, Section 5.1
61	PARENT COMPANY D&B NR	C	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
62	STANDARDIZED PARENT COMPANY NAME	C	A data field developed by EPA that is intended to best reflect the current ultimate U.S. parent company for the facility. *Source:* **TRI_FACILITY**.STANDARDIZED_PARENT_COMPANY *Reference:* Assigned by EPA
63	FOREIGN PARENT COMPANY NAME	C	The current name of the foreign corporation or other business entity that controls the reporting facility. A facility can have both a domestic (see field 13) parent company and foreign parent company. Facilities with sole ownership or controlling interest inside the U.S. will not have a foreign parent company. A value of NA = No Foreign Company Name/Not applicable. *Source:* **TRI_FACILITY.**FOREIGN_PARENT_CO_NAME *Reference:* Part I, Section 5.3

64	FOREIGN PARENT COMPANY D&B NR	C	The current unique identification number assigned by Dun and Bradstreet to the foreign parent company of the reporting facility. *Source:* **TRI_FACILITY.**FOREIGN_PARENT_CO_DB_NUM *Reference:* Part I, Section 5.4
65	STANDARDIZED FOREIGN PARENT COMPANY NAME	C	The current standardized Foreign Parent Company Name assigned by TRI. 'Standardized Foreign Parent Company Name' is a data field developed by EPA that is intended to best reflect the current ultimate foreign parent company for the facility. *Source*: **TRI_FACILITY.** STANDARDIZED_FOREIGN_PARENT_CO *Reference*: Assigned by the TRI Program.
66	FRS FACILITY ID	C	Indicates the Facility Registry Service (FRS) ID for the TRI facility. The FRS is a centrally managed EPA database that identifies facilities, sites, or places subject to environmental regulations or of environmental interest. Using the FRS ID, data users can link data from different EPA programs together. *Source:* **TRI_FACILITY.EPA_**REGISTRY_ID
67	DOCUMENT CONTROL NUMBER	C	Unique identification number assigned to each TRI form submission. Format: TTYYNNNNNNNNN, where: TT = document type YY = reporting year NNNNNNNNN= assigned number *Source:* **TRI_REPORTING_FORM.**DOC_CTRL_ NUM *Reference:* TRI system generated
68	CAS NUMBER	C	Unique numerical identifier assigned by the Chemical Abstracts Service to every chemical substance. *Note: CAS number 9999999999 is for sanitized trade secret submissions.* *Source:* **TRI_CHEM_INFO.** CAS_REGISTRY_NUMBER *Reference:* Part II, Section 1.1
69	TRI_CHEM_ID	C	TRI Chemical ID is an internal program number that uniquely identifies chemical or category codes (for compounds). The number is the same as the CAS number but with a different format (no dashes and left padded with zeroes for non-compounds). Format: 9999999999 (Chemicals) N999 (Compounds) *Note: I_CHEM_ID 9999999999 is sanitized for trade secret submissions.* *Source:* **TRI_REPORTING_FORM.**TRI_CHEM_ID *Reference:* Part II, Section 1.1
70	CHEMICAL NAME	C	Name of the chemical as listed on the TRI chemical list, or generic name, if the chemical is claimed as a trade secret. *Source:* **TRI_REPORTING_FORM.**CAS_CHEM_ NAME *Reference:* Part II, Section 1.2 *or* Part II, Section 1.3
71	MIXTURE NAME	C	The generic term used in place of the chemical name when the supplier of the chemical is withholding the name of the TRI chemical or claiming that the chemical is a trade secret. This is generally used when the supplier of a chemical formulation wishes to keep the identity of a particular ingredient in the formulation a secret. It is only used when the supplier, not the reporting facility, is claiming the trade secret. The reporting facility will enter the chemical name as "Mixture", then supply this generic name to describe it. *Source:* **TRI_REPORTING_FORM**.MIXTURE_NAME *Reference:* Part II, Section 2.1

