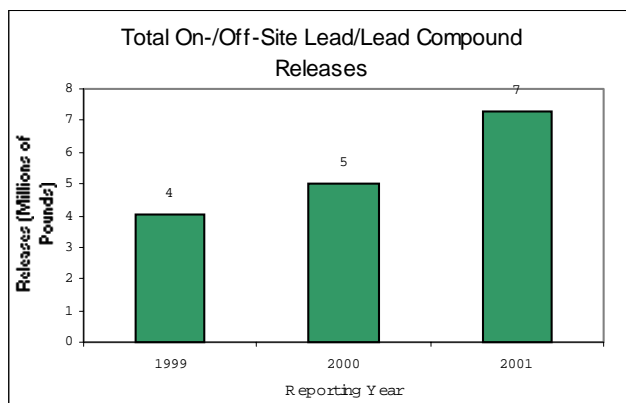
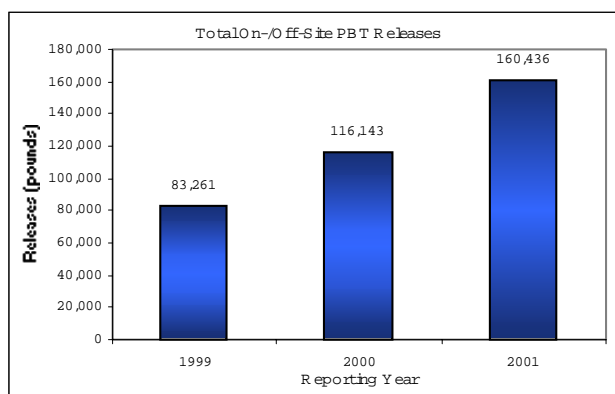
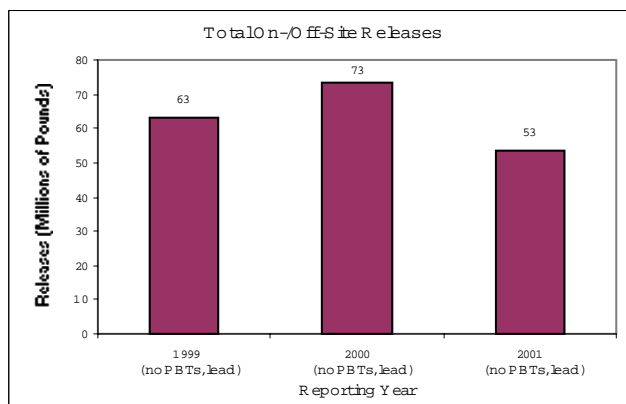




California Report: 2001 Toxics Release Inventory

U.S. EPA Region 9
Arizona, California,
Hawaii, Nevada,
and the Pacific
Islands

Toxic Chemical Releases: 1999-2001



| Total Releases for Reporting Years 1999-2001 | | | | | |
|--|------------|-----------|--------------|------------------------|------------|
| Year | Air | Water | On-Site Land | Under-ground Injection | Off-Site |
| 1999 | 26,297,030 | 4,848,876 | 25,381,670 | 47,992 | 8,596,803 |
| 2000 | 23,944,509 | 6,083,764 | 34,344,148 | 48,748 | 13,816,086 |
| 2001 | 20,020,030 | 4,924,819 | 28,081,314 | 55,902 | 7,578,900 |

Table does not reflect changes in reporting requirements.

Note: In order to directly compare 1999, 2000 and 2001 releases, PBT and lead/lead compound chemical reported releases are illustrated separately in the charts above.

The 2001 Public Data Release

EPA has just made public the 2001 data on toxic chemicals that were released to California's air, water and land. This information comes from the Toxics Release Inventory (TRI), a federal community right-to-know program. In California, 1619 facilities reported a total of 60.7 million pounds of toxic chemical releases*.

It is important to note that release should not be directly equated with risk. To evaluate risk, release data must be combined with information about chemical toxicity, site-specific conditions, and exposure. In addition, these data do not indicate whether a facility is violating environmental laws. Many of the substances reported through this program are subject to state and federal regulations designed to protect human health and the environment.

Industries

* Release is defined as the amount of a toxic chemical released on-site (to air, water, underground injection, landfills and other land disposal), and the amount transferred off-site for disposal. Year to year data comparisons do not reflect changes in reporting requirements.

