

Table 381. Toxic Chemical Releases and Transfers by Media: 2004 to 2009

[In millions of pounds (4,253.6 represents 4,253,600,000), except as indicated. Based on reports filed as required by Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA), or Title III of the Superfund Amendments and Reauthorization Act of 1986), Public Law 99-499. The Pollution Prevention Act (PPA) of 1990 mandates collection of data on toxic chemicals that are treated on-site, recycled, and combusted for energy recovery. Owners and operators of facilities that are classified within North American Industrial Classification Code groups 31 through 33, 2121, 2122, 2211, 4246, 4247 and 562; have 10 or more full-time employees, and that manufacture, process, or otherwise use any listed toxic chemical in quantities greater than the established threshold in the course of a calendar year are covered and required to report. Includes all Persistent, Toxic (PBT) chemicals and vanadium and vanadium compounds. Does not include off-site disposal or other releases transferred to other TRI facilities that reported the amounts as on-site disposal or other releases]

Media	2004	2005	2006	2007	2008 ¹	2009
Total facilities reporting	24,428	24,140	23,543	22,775	22,319	21,020
Total on- and off-site disposal or other releases	4,253.6	4,364.7	4,322.7	4,118.7	3,872.5	3,386.4
On-site releases	3,738.1	3,829.5	3,784.6	3,559.8	3,383.8	3,015.3
Air emissions ²	1,544.1	1,516.4	1,413.5	1,319.8	1,151.2	915.3
Surface water discharges	253.3	256.7	250.0	238.7	249.3	204.8
Underground injection class I	210.3	211.5	199.8	184.1	174.1	153.2
Underground injection class II-V	27.7	20.2	20.1	21.5	18.2	26.3
RCRA subtitle C landfills ³	151.9	155.2	151.8	150.6	123.9	71.7
Other landfills	267.8	266.9	263.1	267.2	282.1	280.4
Land treatment/application farming	21.5	23.7	26.8	22.0	24.9	17.1
Surface impoundments	719.3	782.0	822.2	764.9	738.6	746.8
Other land disposal	542.1	596.9	637.3	590.9	621.6	599.7
Off-site releases	515.5	535.2	538.1	558.8	488.6	371.1
Total transfers offsite for further waste management	4,006.4	3,944.6	3,989.0	3,885.1	3,511.4	2,842.4
Transfers to recycling	2,085.0	2,095.8	2,181.6	2,142.3	1,970.4	1,628.9
Transfers to energy recovery	650.4	609.0	555.3	525.4	450.9	365.0
Transfers to treatment	326.6	335.4	328.1	286.5	257.4	229.1
Transfers to POTWs (non metals) ⁴	259.9	264.6	260.1	252.5	256.7	216.4
Transfers to POTWs metal and metal compounds ⁴	1.7	1.8	1.8	2.0	1.2	3.3
Other off-site transfers	71.5	0.4	0.5	0.2	0.2	(Z)
Transfers off-site for disposal or other releases	611.3	637.6	661.5	676.3	574.5	399.8
Total production-related waste managed	25,863.8	24,863.3	24,305.5	24,377.3	22,990.2	20,390.7
Recycled on-site	7,135.9	6,719.6	6,822.9	6,878.2	6,807.9	6,035.9
Recycled off-site	2,085.3	2,100.7	2,185.2	2,121.5	1,968.9	1,615.1
Energy recovery on-site	2,617.1	2,462.9	2,392.7	2,286.9	2,269.4	1,871.7
Energy recovery off-site	649.5	608.9	554.6	523.3	449.7	367.0
Treated on-site	8,447.8	7,918.0	7,314.6	7,755.4	7,050.5	6,644.4
Treated off-site	566.2	574.9	555.7	515.1	484.1	423.2
Quantity disposed or otherwise release of on- and off-site	4,362.1	4,478.3	4,479.9	4,296.9	3,959.8	3,433.5
Non-production-related waste managed	19.3	24.1	18.1	14.3	34.0	11.5

¹ Data have been revised. ² Air emissions include both fugitive and point source. ³ RCRA=Resource Conservation and Recovery Act. ⁴ POTW (Publicly Owned Treatment Work) is a wastewater treatment facility that is owned by a state or municipality. Source: U.S. Environmental Protection Agency, Toxic Release Inventory (TRI) Program, 2009 TRI National Analysis. See also <http://www.epa.gov/tri/tridata/tri09/national_analysis/index.htm>, 2009 data as of April 18, 2011.

Table 382. Toxic Chemical Releases by Industry: 2009

[In millions of pounds (3,386.4 represents 3,386,400,000), except as indicated. See headnote, Table 381]

Industry	2002 NAICS ¹ code	Total on- and off-site releases	On-site releases			Off-site releases/transfers to disposal ²
			Total	Air emissions	Other surface impoundments	
Total ³	(X)	3,386.4	3,015.3	915.3	744.8	371.1
Coal mining	2121	11.3	11.3	0.4	1.8	(Z)
Metal mining	2122	1,137.0	1,135.5	3.1	563.7	1.5
Electric utilities	2211	797.0	730.1	386.4	128.0	66.9
Food/beverages/tobacco	311/312	142.5	134.8	40.7	0.1	7.7
Textiles	313/314	1.8	1.3	1.2	0.1	0.4
Apparel	315	(Z)	(Z)	(Z)	—	(Z)
Leather	316	0.6	0.2	0.2	—	0.4
Wood products	321	8.6	8.0	7.9	(Z)	0.6
Paper	322	175.0	167.6	128.8	3.8	7.4
Printing and publishing	323/51	9.9	9.7	9.7	—	0.2
Petroleum	324	63.9	58.7	35.2	(Z)	5.2
Chemicals	325	420.3	377.5	157.5	15.8	42.8
Plastics and rubber	326	39.9	32.0	31.4	(Z)	7.8
Stone/clay/glass	327	23.2	20.8	15.0	0.1	2.4
Cement	32731	5.4	5.3	4.2	(Z)	0.1
Primary metals	331	305.9	148.6	31.2	29.2	157.3
Fabricated metals	332	44.3	22.8	21.2	(Z)	21.5
Machinery	333	5.6	3.5	3.5	—	2.1
Computers/electronic products	334	5.2	3.0	1.4	—	2.2
Electrical equipment	335	5.1	1.8	1.8	(Z)	3.3
Transportation equipment	336	30.3	21.5	21.1	(Z)	8.7
Furniture	337	4.4	4.3	4.3	—	0.1
Miscellaneous Manufacturing	339	4.7	2.8	2.8	—	1.9
Chemical wholesalers	4246	1.3	1.2	1.1	—	0.1
Petroleum bulk terminals	4247	3.2	3.1	3.1	(Z)	0.1
Hazardous waste	562	108.3	79.8	0.5	1.2	28.4
No codes ³	(X)	32.0	30.1	1.7	1.0	1.9

— Represents zero. X Not applicable. Z less than 50,000 lbs. ¹ North American Industry Classification System, see text, Section 12. ² Includes off-site disposal to underground injection for Class I wells, Class II to V wells, other surface impoundments, land releases, and other releases, not shown separately. ³ Includes industries with no specific industry identified.

Source: U.S. Environmental Protection Agency, 2009 TRI National Analysis. See also <http://www.epa.gov/tri/tridata/tri09/national_analysis/index.htm>. Data as of April 18, 2011.