

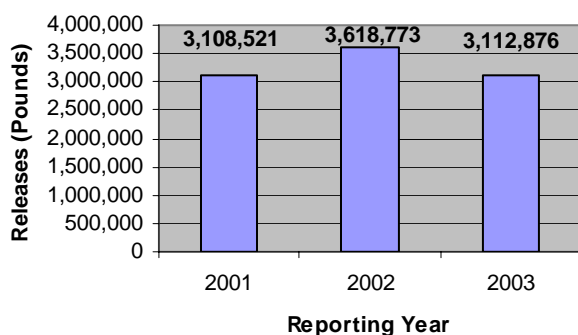


Hawaii Report: 2003 Toxics Release Inventory

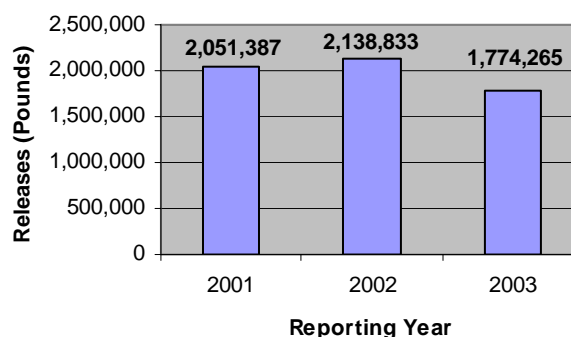
U.S. EPA Region 9
Arizona, California,
Hawaii, Nevada, the
Pacific Islands, and
Tribal Nations

Toxic Chemical Releases: 2001 – 2003

**Total On- and Off-Site Releases
All Industries**



**Total On- and Off-Site Releases
Electric Generating Facilities**

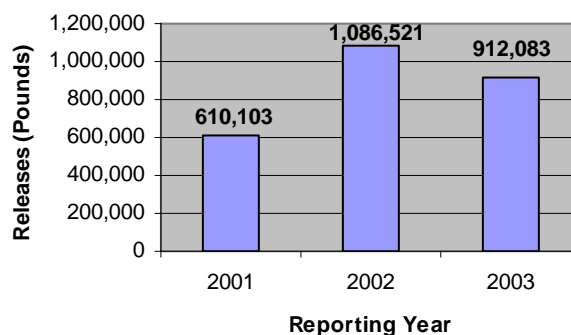


Total Releases for Reporting Years 2001 – 2003

Year	Air	Water	On-Site Land	Under-ground Injection	Off-Site
2001	2,379,969	29,770	224,400	2,071	472,311
2002	2,428,037	454,684	228,634	4*	507,414
2003	2,081,777	364,067	249,267	2,670	415,095

* the releases from one facility were not yet recorded in the TRI database

**Total On- and Off-Site Releases
Federal Facilities**



The 2003 Public Data Release

EPA has made public the 2004 data on toxic chemicals that were released to Hawaii's air, water and land. This information comes from the Toxics Release Inventory (TRI), a federal community right-to-know

program. In Hawaii, 41 facilities reported a total of 3.1 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

* 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.

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

A facility is subject to TRI reporting requirements if it: has 10 or more full-time employees; is classified under a reportable Standard Industrial Classification (SIC) code; and manufactures, processes, or otherwise uses any of the listed toxic chemicals in amounts greater than the threshold quantities. For most chemicals (excluding persistent, bioaccumulative and toxic (PBT) chemicals) the thresholds are 25,000 pounds for manufactured or processed, and 10,000 pounds for otherwise used.

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

Hawaii's total reported on- and off-site releases decreased approximately 14% when compared to 2002 data. Leading the trend was a decrease of nearly 346 thousand pounds in reported releases to air, a 14% decrease. These decreases were primarily sulfuric acid releases from electric generating facilities.

Releases to water decreased by 20%, nearly 91 thousand pounds. This decrease was primarily due to one federal facility, U.S. Navy Pearl Harbor Naval Complex, reporting fewer releases of nitrate compounds.

Land releases increased by approximately 9%, nearly 21 thousand pounds. Increases included lead releases at several federal training facilities, and copper releases at the U.S. Army Pohakuloa Training Area – Range Facility.

Transfers off-site for disposal and other waste management decreased by approximately 92 thousand pounds, an 18% decrease. A large decrease occurred in the amount of nitrate compounds being sent off-site from the U.S. Army Schofield Barracks/Wheeler Army Airfield.

Persistent, Bioaccumulative, and Toxic Chemicals

In the year 2000, TRI was expanded to include additional persistent, bioaccumulative and toxic (PBT) chemicals, and to require 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 Hawaii, over 108 thousand pounds of total on- and off-site releases of PBT chemicals were reported. Below is a table of the PBT releases in Hawaii ranked by total on- and off-site releases. The data is in pounds for all chemicals except dioxin, which is given in grams.

