
Chapter 6

Toxics Release Inventory Data for Federal Facilities



Chapter 6

Toxics Release Inventory Data for Federal Facilities

This chapter provides analyses of 2000 TRI data as reported by federal facilities. Federally owned facilities that are operated by federal agencies or contractors are required to report to TRI, regardless of SIC code, pursuant to Executive Order 13148. Federal facilities have been required to report since the 1994 reporting year.

Chapter 1 explains types of releases and other waste management activities, described in this chapter, and provides important information on factors to be considered when using TRI data.

Tables in this chapter list the federal agencies that have facilities reporting to TRI. Department of Defense (DOD) data are presented for DOD as a whole and for each defense agency. In addition, Environmental Protection Agency (EPA) data are presented for EPA as a whole and for EPA Fund-lead Superfund sites separately from other EPA facilities.

2000 TRI DATA FOR FEDERAL FACILITIES

In 2000, a total of 153 federal facilities submitted 646 TRI forms, as shown in Table 6-1. Of these, 83 facilities were owned or operated by the Department of Defense (DOD), 21 by the Department of Energy (DOE) and 17 by the Tennessee Valley Authority (TVA).

DOD agencies submitted 271 forms. These DOD submissions included 131 reports by Army facilities, 59 reports by Air Force facilities and 51 reports by Navy facilities. DOE facilities submitted 82 forms, and TVA facilities submitted 224 forms.

On- and Off-site Releases, 2000

All TRI Chemicals

As is also shown in Table 6-1, federal facilities reported on- and off-site releases totaling 81.4 million pounds. The bulk of the releases, 79.9 million pounds, occurred on-site. Off-site releases totaled 1.5 million pounds.

Tennessee Valley Authority facilities reported 70.3 million pounds of on- and off-site releases. This amount represented 86.5 percent of all releases by all federal facilities. It included the largest amounts in all on-site release types, except for 505 pounds of underground injection by the Energy Department. TVA's releases included 51.5 million pounds of air emissions and 16.7 million pounds of other on-site land releases (that is, on-site land releases to other than RCRA subtitle C landfills).

Together, the Department of Defense agencies reported 7.9 million pounds of total releases, including 2.9 million pounds of air emissions, 2.3 million pounds of other on-site land releases (that is, on-site land releases to other than RCRA subtitle C landfills), and 2.0 million pounds of surface water discharges. These DOD facilities also reported over 627,000 pounds transferred off-site for disposal. Total releases from DOD facilities represented 9.7 percent of all releases by all federal facilities.

Within the DOD, Army releases of 5.5 million pounds consisted of on-site land releases of 2.0 million pounds, surface water discharges of 1.9 million pounds and air emissions of 1.4 million pounds. The Air Force's total of 1.4 million pounds consisted principally of air emissions (about 1.2 million pounds). The Navy reported over 934,500 pounds



Table 6-1: TRI On-site and Off-site Releases by Agency, 2000: Federal Facilities

Federal Agency	Total Facilities Number	Total Forms Number	On-site Releases							Total On-site Releases Pounds	Off-site Releases Transfers Off-site to Disposal Pounds	Total On-site and Off-site Releases Pounds
			Total Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection		On-site Land Releases					
					Class I Wells Pounds	Class II-V Wells Pounds	RCRA Subtitle C Landfills Pounds	Other On-site Land Releases Pounds				
Department of Defense	83	271	2,943,814	2,008,550	0	0	9,000	2,300,806	7,262,170	627,458	7,889,628	
Air Force	15	59	1,190,250	125,828	0	0	0	253	1,316,331	109,996	1,426,327	
Army	38	131	1,351,755	1,876,697	0	0	9,000	2,033,782	5,271,234	215,087	5,486,321	
Army Corps of Engineers	2	8	0	77	0	0	0	12,978	13,055	0	13,055	
Defense Logistics	1	5	4,156	0	0	0	0	0	4,156	0	4,156	
Defense Stockpile	5	7	0	0	0	0	0	0	0	0	0	
Marines	6	9	22,446	0	0	0	0	0	22,446	632	23,078	
Military Academy	1	1	2,169	0	0	0	0	0	2,169	0	2,169	
Navy	15	51	373,038	5,948	0	0	0	253,793	632,779	301,742	934,521	
Department of Energy	21	82	450,006	93,843	0	505	0	193,774	738,128	22,189	760,317	
Department of Interior	5	5	750	4,915	0	0	0	10,781	16,446	0	16,446	
Department of State	1	1	0	250	0	0	0	0	250	0	250	
Department of Transportation	1	10	14	0	0	0	0	0	14	54	68	
Department of Treasury	8	16	213	0	0	0	0	111,562	111,775	22,274	134,049	
Environmental Protection Agency	5	11	0	33,243	0	0	0	1,065,934	1,099,177	0	1,099,177	
Environmental Protection Agency	3	7	0	0	0	0	0	0	0	0	0	
EPA Fund-Lead Superfund Sites	2	4	0	33,243	0	0	0	1,065,934	1,099,177	0	1,099,177	
National Aeronautics and Space Administration	5	12	99,305	0	0	0	0	0	99,305	723	100,028	
Tennessee Valley Authority	17	224	51,537,006	1,370,030	0	0	0	16,662,532	69,569,568	779,833	70,349,401	
US Department of Agriculture	4	5	0	0	0	0	0	496,271	496,271	0	496,271	
US Enrichment Corporation	1	7	507,101	122	0	0	0	11	507,233	0	507,233	
Veterans Administration	2	2	3,653	0	0	0	0	0	3,653	0	3,653	
Total for Federal Facilities	153	646	55,541,862	3,510,953	0	505	9,000	20,841,670	79,903,991	1,452,531	81,356,522	