Manufacturing industries have been reporting their releases since 1987, and federal facilities started reporting in 1994. In 1998, an additional seven industry sectors began reporting their toxic chemical releases for the first time. These sectors are metal and coal mining, electricity generation, commercial hazardous waste treatment, solvent recovery, petroleum bulk terminals, and wholesale chemical distributors.

Releases

California's total reported on- and off-site releases decreased 22% when compared to 2000 data. Leading the trend was a decrease of 6.3 million pounds in reported on-site land disposal, an 18% change. This is due primarily to a decrease in waste from toxic cleanup projects disposed at the Chemical Waste Management Inc. facility in Kettleman City.

Also contributing to the state trend was a reported decrease in transfers off-site for disposal, down 45% from the previous year. This was due in large part to decreased waste handling at DK Environmental in Vernon.

Reported releases to water and air also decreased from 2000 levels, by 19% and 16% respectively. Much of the decrease in releases to water was due to reduced discharges at the Samoa Pulp Mill in Humboldt County and the Chevron Refinery in El Segundo. Underground injection releases reported have increased by 15%.

Much of this increase is attributable to three refineries in Bakersfield (San Joaquin Refining Co., Equilon Enterprises L.L.C., and Equilon Bakersfield Refinery Areas 1 & 2).

Persistent, Bioaccumulative, and Toxic Chemicals

In the year 2000, TRI was expanded to include additional persistent, bioaccumulative and toxic (PBT) chemicals, and required reporting for these chemicals at lower thresholds, ranging from 0.1 grams to 100 pounds. PBT pollutants are toxic chemicals that persist in the environment and bioaccumulate in food chains, thus posing risks to human health and ecosystems.

In California, 7.4 million pounds of total on- and off-site releases of PBT chemicals were reported.

Below is a table of the PBT releases in California ranked by total on- and off-site releases. The data is in pounds for all chemicals except dioxin, which is given in grams.

New Data - Lead and Lead Compounds

For the year 2001, lead and lead compounds were reported as persistent, bioaccumulative and toxic (PBT) chemicals for the first time. While lead and lead compounds have been on the list of reportable chemicals since 1987, for the year 2001 the reporting threshold was drastically lowered (to 100 pounds manufactured, processed, or otherwise used), and this change has resulted in more comprehensive release information for these compounds.

Table of PBT Releases in California

| <i>Chemical</i> | <i>Air</i> | <i>Water</i> | <i>Und. Inj.</i> | <i>Land</i> | <i>Off-Site Releases</i> | <i>Total On- and Off-Site Releases 2001</i> | <i>Total On- and Off-Site Releases 2000</i> | <i>Percent Change</i> |
|---|------------|--------------|------------------|--------------|--------------------------|---|---|-----------------------|
| Lead | 21,024.44 | 403.53 | 0.00 | 5,895,633.90 | 298,366.00 | 6,215,427.86 | N/A | N/A |
| Lead Compounds | 14,447.39 | 523.95 | 8.40 | 563,401.70 | 481,298.00 | 1,059,679.44 | N/A | N/A |
| Mercury | 1,064.96 | 1.10 | 0.00 | 15,416.82 | 33,269.00 | 49,751.87 | 11,393.75 | 337% |
| Mercury Compounds | 4,602.98 | 9.00 | 0.61 | 33,587.90 | 5,804.00 | 44,004.49 | 51,573.33 | -15% |
| Polycyclic aromatic compounds (PACs) | 1,507.27 | 350.04 | 0.00 | 31,906.55 | 258.00 | 34,021.86 | 22,091.22 | 54% |
| Polychlorinated biphenyls (PCBs) | 0.11 | 0.00 | 0.00 | 16,356.00 | 387.00 | 16,743.11 | 28,007.57 | -40% |
| Tetrabromobisphenol A | 5.00 | 0.00 | 0.00 | 0.00 | 7,790.00 | 7,795.00 | 555.00 | 1304% |
| Benzo(g,h,i)perylene | 12.59 | 10.90 | 0.00 | 2,561.43 | 25.00 | 2,609.92 | 150.42 | 1635% |
| Trifluralin | 182.00 | 0.00 | 0.00 | 1,004.00 | 998.00 | 2,184.00 | 1,349.00 | 62% |
| Chlordane | 0.00 | 0.00 | 0.00 | 2,005.70 | 0.00 | 2,005.70 | 31.74 | 3219% |
| Toxaphene | 0.00 | 0.00 | 0.00 | 597.00 | 0.00 | 597.00 | 200.02 | 198% |
| Hexachlorobenzene | 2.73 | 0.03 | 0.00 | 457.00 | 1.00 | 460.76 | 612.52 | -25% |
| Pendimethalin | 134.00 | 0.00 | 0.00 | 0.00 | 0.00 | 134.00 | 1.00 | 13300% |
| Heptachlor | 0.00 | 0.00 | 0.00 | 60.00 | 0.00 | 60.00 | 30.56 | 96% |
| Dioxin and dioxin-like compounds (in grams) | 22.234 | 0.850 | 0.000 | 2.097 | 103.000 | 128.182 | 177.313 | -28% |