72	ELEMENTAL METAL INCLUDED	C	Flag indicating whether the facility submitted a combined reporting form for a metal compound and the corresponding elemental metal. TRI started collecting this data element beginning with RY 2018. VALUES: YES = combined form for both an elemental metal and a metal compound containing the same elemental metal NO = only metal compound reported *Source:* **TRI_REPORTING_FORM.**ELEMENTAL_METAL_INCLUDED *Reference:* Part II, Section 1.2
73	CLASSIFICATION	C	Indicates the classification of the chemical. Chemicals can be classified as either a dioxin or dioxin-like compound, a Persistent, Bioaccumulative and Toxic chemical, or a general EPCRA Section 313 chemical. Values: {TRI, PBT, DIOXIN} where: TRI = General EPCRA Section 313 chemical PBT = Persistent Bioaccumulative and Toxic chemical DIOXIN = Dioxin or dioxin-like compound *Source:* **TRI_CHEM_INFO.**CLASSIFICATION
74	UNIT OF MEASURE	C	Indicates the unit of measure used to quantify the chemical. Dioxin and dioxin-like compounds are measured in grams, while all other TRI chemicals are measured in pounds. Values: {Pounds, Grams} *Source:* **TRI_CHEM_INFO.**UNIT_OF_MEASURE *Reference:* NONE
75	HAZARDOUS AIR POLLUTANT - HAPS	C	Flag indicating whether the chemical is listed as a hazardous air pollutant under the Clean Air Act (CAA). Yes = CAAC No = non-CAAC See Appendix B: Chemical Classifications – CAAC for a list of TRI chemicals that are designated hazardous air pollutants under the CAA. *Source:* **TRI_CHEM_INFO.**CAAC_IND
76	CARCINOGEN	C	Flag indicating whether the chemical is classified as a carcinogen by the Occupational Safety and Health Administration (OSHA). Yes = CARC No = non-CARC See “Appendix B: Chemical Classifications – Carcinogens” for a list of TRI chemicals classified as OSHA carcinogens. *Source:* **TRI_CHEM_INFO.**CARC_IND
77	PFAS_IND	C	Flag indicating whether the chemical is a per- and polyfluoroalkyl substance (PFAS) or not. Yes = PFAS No = non-PFAS See Appendix B: Chemical Classifications – PFAS for a list of PFAS on the TRI chemical list. *Source:* **TRI_CHEM_INFO.**PFAS_IND
78	METAL_IND	C	Flag indicating whether the chemical is a metal with TRI reporting restrictions. Yes = Metal with reporting restrictions No = TRI chemical without reporting restrictions See Appendix B: Chemical Classifications – Metals for a list of metals on the TRI chemical list. *Source:* **TRI_CHEM_INFO.**Metal_Ind

79	REVISION CODE 1	C	If the facility revises its original TRI reporting form for a chemical, the facility indicates the reason using revision codes. This is an 'RR' followed by a single digit. This data element was collected beginning in RY 2007. Values: RR1 = New Monitoring Data RR2 = New Emission Factors RR3 = New Chemical Concentration Data RR4 = Recalculation(s) RR5 = Other Reason(s) *Source:* **TRI_REPORTING_FORM.**Revision_Code_1
80	REVISION CODE 2	C	If the facility revises its original TRI reporting form for a chemical, the facility indicates the reason using revision codes. This is an 'RR' followed by a single digit. This data element was collected beginning in RY 2007. Values: RR1 = New Monitoring Data RR2 = New Emission Factors RR3 = New Chemical Concentration Data RR4 = Recalculation(s) RR5 = Other Reason(s) *Source:* **TRI_REPORTING_FORM.**Revision_Code_2
81	DIOXIN DISTRIBUTION 1	N	Indicates the percentage of 1,2,3,4,6,7,8 Heptachlorodibenzofuran (CAS # 67562-39-4) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_1 *Reference:* Part II, Section 1.4
82	DIOXIN DISTRIBUTION 2	N	Indicates the percentage of 1,2,3,4,7,8,9 Heptachlorodibenzofuran (CAS # 55673-89-7) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_2 *Reference:* Part II, Section 1.4
83	DIOXIN DISTRIBUTION 3	N	Indicates the percentage of 1,2,3,4,7,8 Hexachlorodibenzofuran (CAS # 70648-26-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_3 *Reference:* Part II, Section 1.4
84	DIOXIN DISTRIBUTION 4	N	Indicates the percentage of 1,2,3,6,7,8 Hexachlorodibenzofuran (CAS # 57117-44-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_4 *Reference:* Part II, Section 1.4