Note: On-site Releases are from Section 5 of Form R. Off-site Releases are from Section 6 (transfers off-site to disposal) of Form R. Off-site Releases include metals and metal compounds transferred off-site for solidification/stabilization and for wastewater treatment, including to POTWs.

with the largest off-site transfers to disposal of all DOD agencies (301,700 pounds).

The EPA Fund-Lead Superfund sites reported almost 1.1 million pounds, primarily as on-site land releases. Over 33,200 pounds were reported as discharged to surface water. The on-site land releases were a result of clean-up activities at large, abandoned mining sites.

Federal facilities may report activities within either the new or the original industry sectors, which are presented in Chapters 4 and 5. Box 6-1 briefly summarizes these activities for federal facilities.

PBT Chemicals

For the 2000 reporting year, the reporting criteria were changed for persistent bioaccumulative toxic (PBT) chemicals. TRI was expanded to include new PBT chemicals and reporting thresholds were lowered for both the newly-added PBT chemicals and certain PBT chemicals already on the TRI list. Chapter 3 presents the data for 2000 for PBT chemicals for all TRI facilities.

Federal facilities reported almost 15,600 pounds of releases of PBT chemicals on 93 forms in 2000, as shown in Table 6-2. Almost 9,500 pounds (60.8 percent) were air emissions. Another 3,900 pounds were off-site releases (transfers off-site to disposal) and almost 1,600 pounds were other on-site land releases (that is, on-site land releases to other than RCRA subtitle C landfills). There were also over 600 pounds discharged into surface waters on-site.

Facilities of the Tennessee Valley Authority reported the largest releases of PBT chemicals, almost 6,900 pounds or 44.1 percent of all releases of PBT chemicals reported by federal facilities in 2000. Most of the TVA releases of PBT chemicals were on-site as air emissions (over 4,700 pounds or 68.6 percent of total releases for TVA).

Department of Energy facilities reported the second largest amount of releases of PBT chemicals in 2000, with over 4,700 pounds or 30.3 percent of the total for all federal facilities. Most of the Department of Energy's releases were off-site releases (transfers off-site to disposal). DOE facilities reported over 3,700 pounds of off-site releases,



Box 6-1: Federal Facilities Reporting in Original and New Industry Sectors

Standard Industrial Classification (SIC) codes are used throughout the federal government to classify economic activity by industry. Facilities in the manufacturing sectors—that is, SIC codes 20 through 39—have been required to report releases since the TRI program began. Federal facilities have been required to report to TRI since 1994, regardless of their SIC code. In 1998, seven additional industries began reporting.

Chapter 4 describes reporting within the new industry sectors. Twenty-three federal facilities reported activities within the new industry sectors on 246 forms for 2000. These included 16 Tennessee Valley Authority facilities reporting 70.3 million pounds of total on- and off-site releases in the electric utility sector, 1 Defense Logistics facility reporting almost 4,200 pounds in the chemical wholesale distributors sector, 3 Department of Energy facilities reporting 12,500 pounds in the petroleum terminals/bulk storage sector, and 1 Department of Energy facility reporting 3,200 pounds in the hazardous waste/solvent recovery sectors. One Department of Energy facility and one Navy facility each reported less than 10 pounds of releases in the electric utilities sector.

Chapter 5 describes reporting from the original industry sectors. These include manufacturing activities as well as activities, such as those at federal facilities, not designated as falling within the manufacturing or new industry sectors. All federal facilities, except those listed above, are included in the amounts described in Chapter 5. For 2000, there were 130 federal facilities reporting 11.0 million pounds on 400 forms falling within the original industry sector analysis in this report.

Table 6-2: TRI On-site and Off-site Releases of PBT Chemicals by Agency, 2000: Federal Facilities