Releases of persistent, bioaccumulative and toxic (PBT) chemicals (pounds). Dioxin and dioxin-like compounds data not in Toxicity Equivalence (TEQ).

Nearly 7.3 million pounds of total on- and off-site releases of lead and lead compounds were reported in California. Many of the top releasing facilities are in the refuse systems/sanitary services industry, mining industry, or are federal facilities. Much of the lead reported released to land (approximately 5.8 million pounds) was by Chemical Waste Management Inc., in Kettleman City.

Mercury and Mercury Compounds

Much of the mercury and mercury compounds reported was released to land (approximately 34,000 pounds) by mining facilities. Hazardous waste management facilities reported a significant amount (greater than 16,000 pounds) disposed on-site or transferred off-site for disposal. The largest share of air emissions, over 4,800 pounds, came from the portland cement manufacturing sector. Petroleum refineries reported nearly 700 pounds of mercury and mercury compounds to the air.

Polychlorinated biphenyls (PCBs) and Polycyclic Aromatic Compounds (PACs)

Most of the reported PCBs were disposed of in an on-site hazardous waste landfill at Chemical Waste Management Inc. in Kettleman City (approximately 16,000 pounds). Hazardous waste treatment facilities reported releasing the most PACs, over 28,000 pounds.

Dioxin

For dioxin and dioxin-like compounds, much of the reported releases are attributable to the secondary smelting and refining of nonferrous.

Top Facilities for Releases

The top 10 facilities for total on- and off-site releases in California are:

- Ø Chemical Waste Management (Kettleman City, Kings County) with 20.2 million pounds
- Ū Safety-Kleen (Buttonwillow, Kern County) with 3.0 million pounds
- Ū Chevron Prods. Co. Div. Of Chevron USA (El Segundo, Los Angeles County) with 1.9 million pounds
- Ū Hilmar Cheese Co. Inc. (Hilmar, Merced County) with 1.9 million pounds
- Ū Chevron Products Co. Richmond Refinery (Richmond, Contra Costa County) with 1.5 million pounds
- Ÿ McLaughlin Mine (Lower Lake, Lake County)

with 1.4 million pounds

- Þ Valero Refining Co. California Benicia Refinery (Benicia, Solano County) with 1.3 million pounds
- Ó Samoa Pacific Cellulose L.L.C. Samoa Pulp Mill (Samoa, Humboldt County) with 1.3 million pounds
- à Tesoro Refining & Marketing Co. (Martinez, Contra Costa County) with 1.2 million pounds
- á Tosco Refining Co. Los Angeles Refinery Wilmington Plant (Wilmington, Los Angeles County) with 1.1 million pounds.

On-line Access

For national information on data release, see:
<http://www.epa.gov/tri>

The TRI data is available through the Envirofacts Warehouse, EPA's premier Internet site for distributing environmental information at:
<http://www.epa.gov/enviro>

or the TRI Explorer tool:
<http://www.epa.gov/triexplorer>

For general information on the Toxics Release Inventory, including reporting requirements for businesses, go to:
<http://www.epa.gov/region09/toxic/tri>

For additional information on Dioxin, go to:
www.epa.gov/ncea/dioxin.htm

For more information on the EPA's PBT Chemicals Program:
<http://www.epa.gov/opptintr/pbt/>

Information and Assistance

We will be more than happy to answer your questions and assist you in learning more about the Toxics Release Inventory program in Region 9.

U.S. EPA Region 9 TRI Coordinator
Nancy Sockabasin, (415) 972-3772