85	DIOXIN DISTRIBUTION 5	N	Indicates the percentage of 1,2,3,7,8,9 Hexachlorodibenzofuran (CAS # 72918-21-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_5 *Reference:* Part II, Section 1.4
86	DIOXIN DISTRIBUTION 6	N	Indicates the percentage of 2,3,4,6,7,8 Hexachlorodibenzofuran (CAS # 60851-34-5) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_6 *Reference:* Part II, Section 1.4
87	DIOXIN DISTRIBUTION 7	N	Indicates the percentage of 1,2,3,4,7,8 Hexachlorodibenzo-p-dioxin (CAS # 39227-28-6) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_7 *Reference:* Part II, Section 1.4
88	DIOXIN DISTRIBUTION 8	N	Indicates the percentage of 1,2,3,6,7,8 Hexachlorodibenzo- p-dioxin (CAS # 5765385-7) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0. and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_8 *Reference:* Part II, Section 1.4
89	DIOXIN DISTRIBUTION 9	N	Indicates the percentage of 1,2,3,7,8,9 Hexachlorodibenzo-p-dioxin (CAS # 19408-74-3) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_9 *Reference:* Part II, Section 1.4
90	DIOXIN DISTRIBUTION 10	N	Indicates the percentage of 1,2,3,4,6,7,8 Heptachlorodibenzo-p- dioxin (CAS # 35822-46-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_10 *Reference:* Part II, Section 1.4
91	DIOXIN DISTRIBUTION 11	N	Indicates the percentage of 1,2,3,4,6,7,8,9 Octachlorodibenzofuran (CAS # 39001-02-0) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_11 *Reference:* Part II, Section 1.4

92	DIOXIN DISTRIBUTION 12	N	Indicates the percentage of 1,2,3,4,6,7,8,9 Octachlorodibenzo-p- dioxin (CAS # 03268-87-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_12 *Reference:* Part II, Section 1.4
93	DIOXIN DISTRIBUTION 13	N	Indicates the percentage of 1,2,3,7,8 Pentachlorodibenzofuran (CAS # 57117-41-6) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_13 *Reference:* Part II, Section 1.4
94	DIOXIN DISTRIBUTION 14	N	Indicates the percentage of 2,3,4,7,8 Pentachlorodibenzofuran (CAS # 57117-31-4) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_14 *Reference:* Part II, Section 1.4
95	DIOXIN DISTRIBUTION 15	N	Indicates the percentage of 1,2,3,7,8 Pentachlorodibenzo-p-dioxin (CAS # 40321-76-4) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_15 *Reference:* Part II, Section 1.4
96	DIOXIN DISTRIBUTION 16	N	Indicates the percentage of 2,3,7,8 Tetrachlorodibenzofuran (CAS # 51207-31-9) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_16 *Reference:* Part II, Section 1.4
97	DIOXIN DISTRIBUTION 17	N	Indicates the percentage of 2,3,78 Tetrachlorodibenzo-p-dioxin (CAS # 01746-01-6) in the reported dioxin or dioxin-like compound. Values are either 0 or a number between 0 and 100 (inclusive). See Appendix C for details. *Note: This data element was collected from RY 2000 through 2007.* *Source:* **TRI_REPORTING_FORM.**DIOXIN_DISTRIBUTION_17 *Reference:* Part II, Section 1.4
98	STREAM 1 – WASTE STREAM CODE	C	One-letter code indicating the type of general waste stream in which the reported chemical was treated. See Appendix D for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.WASTESTREAM_CODE *Reference*: Part II, Section 7A.1a

99	STREAM 1 - TRTMT METHOD 1	C	Code corresponding to the first treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
100	STREAM 1 - TRTMT METHOD 2	C	Code corresponding to the second treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
101	STREAM 1 - TRTMT METHOD 3	C	Code corresponding to the third treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
102	STREAM 1 - TRTMT METHOD 4	C	Code corresponding to the fourth treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005. Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
103	STREAM 1 - TRTMT METHOD 5	C	Code corresponding to the fifth treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
104	STREAM 1 - TRTMT METHOD 6	C	Code corresponding to the sixth treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b

105	STREAM 1 - TRTMT METHOD 7	C	Code corresponding to the seventh treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
106	STREAM 1 - TRTMT METHOD 8	C	Code corresponding to the eighth treatment method used on Waste Stream 1, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.1b
107	STREAM 1 - RANGE INFLUENT CONCENT	C	Code corresponding to the range of concentration of the chemical as it typically enters the specified waste treatment step or sequence. See Appendix E for list of codes and definitions. *Note: This data no longer collected as of RY 2005.* *Source*: **TRI_ONSITE_WASTESTREAM**.INFLUENT_CONC_RANGE *Reference*: Part II, Section 7A.1c
108	STREAM 1 - TRTMT EFFICIENCY EST	N	Estimate of the percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. *Note: This data element was reported from RY 1987 to RY 2004. In RY 2005, the Treatment Efficiency Range Code (see: STREAM 1 – TRTMT EFFICIENCY RANGE CODE) was reported instead.* *Source*: **TRI_ONSITE_WASTESTREAM**.TREATMENT_EFFICIENCY_EST *Reference*: Part II, Section 7A.1.d
109	STREAM 1 - BASED ON OPERATING DATA?	C	Indicates whether the treatment efficiency estimate is based on operating data. Value is either “yes” or “no.” *Note: As of RY 2005, this data is no longer collected.* *Source*: **TRI_ONSITE_WASTESTREAM**.OPERATING_DATA_IND *Reference*: Part II, Section 7A.1.e
110	STREAM 1 – TRTMT EFFICIENCY RANGE CODE	C	Range code indicating the estimated percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. Reported as a two-character range code beginning in RY 2005. See Appendix F for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.EFFICIENCY_RANGE_CODE *Reference*: Part II, Section 7A.1.d
111	STREAM 2 - WASTE STREAM CODE	C	One-letter code indicating the type of general waste stream in which the reported chemical was treated. See Appendix D for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.WASTESTREAM_CODE *Reference*: Part II, Section 7A.2a