Federal Agency	Total Forms Number	On-site Releases							Total On-site Releases Pounds	Off-site Releases Transfers Off-site to Disposal Pounds	Total On- and Off-site Releases Pounds
		Total Air Emissions Pounds	Surface Water Discharges Pounds	Underground Injection		On-site Land Releases					
				Class I Wells Pounds	Class II-V Wells Pounds	RCRA Subtitle C Landfills Pounds	Other On-site Land Releases Pounds				
Department of Defense	20	189.23	5.00	0.00	0.00	0.00	31.00	225.23	26.57	251.80	
Air Force	7	39.34	0.00	0.00	0.00	0.00	0.00	39.34	0.00	39.34	
Army	10	141.01	5.00	0.00	0.00	0.00	31.00	177.01	22.10	199.11	
Army Corps of Engineers	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Defense Logistics	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Defense Stockpile	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Marines	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Military Academy	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Navy	3	8.88	0.00	0.00	0.00	0.00	0.00	8.88	4.47	13.35	
Department of Energy	20	895.26	35.60	0.00	0.00	0.00	45.00	975.86	3,736.32	4,712.18	
Department of Interior	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Department of State	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Department of Transportation	2	13.85	0.00	0.00	0.00	0.00	0.26	14.11	54.23	68.34	
Department of Treasury	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Environmental Protection Agency	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Environmental Protection Agency	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
EPA Fund-Lead Superfund Sites	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
National Aeronautics and Space Administration	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tennessee Valley Authority	44	4,706.49	560.10	0.00	0.00	0.00	1,486.60	6,753.19	102.90	6,856.09	
US Department of Agriculture	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
US Enrichment Corporation	1	0.60	0.00	0.00	0.00	0.00	10.60	11.20	0.00	11.20	
Veterans Administration	1	3,653.00	0.00	0.00	0.00	0.00	0.00	3,653.00	0.00	3,653.00	
Total for Federal Facilities	93	9,458.44	600.70	0.00	0.00	0.00	1,573.46	11,632.59	3,920.02	15,552.61	

Note: On-site Releases are from Section 5 of Form R. Off-site Releases are from Section 6 (transfers off-site to disposal) of Form R. Off-site Releases include metals and metal compounds transferred off-site for solidification/stabilization and for wastewater treatment, including to POTWs.



79.3 percent of total releases of PBT chemicals from DOE facilities. The Veterans Administration reported almost 3,700 pounds of releases of PBT chemicals in 2000, all of which were air emissions.

Waste Management Data, 2000

Quantities of TRI Chemicals in Waste

Federal facilities reported managing 211.2 million pounds of TRI chemicals in production-related waste in 2000, as shown in Table 6-3. The largest waste management types reported by federal facilities were on- and off-site releases (79.6 million pounds) and on-site treatment (59.1 million pounds). They also reported 46.6 million pounds recycled off-site and 25.3 million pounds recycled on-site.

Tennessee Valley Authority facilities accounted for 119.6 million pounds of production-related waste managed, or 56.6 percent of the total for all federal facilities in 2000. TVA facilities reported 70.3 million pounds released on- and off-site, 88.4 percent of the total quantity released on- and off-site by federal facilities. TVA facilities also reported 49.2 mil-

lion pounds treated on-site, 83.2 percent of the total treated on-site by federal facilities.

Department of Defense facilities reported the second-largest quantity of production-related waste, 43.7 million pounds or 20.7 percent of the total for all federal facilities in 2000. The Army reported a total of 37.6 million pounds with 23.9 million pounds recycled on-site, 4.9 million pounds released on- and off-site, 4.5 million pounds treated on-site and 4.2 million pounds recycled off-site.

The Treasury Department ranked third among federal agencies for total production-related waste, with 40.7 million pounds, or 19.3 percent of the total for all federal facilities in 2000. Most (40.6 million pounds) of this amount was reported as recycled off-site.

Quantities of PBT Chemicals in Waste

Federal facilities reported managing almost 25,600 pounds of PBT chemicals in waste in 2000, as shown in Table 6-4. Over half (almost 14,400 pounds or 56.3 percent) was released on- and off-

Table 6-3: Quantities of TRI Chemicals in Waste Managed by Agency, 2000: Federal Facilities

Federal Agency	Recycled		Energy Recovery		Treated		Quantity Released On- and Off-site Pounds	Total Production-related Waste Managed Pounds	Non-production-related Waste Managed Pounds
	On-site Pounds	Off-site Pounds	On-site Pounds	Off-site Pounds	On-site Pounds	Off-site Pounds			
Department of Defense	24,854,370	4,576,522	490	93,891	6,487,002	451,231	7,238,496	43,702,002	803,210
Air Force	33,210	103,000	0	14,220	1,111,397	249,620	1,422,605	2,934,052	3,420
Army	23,898,063	4,244,172	0	36,682	4,514,125	66,188	4,886,546	37,645,776	748,730
Army Corps of Engineers	0	1,443	0	0	0	0	13,055	14,498	0
Defense Logistics	907,775	0	0	0	0	0	4,156	911,931	0
Defense Stockpile	0	0	0	0	0	0	0	0	0
Marines	9,818	71,242	490	20,840	0	4,864	23,045	130,299	32
Military Academy	0	0	0	9,890	0	0	2,169	12,059	0
Navy	5,504	156,665	0	12,259	861,480	130,559	886,919	2,053,386	51,028
Department of Energy	284,270	1,376,152	0	1,542	2,333,918	12,969	749,741	4,758,592	1,625,758
Department of Interior	0	0	0	0	0	0	24,569	24,569	0
Department of Transportation	0	127	0	0	0	0	68	196	0
Department of State	0	0	0	0	56,250	5,000	479	61,729	0
Department of Treasury	0	40,581,106	0	0	37	0	136,122	40,717,265	0
Environmental Protection Agency	0	0	0	0	996,000	325	5,260	1,001,585	103,177
Environmental Protection Agency	0	0	0	0	0	325	0	325	0
US EPA Fund-Lead Superfund Sites	0	0	0	0	996,000	0	5,260	1,001,260	103,177
National Aeronautics and Space Administration	129,843	7,610	0	13,108	19,481	12,684	108,564	291,290	53,000
Tennessee Valley Authority	0	82,400	0	0	49,167,700	0	70,327,919	119,578,019	0
US Department of Agriculture	0	0	0	0	0	0	495,858	495,858	0
US Enrichment Corporation	0	0	0	0	48,100	0	507,255	555,355	0
Veterans Administration	0	0	0	0	0	0	3,653	3,653	0
Total for Federal Facilities	25,268,483	46,623,917	490	108,541	59,108,488	482,209	79,597,985	211,190,113	2,585,145

Note: Data are from Section 8 of Form R.



site. Another 38.5 percent (over 9,800 pounds) was treated on-site, smaller amounts were treated off-site and recycled on- and off-site. No PBT chemicals were reported as burned for energy recovery on- or off- site in 2000.

Department of Energy facilities reported 14,150 pounds of PBT chemicals managed in waste in 2000, 55.3 percent of the total for all federal facilities. Over 69.5 percent (over 9,800 pounds) of the total production-related waste reported for PBT chemicals by Department of Energy facilities was treated on-site, and 24.4 percent (over 3,400 pounds) was released on- and off-site.

Facilities of the Tennessee Valley Authority reported almost 6,900 pounds of PBT chemicals in production-related waste managed in 2000. This represented 26.8 percent of the total for all federal facilities. All of this was released on- and off-site.

Transfers Off-site for Further Waste Management/Disposal

Table 6-5 summarizes reporting by federal facilities of transfers off-site for further waste management and disposal. These transfers totaled 49.0 million pounds in 2000. Much of this amount (47.0 million pounds or 95.8 percent) was transferred off-site to recycling; the category of other off-site transfers to disposal accounted for 1.5 million pounds.

Treasury Department facilities reported the largest total transfers off-site for further waste management and disposal in 2000. Over 99.9 percent of the 40.6 million pounds of transfers by the Treasury Department was sent off-site to recycling.

The Department of Defense facilities reported 5.9 million pounds of chemicals in waste sent off-site for further waste management and disposal in 2000. Over 4.7 million pounds of this was sent off-site for recycling, primarily by Army facilities. Department of Energy facilities reported 1.5 million pounds sent off-site for further waste management and disposal, with most of it sent for recycling.

Table 6-4: Quantities of TRI PBT Chemicals in Waste Managed by Agency, 2000: Federal Facilities

Federal Agency	Recycled		Energy Recovery		Treated		Quantity Released On- and Off-site Pounds	Total Production-related Waste Managed Pounds	Non-production-related Waste Managed Pounds
	On-site Pounds	Off-site Pounds	On-site Pounds	Off-site Pounds	On-site Pounds	Off-site Pounds			
Department of Defense	0.00	22.52	0.00	0.00	0.13	0.30	359.67	382.62	0.00
Air Force	0.00	0.00	0.00	0.00	0.13	0.00	39.35	39.48	0.00
Army	0.00	0.02	0.00	0.00	0.00	0.30	199.01	199.33	0.00
Army Corps of Engineers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Defense Logistics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Defense Stockpile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Military Academy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Navy	0.00	22.50	0.00	0.00	0.00	0.00	121.31	143.81	0.00
Department of Energy	270.00	381.67	0.00	0.00	9,841.13	209.66	3,447.64	14,150.10	1,026.47
Department of Interior	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Department of State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Department of Transportation	0.00	127.35	0.00	0.00	0.00	0.00	68.38	195.73	0.00
Department of Treasury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental Protection Agency	0.00	0.00	0.00	0.00	0.00	324.75	0.15	324.90	0.00
Environmental Protection Agency	0.00	0.00	0.00	0.00	0.00	324.75	0.15	324.90	0.00
EPA Fund-Lead Superfund Sites	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
National Aeronautics and Space Administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tennessee Valley Authority	0.00	0.00	0.00	0.00	0.00	0.00	6,855.43	6,855.43	0.00
US Department of Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Enrichment Corporation	0.00	0.00	0.00	0.00	0.00	0.00	11.20	11.20	0.00
Veterans Administration	0.00	0.00	0.00	0.00	0.00	0.00	3,653.00	3,653.00	0.00
Total for Federal Facilities	270.00	531.54	0.00	0.00	9,841.26	534.71	14,395.47	25,572.98	1,026.47

Note: Data are from Section 8 of Form R.



Chapter 6 Toxics Release Inventory Data for Federal Facilities

Table 6-5: TRI Transfers Off-site for Further Waste Management/Disposal by Agency, 2000: Federal Facilities