112	STREAM 2 - TRTMT METHOD 1	C	Code corresponding to the first treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_ MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
113	STREAM 2 - TRTMT METHOD 2	C	Code corresponding to the second treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
114	STREAM 2 - TRTMT METHOD 3	C	Code corresponding to the third treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
115	STREAM 2 - TRTMT METHOD 4	C	Code corresponding to the fourth treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
116	STREAM 2 - TRTMT METHOD 5	C	Code corresponding to the fifth treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_ MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
117	STREAM 2 - TRTMT METHOD 6	C	Code corresponding to the sixth treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b

118	STREAM 2 - TRTMT METHOD 7	C	Code corresponding to the seventh treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
119	STREAM 2 - TRTMT METHOD 8	C	Code corresponding to the eighth treatment method used on Waste Stream 2, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.2b
120	STREAM 2 - RANGE INFLUENT CONCENT	C	Code corresponding to the range of concentration of the chemical as it typically enters the specified waste treatment step or sequence. See Appendix E for list of codes and definitions. *Note: This data no longer collected as of RY 2005.* *Source*: **TRI_ONSITE_WASTESTREAM**.INFLUENT_CONC_RANGE *Reference*: Part II, Section 7A.2c
121	STREAM 2 - TRTMT EFFICIENCY EST	N	Estimate of the percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. *Note: This data element was reported from RY 1987 to RY 2004. In RY 2005, the Treatment Efficiency Range Code (see: STREAM 2 – TRTMT EFFICIENCY RANGE CODE) was reported instead.* *Source*: **TRI_ONSITE_WASTESTREAM**.TREATMENT_EFFICIENCY_EST *Reference*: Part II, Section 7A.1.d
122	STREAM 2 - BASED ON OPERATING DATA?	C	Indicates whether the treatment efficiency estimate is based on operating data. Value is either “yes” or “no.” *Note: As of RY 2005, this data is no longer collected.* *Source*: **TRI_ONSITE_WASTESTREAM**.OPERATING_DATA_IND *Reference*: Part II, Section 7A.1.e
123	STREAM 2 – TRTMT EFFICIENCY RANGE CODE	C	Range code indicating the estimated percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. Reported as a two-character range code beginning in RY 2005. See Appendix F for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.EFFICIENCY_RANGE_CODE *Reference*: Part II, Section 7A.1.d
124	STREAM 3 - WASTE STREAM CODE	C	This field indicates the type of general waste stream in which the reported chemical was treated. See Appendix D for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.WASTESTREAM_CODE *Reference*: Part II, Section 7A.3a

125	STREAM 3 - TRTMT METHOD 1	C	Code corresponding to the first treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_ MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.3b
126	STREAM 3 - TRTMT METHOD 2	C	Code corresponding to the second treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
127	STREAM 3 - TRTMT METHOD 3	C	Code corresponding to the third treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
128	STREAM 3 - TRTMT METHOD 4	C	Code corresponding to the fourth treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005 Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
129	STREAM 3 - TRTMT METHOD 5	C	Code corresponding to the fifth treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
130	STREAM 3 - TRTMT METHOD 6	C	Code corresponding to the sixth treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005*. *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b