Federal Agency				Transfers to POTWs		Other Off-site Transfers*	Other Transfers Off-site to Disposal**	Total Transfers for Further Waste Management/Disposal
	Transfers to Recycling	Transfers to Energy Recovery	Transfers to Treatment	Metals and Metal	Non-metal TRI			
				Compounds	Chemicals			
Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
Department of Defense	4,748,755	93,963	298,252	2,240	157,091	0	625,217	5,925,518
Air Force	99,000	14,353	147,377	619	102,315	0	109,377	473,041
Army	4,420,271	36,729	54,937	860	10,668	0	214,227	4,737,692
Army Corps of Engineers	1,443	0	0	0	0	0	0	1,443
Defense Logistics	0	0	0	0	0	0	0	0
Defense Stockpile	0	0	0	0	0	0	0	0
Marines	71,242	20,840	4,694	0	170	0	632	97,578
Military Academy	0	9,890	0	0	0	0	0	9,890
Navy	156,798	12,151	91,244	761	43,938	0	300,981	605,874
Department of Energy	1,503,072	1,542	4,520	317	7,008	0	21,872	1,538,331
Department of Interior	0	0	0	0	0	0	0	0
Department of Transportation	127	0	0	0	0	0	54	181
Department of State	5,000	0	0	0	0	0	0	5,000
Department of Treasury	40,584,044	0	0	1,072	0	0	21,202	40,606,318
Environmental Protection Agency	32	0	293	0	0	0	0	325
Environmental Protection Agency	32	0	293	0	0	0	0	325
US EPA Fund-Lead Superfund Sites	0	0	0	0	0	0	0	0
National Aeronautics and Space Administration	60,520	13,108	12,684	0	0	0	723	87,035
Tennessee Valley Authority	82,309	0	0	0	0	0	779,833	862,142
US Department of Agriculture	0	0	0	0	0	0	0	0
US Enrichment Corporation	0	0	0	0	0	0	0	0
Veterans Administration	0	0	0	0	0	0	0	0
Total for Federal Facilities	46,983,858	108,613	315,749	3,630	164,099	0	1,448,901	49,024,850

Note: Total Transfers Off-site for Further Waste Management/Disposal are from Section 6 of Form R.

* Other Off-site Transfers are transfers reported without a valid waste management code.

** Does not include transfers to POTWs of metals and metal compounds.

Table 6-6: TRI Transfers Off-site for Further Waste Management/Disposal of PBT Chemicals by Agency, 2000: Federal Facilities

Federal Agency				Transfers to POTWs		Other Off-site Transfers*	Other Transfers Off-site to Disposal**	Total Transfers for Further Waste Management/Disposal
	Transfers to Recycling	Transfers to Energy Recovery	Transfers to Treatment	Metals and Metal	Non-metal TRI			
				Compounds	Chemicals			
Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	Pounds	
Department of Defense	130.69	0.00	0.00	4.47	0.00	0.00	22.10	157.26
Air Force	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Army	0.22	0.00	0.00	0.00	0.00	0.00	22.10	22.32
Army Corps of Engineers	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Defense Logistics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Defense Stockpile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marines	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Military Academy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Navy	130.47	0.00	0.00	4.47	0.00	0.00	0.00	134.94
Department of Energy	382.59	0.00	8.00	1.30	0.00	0.00	3,735.02	4,126.91
Department of Interior	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Department of State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Department of Transportation	126.87	0.00	0.00	0.00	0.10	0.00	54.23	181.20
Department of Treasury	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental Protection Agency	31.95	0.00	292.80	0.00	0.00	0.00	0.00	324.75
Environmental Protection Agency	31.95	0.00	292.80	0.00	0.00	0.00	0.00	324.75
EPA Fund-Lead Superfund Sites	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
National Aeronautics and Space Administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tennessee Valley Authority	9.00	0.00	0.00	0.00	0.00	0.00	102.90	111.90
US Department of Agriculture	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Enrichment Corporation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Veterans Administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total for Federal Facilities	681.10	0.00	300.80	5.77	0.10	0.00	3,914.25	4,902.02

Note: Total Transfers Off-site for Further Waste Management/Disposal are from Section 6 of Form R.

* Other Off-site Transfers are transfers reported without a valid waste management code.

** Does not include transfers to POTWs of metals and metal compounds.



Tennessee Valley Authority facilities reported over 862,100 pounds sent off-site for further waste management and disposal. Most of these transfers were other transfers sent off-site for disposal, 779,800 pounds or 90.5 percent of the total transfers reported by TVA facilities in 2000.

Transfers Off-site for Further Waste Management/Disposal of PBT Chemicals

Federal facilities reported over 4,900 pounds of PBT chemicals transferred off-site for further waste management and disposal in 2000, as shown in Table 6-6. Most of these transfers were other transfers sent off-site for disposal, over 3,900 pounds or 79.8 percent of the total.

Department of Energy facilities reported over 4,100 pounds of PBT chemicals in transfers sent off-site for further waste management and disposal. This represented 84.2 percent of the total of such transfers of all federal facilities in 2000. Most of these transfers by DOE facilities were other transfers sent

off-site for disposal, over 3,700 pounds or 90.5 percent of the total reported by DOE facilities.

There were 681 pounds of PBT chemicals transferred to recycling by federal facilities in 2000, with over half reported by Department of Energy facilities. Of the 301 pounds of PBT chemicals transferred to treatment, EPA Fund-lead Superfund Site reported 293 pounds.

Projected Quantities of TRI Chemicals Managed in Waste, 2000-2002

As Table 6-7 shows, production-related waste for federal facilities is projected to decrease by 7.0 percent between 2000 and 2002, with the largest decline, 6.8 percent, taking place in 2000. As described in **Waste Management** in Chapter 1, on each Form R that it submits, a facility reports actual waste management quantities for the current and prior years and projected quantities for the next two years.

Table 6-7: Current Year and Projected Quantities of TRI Chemicals in Waste by Agency, 2000-2002: Federal Facilities

Federal Agency	Total Production-related Waste Management					
	Current Year 2000 Pounds	Projected			Change 2000-2001 Percent	Change 2000-2002 Percent
		2001 Pounds	2002 Pounds			
Department of Defense	43,702,002	40,719,619	38,626,075	-6.8	-11.6	
Air Force	2,934,052	2,651,182	2,648,735	-9.6	-9.7	
Army	37,645,776	34,456,194	34,442,884	-8.5	-8.5	
Army Corps of Engineers	14,498	19,902	19,902	37.3	37.3	
Defense Logistics	911,931	1,367,895	1,367,895	50.0	50.0	
Defense Stockpile	0	0	0	--	--	
Marines	130,299	131,359	126,659	0.8	-2.8	
Military Academy	12,059	20,000	20,000	65.9	65.9	
Navy	2,053,386	2,073,087	1,858,106	1.0	-9.5	
Department of Energy	4,758,592	2,055,027	2,019,763	-56.8	-57.6	
Department of Interior	24,569	5,130	0	-79.1	-100.0	
Department of Transportation	196	15	15	-92.3	-92.3	
Department of State	61,729	61,729	61,729	0.0	0.0	
Department of Treasury	40,717,265	32,298,171	32,296,664	-20.7	-20.7	
Environmental Protection Agency	1,001,585	1,001,452	1,001,260	0.0	0.0	
Environmental Protection Agency	325	192	0	-40.9	-99.9	
US EPA Fund-Lead Superfund Sites	1,001,260	1,001,260	1,001,260	0.0	0.0	
National Aeronautics and Space Administration	291,290	283,370	277,718	-2.7	-4.7	
Tennessee Valley Authority	119,578,019	119,534,219	119,534,219	-0.04	-0.04	
US Department of Agriculture	495,858	478,500	461,700	-3.5	-6.9	
US Enrichment Corporation	555,355	333,990	283,990	-39.9	-48.9	
Veterans Administration	3,653	3,653	3,653	0.0	0.0	
Total for Federal Facilities	211,190,113	196,774,876	196,424,893	-6.8	-7.0	

Note: Data are from Section 8 (Total of 8.1 through 8.7) of Form R for 2000. Current Year is Column B, 2001 is Column C and 2002 is Column D.



Facilities of the Tennessee Valley Authority, the agency with the largest total production-related waste in 2000, projected almost no reductions.

Department of Defense facilities, which reported the second largest total production-related waste of all federal agencies, projected a decrease of 11.6 percent from 2000 to 2002. This included projected reductions in the neighborhood of 9 percent by Air Force, Army and Navy facilities. Facilities of the U.S. Marines also projected a reduction of 2.8 percent. The other DOD agencies, however, projected increases, including a 65.9 percent increase by the Military Academy, a 50.0 percent increase by Defense Logistics and a 37.3 percent increase by the Army Corps of Engineers.

Other agencies projected large decreases, including Department of Energy facilities expecting a decrease of 57.6 percent from 2000 to 2002, Treasury Department facilities expecting a 20.7 percent decrease, and the U.S. Enrichment Corporation facilities projecting a 48.9 percent decrease.

Source Reduction, 2000

In 2000, federal facilities filed 119 forms reporting source reduction activity (see Table 6-8). As noted

in **Waste Management** in Chapter 1, source reduction—activity that prevents the generation of waste—is the preferred waste management option.

Department of Defense facilities reported source reduction activity on 70 forms, 26.7 percent of their total Form Rs. Of the DOD agencies, the Army Corps of Engineers facilities reported source reduction activities on all their Form Rs, Marines facilities on 44.4 percent, Navy facilities on 38.0 percent, Air Force facilities on 31.5 percent, and Army facilities on 17.2 percent.

Tennessee Valley Authority facilities reported source reduction activity on 23 Form Rs, 10.4 percent. Department of Treasury facilities reported such activity on 33.3 percent of their 15 Form Rs, and Department of Energy facilities on 9.0 percent of their 78 Form Rs.

The most frequently reported source reduction activity (identified on 44 forms, including 32 filed by the Department of Defense facilities) was good operating practices. Raw materials modifications came next, with 39 forms (including 20 by Tennessee Valley Authority facilities and 13 by Department of Defense facilities). Inventory control

Table 6-8: Number of Forms Reporting Source Reduction Activity by Agency, 2000: Federal Facilities