131	STREAM 3 - TRTMT METHOD 7	C	Code corresponding to the seventh treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005*. *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
132	STREAM 3 - TRTMT METHOD 8	C	Code corresponding to the eighth treatment method used on Waste Stream 3, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005*. *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference:* Part II, Section 7A.3b
133	STREAM 3 - RANGE INFLUENT CONCENT	C	Code corresponding to the range of concentration of the chemical as it typically enters the specified waste treatment step or sequence. See Appendix E for list of codes and definitions. *Note: This data no longer collected as of RY 2005.* *Source*: **TRI_ONSITE_WASTESTREAM**.INFLUENT_CONC_RANGE *Reference*: Part II, Section 7A.3c
134	STREAM 3 - TRTMT EFFICIENCY EST	N	Estimate of the percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. *Note: This data element was reported from RY 1987 to RY 2004. In RY 2005, the Treatment Efficiency Range Code (see: STREAM 3 – TRTMT EFFICIENCY RANGE CODE) was reported instead.* *Source*: **TRI_ONSITE_WASTESTREAM**.TREATMENT_EFFICIENCY_EST *Reference*: Part II, Section 7A.1.d
135	STREAM 3 - BASED ON OPERATING DATA?	C	Indicates whether the treatment efficiency estimate is based on operating data. Value is either “yes” or “no.” *Note: As of RY 2005, this data is no longer collected.* *Source*: **TRI_ONSITE_WASTESTREAM**.OPERATING_DATA_IND *Reference*: Part II, Section 7A.1.e
136	STREAM 3 – TRTMT EFFICIENCY RANGE CODE	C	Range code indicating the estimated percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. Reported as a two-character range code beginning in RY 2005. See Appendix F for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.EFFICIENCY_RANGE_CODE *Reference*: Part II, Section 7A.1.d
137	STREAM 4 - WASTE STREAM CODE	C	This field indicates the type of general waste stream in which the reported chemical is being treated. See Appendix D for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.WASTESTREAM_CODE *Reference*: Part II, Section 7A.4a

138	STREAM 4 - TRTMT METHOD 1	C	Code corresponding to the first treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
139	STREAM 4 - TRTMT METHOD 2	C	Code corresponding to the second treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
140	STREAM 4 - TRTMT METHOD 3	C	Code corresponding to the third treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
141	STREAM 4 - TRTMT METHOD 4	C	Code corresponding to the fourth treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_ MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
142	STREAM 4 - TRTMT METHOD 5	C	Code corresponding to the fifth treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
143	STREAM 4 - TRTMT METHOD 6	C	Code corresponding to the sixth treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_ MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b

144	STREAM 4 - TRTMT METHOD 7	C	Code corresponding to the seventh treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
145	STREAM 4 - TRTMT METHOD 8	C	Code corresponding to the eighth treatment method used on Waste Stream 4, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.4.b
146	STREAM 4 - RANGE INFLUENT CONCENT	C	Code corresponding to the range of concentration of the chemical as it typically enters the specified waste treatment step or sequence. See Appendix E for list of codes and definitions. *Note: This data no longer collected as of RY 2005.* *Source*: **TRI_ONSITE_WASTESTREAM**.INFLUENT_CONC_RANGE *Reference*: Part II, Section 7A.4.c
147	STREAM 4 - TRTMT EFFICIENCY EST	N	Estimate of the percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. *Note: This data element was reported from RY 1987 to RY 2004. In RY 2005, the Treatment Efficiency Range Code (see: STREAM 4 – TRTMT EFFICIENCY RANGE CODE) was reported instead.* *Source*: **TRI_ONSITE_WASTESTREAM**.TREATMENT_EFFICIENCY_EST *Reference*: Part II, Section 7A.1.d
148	STREAM 4 - BASED ON OPERATING DATA?	C	Indicates whether the treatment efficiency estimate is based on operating data. Value is either “yes” or “no.” *Note: As of RY 2005, this data is no longer collected.* *Source*: **TRI_ONSITE_WASTESTREAM**.OPERATING_DATA_IND *Reference*: Part II, Section 7A.1.e
149	STREAM 4 – TRTMT EFFICIENCY RANGE CODE	C	Range code indicating the estimated percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. Reported as a two-character range code beginning in RY 2005. See Appendix F for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.EFFICIENCY_RANGE_CODE *Reference*: Part II, Section 7A.1.d
150	STREAM 5 - WASTE STREAM CODE	C	This field indicates the type of general waste stream in which the reported chemical was treated. See Appendix D for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.WASTESTREAM_CODE *Reference*: Part II, Section 7A.5a

151	STREAM 5 - TRTMT METHOD 1	C	Code corresponding to the first treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
152	STREAM 5 - TRTMT METHOD 2	C	Code corresponding to the second treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
153	STREAM 5 - TRTMT METHOD 3	C	Code corresponding to the third treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
154	STREAM 5 - TRTMT METHOD 4	C	Code corresponding to the fourth treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
155	STREAM 5 - TRTMT METHOD 5	C	Code corresponding to the fifth treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
156	STREAM 5 - TRTMT METHOD 6	C	Code corresponding to the sixth treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b