Federal Agency	Total Form Rs Number	Forms Reporting Source Reduction		Category of Source Reduction Activity							
		Number	Percent of All Form Rs	Good Operating Practices	Inventory Control	Spill and Leak Prevention	Raw Materials Modifications	Process Modifications	Cleaning and Degreasing	Surface Preparation and Finishing	Product Modifications
Department of Defense	262	70	26.7	32	19	13	13	15	16	19	1
Air Force	54	17	31.5	5	0	4	7	6	14	11	0
Army	128	22	17.2	14	6	8	1	7	0	0	0
Army Corps of Engineers	8	8	100.0	8	0	0	0	0	0	0	0
Defense Logistics	5	0	0.0	0	0	0	0	0	0	0	0
Defense Stockpile	7	0	0.0	0	0	0	0	0	0	0	0
Marines	9	4	44.4	1	1	0	1	0	0	4	1
Military Academy	1	0	0.0	0	0	0	0	0	0	0	0
Navy	50	19	38.0	4	12	1	4	2	2	4	0
Department of Energy	78	7	9.0	1	2	2	3	3	0	0	0
Department of Interior	4	2	50.0	1	0	2	0	0	1	0	0
Department of Transportation	2	2	100.0	0	0	2	0	2	0	0	0
Department of State	1	0	0.0	0	0	0	0	0	0	0	0
Department of Treasury	15	5	33.3	1	0	0	3	1	0	0	0
Environmental Protection Agency	9	2	22.2	2	0	0	0	0	0	0	0
Environmental Protection Agency	5	0	0.0	0	0	0	0	0	0	0	0
US EPA Fund-Lead Superfund Sites	4	2	50.0	2	0	0	0	0	0	0	0
National Aeronautics and Space Administration	11	5	45.5	4	0	0	0	2	4	0	0
Tennessee Valley Authority	222	23	10.4	2	0	0	20	1	0	0	0
US Department of Agriculture	5	3	60.0	1	2	2	0	0	0	0	0
US Enrichment Corporation	6	0	0.0	0	0	0	0	0	0	0	0
Veterans Administration	1	0	0.0	0	0	0	0	0	0	0	0
Total for Federal Facilities	616	119	19.3	44	23	21	39	24	21	19	1

Note: All source reduction activities on a form are counted in the corresponding category. Totals do not equal the sum of the categories because forms may report more than one source reduction activity.



Table 6-9: Total On-site and Off-site Releases by Agency, 1998-2000: Federal Facilities

Federal Agency	Total On-site and Off-site Releases						
	1998	1999	2000	Change 1999-2000		Change 1998-2000	
	Pounds	Pounds	Pounds	Pounds	Percent	Pounds	Percent
Department of Defense	3,495,320	6,964,516	7,889,376	924,860	13.3	4,394,056	125.7
Air Force	1,224,632	1,150,693	1,426,288	275,595	24.0	201,656	16.5
Army	1,517,489	5,284,734	5,486,122	201,388	3.8	3,968,633	261.5
Army Corps of Engineers	11,506	16,744	13,055	-3,689	-22.0	1,549	13.5
Defense Logistics	5,545	5,670	4,156	-1,514	-26.7	-1,389	-25.0
Defense Stockpile	0	0	0	0	--	0	--
Marines	88,582	71,706	23,078	-48,628	-67.8	-65,504	-73.9
Military Academy	0	0	2,169	2,169	--	2,169	--
Navy	647,566	434,969	934,508	499,539	114.8	286,942	44.3
Department of Energy	592,455	933,336	755,605	-177,731	-19.0	163,150	27.5
Department of Interior	5,221	5,083	16,446	11,363	223.5	11,225	215.0
Department of Transportation	0	0	0	0	--	0	--
Department of State	0	0	250	250	--	250	--
Department of Treasury	126,242	153,190	134,049	-19,141	-12.5	7,807	6.2
Environmental Protection Agency	0	0	1,099,177	1,099,177	--	1,099,177	--
Environmental Protection Agency	0	0	0	0	--	0	--
US EPA Fund-Lead Superfund Sites	0	0	1,099,177	1,099,177	--	1,099,177	--
National Aeronautics and Space Administration	315,367	178,429	100,028	-78,401	-43.9	-215,339	-68.3
Tennessee Valley Authority	59,091,265	68,943,646	68,153,235	-790,411	-1.1	9,061,970	15.3
US Department of Agriculture	580,790	541,563	496,271	-45,292	-8.4	-84,519	-14.6
US Enrichment Corporation	469,092	517,353	507,222	-10,131	-2.0	38,130	8.1
Veterans Administration	0	0	0	0	--	0	--
Total for Federal Facilities	64,675,752	78,237,116	79,151,659	914,543	1.2	14,475,907	22.4

Note: Does not include PBT chemicals, vanadium and vanadium compounds. On-site Releases are from Section 5 of Form R. Off-site Releases are from Section 6 (transfers off-site to disposal) of Form R. Off-site Releases include metals and metal compounds transferred off-site for solidification/stabilization and for wastewater treatment, including to POTWs.

followed with 23 forms, and then came cleaning and degreasing and spill and leak prevention both with 21 forms. Most forms for these types of source reduction activities were from Department of Defense facilities.

1998-2000 DATA FOR FEDERAL FACILITIES

Comparisons of TRI data across reporting years are made on the basis of chemicals that were reportable in all years with the same reporting definitions. This ensures that apparent increases or decreases from one year to another are not the result of changes in the list of TRI chemicals. **Making Year-to-Year Comparisons of TRI Data**, in Chapter 1, explains these multiyear analyses; an understanding of these issues is essential for accurate interpretation of the multiyear data presented in this chapter. Comparisons of the years 1998, 1999 and 2000 require that the PBT chemicals (see Chapter 3 for a discussion of these chemicals) and vanadium and vanadium compounds be omitted from the data.

On-site and Off-site Releases, 1998-2000

Table 6-9 summarizes changes in on- and off-site releases reported by federal facilities between 1998 and 2000. Total releases rose 22.4 percent, an increase of 14.5 million pounds.

Tennessee Valley Authority facilities reported the largest increase in on- and off-site releases of any federal agency, with an increase of 9.1 million pounds from 1998 to 2000. They did report a decrease, of 790,400 pounds or 1.1 percent, from 1999 to 2000.

Army facilities in the Department of Defense reported the second largest increase with 4.0 million pounds, a 261.5 percent increase. This increase occurred primarily from 1998 to 1999. The Army facilities reported a 3.8 percent increase from 1999 to 2000.

The Environmental Protection Agency reported the third largest increase with 1.1 million pounds, up from zero releases in 1998 and 1999. These releases



are related to clean-up activities at hazardous waste sites and may vary from year to year.

The only agencies reporting a decrease from 1998 to 2000 were the National Aeronautics and Space Administration with a decrease of 215,300 pounds or 68.3 percent, the Department of Agriculture with a decrease of 84,500 pounds or 14.6 percent and the Marines with a decrease of 65,500 pounds or 73.9 percent.

Quantities of TRI Chemicals in Waste, 1998-2000

Table 6-10 shows changes between 1998 and 2000 in total production-related waste managed as reported by federal facilities. Total production-related waste managed by federal facilities rose 34.0 percent, from 156.0 million pounds to 209.0 million pounds.

Treasury Department facilities reported the largest increase, 25.7 million pounds (170.8 percent) from 1998 to 2000. These facilities reported an increase of 11.2 million pounds from 1999 to 2000.

Department of Defense's Army facilities reported the second largest increase in total production-related waste of all federal agencies, with an increase of 17.4 million pounds (86.0 percent) from 1998 to 2000, with 11.5 million pounds of the increase occurring from 1999 to 2000.

Tennessee Valley Authority facilities reported an increase of 7.9 million pounds (7.2 percent) from 1998 to 2000. However, they reported a decrease from 1999 to 2000 of 1.2 million pounds.

Decreases from 1998 to 2000 in production-related waste were reported by the National Aeronautics and Space Administration, with a decrease of 523,300 pounds or 64.2 percent, the DOD Defense Logistics agency with a decrease of 393,900 pounds or 30.2 percent, the Marines with a decrease of 177,800 pounds or 57.7 percent, the U.S. Department of Agriculture with a decrease of 84,700 pounds or 14.6 percent, and the Army Corps of Engineers with a decrease of 3,000 pounds or 17.2 percent.

Table 6-10: Total Production-related Waste Managed by Agency, 1998-2000: Federal Facilities

Federal Agency	Total Production-related Waste Managed						
	1998 Pounds	1999 Pounds	2000 Pounds	Change 1999-2000		Change 1998-2000	
				Pounds	Percent	Pounds	Percent
Department of Defense	24,981,591	31,015,356	43,701,619	12,686,263	40.9	18,720,028	74.9
Air Force	1,752,887	2,161,468	2,934,013	772,545	35.7	1,181,126	67.4
Army	20,237,160	26,149,384	37,645,577	11,496,193	44.0	17,408,417	86.0
Army Corps of Engineers	17,510	18,246	14,498	-3,748	-20.5	-3,012	-17.2
Defense Logistics	1,305,830	1,330,618	911,931	-418,687	-31.5	-393,899	-30.2
Defense Stockpile	0	0	0	0	--	0	--
Marines	308,076	257,536	130,299	-127,237	-49.4	-177,777	-57.7
Military Academy	0	0	12,059	12,059	--	12,059	--
Navy	1,360,128	1,098,104	2,053,242	955,138	87.0	693,114	51.0
Department of Energy	4,504,014	3,893,516	4,744,442	850,926	21.9	240,428	5.3
Department of Interior	5,130	5,122	24,569	19,447	379.7	19,439	378.9
Department of Transportation	0	0	0	0	--	0	--
Department of State	0	0	61,729	61,729	--	61,729	--
Department of Treasury	15,034,251	29,526,864	40,717,265	11,190,401	37.9	25,683,014	170.8
Environmental Protection Agency	0	0	1,001,260	1,001,260	--	1,001,260	--
Environmental Protection Agency	0	0	0	0	--	0	--
US EPA Fund-Lead Superfund Sites	0	0	1,001,260	1,001,260	--	1,001,260	--
National Aeronautics and Space Administration	814,600	520,618	291,290	-229,328	-44.0	-523,310	-64.2
Tennessee Valley Authority	109,527,323	118,614,386	117,406,164	-1,208,222	-1.0	7,878,841	7.2
US Department of Agriculture	580,550	541,349	495,858	-45,491	-8.4	-84,692	-14.6
US Enrichment Corporation	517,796	581,643	555,344	-26,299	-4.5	37,548	7.3
Veterans Administration	0	0	0	0	--	0	--
Total for Federal Facilities	155,965,255	184,698,854	208,999,540	24,300,686	13.2	53,034,285	34.0

Note: Does not include PBT chemicals, vanadium and vanadium compounds. Data are from Section 8 (total of 8.1 through 8.7) of Form R of year indicated.