157	STREAM 5 - TRTMT METHOD 7	C	Code corresponding to the seventh treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
158	STREAM 5 - TRTMT METHOD 8	C	Code corresponding to the eighth treatment method used on Waste Stream 5, regardless of whether the waste treatment method removes the reported chemical. See Appendix D for list of codes and definitions. *Note: Code changes occurred in RY 2005.* *Source*: **TRI_ONSITE_WASTE_TREATMENT_MET**.TREATMENT_METHOD_CODE *Reference*: Part II, Section 7A.5.b
159	STREAM 5 - RANGE INFLUENT CONCENT	C	Code corresponding to the range of concentration of the chemical as it typically enters the specified waste treatment step or sequence. See Appendix E for list of codes and definitions. *Note: This data no longer collected as of RY 2005.* *Source*: **TRI_ONSITE_WASTESTREAM**. INFLUENT_CONC_RANGE *Reference*: Part II, Section 7A.5.c
160	STREAM 5 - TRTMT EFFICIENCY EST	N	Estimate of the percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. *Note: This data element was reported from RY 1987 to RY 2004. In RY 2005, the Treatment Efficiency Range Code (see: STREAM 5 – TRTMT EFFICIENCY RANGE CODE) was reported instead.* *Source*: **TRI_ONSITE_WASTESTREAM**.TREATMENT_EFFICIENCY_EST *Reference*: Part II, Section 7A.1.d
161	STREAM 5 - BASED ON OPERATING DATA?	C	Indicates whether the treatment efficiency estimate is based on operating data. Value is either “yes” or “no.” *Note: As of RY 2005, this data is no longer collected.* *Source*: **TRI_ONSITE_WASTESTREAM**.OPERATING_DATA_IND *Reference*: Part II, Section 7A.1.e
162	STREAM 5 – TRTMT EFFICIENCY RANGE CODE	C	Range code indicating the estimated percentage of the chemical removed from the waste stream through destruction, biological degradation, chemical conversion, or physical removal. Reported as a two-character range code beginning in RY 2005. See Appendix F for list of codes and definitions. *Source*: **TRI_ONSITE_WASTESTREAM**.EFFICIENCY_RANGE_CODE *Reference*: Part II, Section 7A.1.d

APPENDIX A: NAICS Code Assignments

Until RY 2006, the TRI Program used Standard Industrial Codes (SIC) to identify each reporting facility's industry sector. In RY 2006, the TRI Program began using North American Industry Classification System (NAICS) codes.

To allow for analysis of data across years, the TRI Program assigned NAICS codes to each TRI submission from 1987 through 2005. The six methods used to assign NAICS codes and the number and percentages of assignments per method are shown in the table below. The "Order of Precedence" column indicates the order in which the methods were used to make an assignment.

Method	Order of Precedence	Number of NAICS Codes Assigned via Method (in Thousands)	Percentage Per Method
Reported Data Used	1	821K	50%
SIC to NAICS Crosswalk	2	478K	29%
EPA Facility Registry System (FRS)	3	190K	11%
Commercial Sources	4	113K	7%
Statistics	5	51K	3%
Other Methods	6	2K	Less than 1 %

- Reported Data Used: This method was used to assign 50% of all NAICS codes. In this method, the primary NAICS code reported by each facility in RY 2006 was used to make an assignment to chemical submissions (Form Rs and Form As) for years 1987 to 2005. This method was only used under the following conditions:
  1. The RY 2006 chemical submitted had only one primary NAICS code reported
  2. The prior year submission(s) for the same chemical had only one primary SIC code consistently reported
  3. The SIC to NAICS Crosswalk (obtained for the U.S. Census Bureau) showed a one-to-one match between the reported SIC and NAICS codes
- This SIC to NAICS Crosswalk: In this method, the TRI Program used a crosswalk or lookup table that translated SIC codes into NAICS codes to assign a primary NAICS code to a pre-2006 TRI chemical submission. The primary SIC code reported on the TRI form was used to lookup the corresponding NAICS code. Not all SIC codes translated into only one NAICS code, so it was not possible to use this method to assign a NAICS code to each chemical submission. However, it was used to make 29% of all the assignments.
- EPA Facility Registry System (FRS): In this method, the TRI Program used NAICS codes found in EPA's Facility Registry System (FRS) to assign a primary NAICS code to each TRI chemical submission. This method was only used if FRS listed only one primary NAICS code for a facility. 11% of all assignments were made using this method.
- Commercial Sources: This method involved using various commercial services to verify NAICS code assignments. 7% of all assignments were made using this method.
- Statistics: For 3% of NAICS code assignments, the TRI Program used various statistical methods based on past and present data.

- Other Methods: Manual research (e.g., using Internet searches and other government agencies' data) and personally contacting facilities helped the TRI Program assign NAICS codes to approximately 2,000 TRI submissions.

Appendix B: Chemical Classifications

TRI Chemicals Classified as Hazardous Air Pollutants Under the Clean Air Act:

- https://www.epa.gov/epcra/consolidated-list-lists-under-epcracerclacaa-ss112r-april-2022-version

TRI Chemicals Classified as OSHA Carcinogens:

- www.epa.gov/sites/default/files/2019-11/documents/osha_carcinogen_basis_november_2019_update.pdf

TRI Chemicals Classified as Metals:

- https://ordspub.epa.gov/ords/guideme_ext/f?p=guideme:chemical-list-advanced-search:0

TRI Chemicals Classified as per- and polyfluoroalkyl substances (PFAS):

- www.epa.gov/toxics-release-inventory-tri-program/list-pfas-added-tri-ndaa

TRI Chemicals Classified as Persistent Bioaccumulative Toxic Chemicals (PBTs):

- www.epa.gov/toxics-release-inventory-tri-program/persistent-bioaccumulative-toxic-pbt-chemicalscovered-tri

APPENDIX C: Dioxin and Dioxin-like Compound Data

In reporting year (RY) 2000, the TRI Program began collecting congener data for dioxin and dioxin-like compounds to better convey the relative toxicity of these chemicals being released or managed at facilities. From RY 2000 through 2007, Part II, Section 1.4 of the Reporting Form R asked facilities to specify the percentages of the 17 individual chemicals that make up a dioxin or dioxin-like compound for all release types (air, water, and land). The 17 fields labeled "dioxin distribution" in each of the Basic Plus files should contain those reported percentages.

In RY 2008, the TRI Program improved collection of dioxin and dioxin-like compounds data by introducing the Form R Schedule One. This supplemental form allows facilities to report quantities of each of the 17 dioxin congeners.

Although useful, total releases are not the best measure of the actual toxicity of dioxin and dioxin-like compounds because each compound has its own level of toxicity. Both the original reporting of dioxin and dioxin-like congeners and the Form R Schedule One reporting allowed the TRI Program to calculate Toxic Equivalency (TEQ) values for each facility's dioxin releases. TEQs are a weighted quantity measure based on the toxicity of each member of the dioxin and dioxin-like compounds category relative to the most toxic members of the category. The values allow for comparison of the toxicity of different combinations of dioxins and dioxin-like compounds and help explain the relative toxicity of the TRI chemical release information.

For more information about dioxin and dioxin-like chemical reporting and the calculation of TEQs, see https://www.epa.gov/toxics-release-inventory-tri-program/dioxin-and-dioxin-compounds-toxic-equivalencyinformation. To download dioxin data from the Form R Schedule One, visit https://www.epa.gov/toxicsrelease-inventory-tri-program/tri-dioxin-and-dioxin-compounds-and-teq-data-files-calendar.

APPENDIX D: General Waste Streams and Treatment Methods

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 Method Codes

There are two lists of waste treatment method codes: one list covers reporting years (RY) 2004 and prior, and the other covers RY 2005 and later. In RY 2005, many new waste treatment method codes were introduced, and many existing codes were retired. The new codes were adapted from RCRA Hazardous Waste Management Codes.

Note that some of the older/retired codes still appear in the TRI data after RY 2004, because some TRI data were still being submitted on paper forms in and after RY 2005 (until EPA required electronic reporting beginning in 2013).

Methods (New codes for RY 2005 and later)

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

Methods (Old codes for RY 2004 and earlier)

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

Biological Treatment
B11 Aerobic
B21 Anaerobic
B31 Facultative
B99 Other Biological Treatment

Chemical Treatment
C01 Chemical Precipitation — Lime or Sodium Hydroxide
C02 Chemical Precipitation — Sulfide C09
Chemical Precipitation — Other
C11 Neutralization
C21 Chromium Reduction
C31 Complexed Metals Treatment (other than pH adjustment)
C41 Cyanide Oxidation — Alkaline Chlorination
C42 Cyanide Oxidation — Electrochemical C43
Cyanide Oxidation — Other
C44 General Oxidation (including Disinfection) — Chlorination
C45 General Oxidation (including Disinfection)— Ozonation
C46 General Oxidation (including Disinfection) — Other
C99 Other Chemical Treatment

Incineration/Thermal Treatment
F01 Liquid Injection
F11 Rotary Kiln with Liquid Injection Unit
F19 Other Rotary Kiln
F31 Two Stage F41
Fixed Hearth

F42 Multiple Hearth
F51 Fluidized Bed F61
Infra-Red
F71 Fume/Vapor
F81 Pyrolytic Destructor
F82 Wet Air Oxidation
F83 Thermal Drying/Dewatering
F99 Other Incineration/Thermal Treatment

Physical Treatment P01
Equalization
P09 Other Blending
P11 Settling/Clarification
P12 Filtration
P13 Sludge Dewatering (non-thermal)
P14 Air Flotation
P15 Oil Skimming
P16 Emulsion Breaking — Thermal
P17 Emulsion Breaking — Chemical
P18 Emulsion Breaking — Other
P19 Other Liquid Phase Separation
P21 Adsorption — Carbon
P22 Adsorption — Ion Exchange (other than for recovery/reuse)
P23 Adsorption — Resin
P29 Adsorption — Other
P31 Reverse Osmosis (other than for recovery/reuse) P41
Stripping — Air
P42 Stripping — Steam
P49 Stripping — Other
P51 Acid Leaching (other than for recovery/reuse)
P61 Solvent Extraction (other than recovery/reuse) P99
Other Physical Treatment

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

Below is a crosswalk of the old waste treatment methods codes used in RY 2004 and earlier and the new codes introduced in RY 2005.

Air Emissions Treatment These codes are 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

Biological Treatment:			
Previous Codes (Used in 2004 and prior)		New Codes (Used in 2005 and after)	
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

Chemical Treatment:			
Previous Codes (Used in 2004 and prior)		New Codes (Used in 2005 and after)	
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			
Previous Codes (Used in 2004 and prior)		New Codes (Used in 2005 and after)	
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
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

Physical Treatment			
Previous Codes (Used in 2004 and prior)		New Codes (Used in 2005 and after)	
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)	H082	Adsorption

P23	Adsorption B Resin	H082	Adsorption
P29	Adsorption B Other	H082	Adsorption
P31	Reverse Osmosis (other than for recover/reuse)	H129	Other treatment
P41	Stripping B Air	H083	Air or steam stripping
P42	Stripping B Steam	H083	Air or steam stripping
P49	Stripping B Other	H083	Air or steam stripping
P51	Acid Leaching (other than for recovery/reuse)	H129	Other treatment
P61	Solvent Extraction (other than recovery/reuse)	H129	Other treatment
P99	Other Physical Treatment	H129	Other treatment

APPENDIX E – Range of Influent Concentration

From reporting year 1987 through 2004, the reporting Form R required facilities to indicate the range of concentration of the TRI-covered chemical in the waste stream (i.e., the influent) as it typically enters the waste treatment step or sequence. The concentration is based on the amount or mass of the chemical in the waste stream as compared to the total amount or mass of the waste stream. Facilities provided one of the following code numbers corresponding to the concentration of the chemical in the influent:

1 = Greater than 10,000 parts per million (1%)
2 = 100 parts per million (0.01%) to 10,000 parts per million (1%)
3 = 1 part per million (0.0001%) to 100 parts per million (0.01%)
4 = 1 part per billion to 1 part per million 5 = Less than 1 part per billion

Note: Parts per million (ppm) is:

- milligrams/kilogram (mass/mass) for solids and liquids;
- cubic centimeters/cubic meter (volume/volume) for gases;
- milligrams/liter for solutions or dispersions of the chemical in water; and
- milligrams of chemical/kilogram of air for particulates in air.

If particulate concentrations (at standard temperature and pressure) as grains/cubic foot of air, multiply by 1766.6 to convert to parts per million; if in milligrams/cubic meter, multiply by 0.773 to obtain parts per million. These conversion factors are for standard conditions of 0^{o} C (32^{o} F) and 760 mm Hg atmospheric pressure.

APPENDIX F – Waste Treatment Efficiency Range Codes:

E1 = greater than 99.9999%
E2 = greater than 99.99%, but less than or equal to 99.9999%
E3 = greater than 99%, but less than or equal to 99.99%
E4 = greater than 95%, but less than or equal to 99%
E5 = greater than 50%, but less than or equal to 95%
E6 = equal to or greater than 0%, but less than or equal to 50%