Table of PBT Chemical Releases in Hawaii

Releases of persistent, bioaccumulative and toxic (PBT) chemicals in pounds.

Chemical	Total On- and Off-Site Releases		Percent Change
	2002	2003	
Lead	83853.9	96595.1	15
Lead Compounds	8058.4	9471.49	18
Polycyclic Aromatic Compounds (PACs)	1407.22	1533.371	9
Mercury Compounds	316.9	422.53	33
Mercury	0	12	-----
Benzo (g,h,i) Perylene	0.95	1.175	24
Dioxin and Dioxin-like Compounds (in grams)	6.3295	5.1287	-19

Dioxin and dioxin-like compounds data are not in Toxicity Equivalence (TEQ).

Lead and Lead Compounds

Starting in the year 2001, lead and lead compounds were reported as persistent, bioaccumulative and toxic (PBT) chemicals. 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 (from 25,000 pounds manufactured or processed, and 10,000 pounds otherwise used to 100 pounds manufactured, processed or otherwise used). As a result, additional facilities are required to report releases of lead and lead compounds.

Over 106 thousand pounds of total on- and off-site releases of lead and lead compounds were reported in Hawaii in 2003. Federal facilities released to land over 99% of the total lead releases in Hawaii. Nearly 76% of the total on-site lead compounds reported were released to air by electric generating facilities. In addition one facility, AES Hawaii Inc., reported over 50% of the total on- and off-site releases of lead compounds as off-site transfers.

Polycyclic Aromatic Compounds (PACs)

Electric generating facilities released to the air nearly 80% of the total on- and off-site PACs releases reported in 2003. One facility, Chevron Products Co. Hawaii Refinery in Kapolei, released all of the PACS to water, approximately 260 pounds.

Other PBT Chemical Releases

The electric services industry released nearly 92% of the mercury compounds, and nearly 96% of dioxin and dioxin-like compounds reported in Hawaii in 2003. One facility, Kalaeloa Cogeneration Plant in Kapolei, released all of the mercury (12 pounds) to the air.

Top Facilities for Releases

The top 10 facilities for total on- and off-site releases, for all chemicals, in Hawaii are:

- ☒ Hawaiian Electric Inds. Inc. Kahe Generating Station (Kapolei, Honolulu County) with 853 thousand pounds.
- Ū U.S. Army Schofield Barracks/Wheeler Army Airfield (Schofield Barracks, Honolulu County) with 445 thousand pounds.
- Ū U.S. Navy Pearl Harbor Naval Complex (Pearl Harbor, Honolulu County) with 369 thousand pounds.
- Ū Hawaiian Electric Co. Inc. Waiau Generating Station (Pearl City, Honolulu County) with 269 thousand pounds.
- Ū Chevron Prods. Co. Hawaii Refy. (Kapolei, Honolulu County) with 208 thousand pounds.

- Ÿ Hawaii Electric Light Co. Inc. Hill Generating Station (Hilo, Hawaii County) with 190 thousand pounds.
- ▮ Maui Electric Co. Ltd. Kahului Generating Station (Kahului, Maui County) with 170 thousand pounds.
- ó AES Hawaii Inc. (Kapolei, Honolulu County) with 104 thousand pounds.
- à Tesoro Hawaii Refinery (Kapolei, Honolulu County) with 102 thousand pounds.
- á Hawaiian Electric Light Co. Inc. Puna Generating Station (Keaau, Hawaii County) with 79 thousand pounds.

The top 10 facilities for total on- and off-site releases, for PBT chemicals, in Hawaii are:

- ☒ U.S. Army Schofield Barracks/Wheeler Army Airfield (Schofield Barracks, Honolulu County) with 62 thousand pounds.
- Ū U.S. Marine Corps Base Hawaii Kaneohe Bay Training Facility (MCBH Kaneohe Bay, Honolulu County) with 14 thousand pounds.
- Ū U.S. Marine Corps Base Hawaii Puuloa Training Facility) with 11 thousand pounds.
- Ū U.S. Army Pohakuloa Training Area – Range Facility (Hilo, Hawaii County) with 9.2 thousand pounds.
- Ū AES Hawaii Inc. (Kapolei, Honolulu County) with 5.1 thousand pounds.
- Ÿ Hilo Coast Power Co. (Pepeekeo, Hawaii County) with 1.7 thousand pounds.
- ▮ Hawaiian Electric Co. Inc. Kahe Generating Station (Kapolei, Honolulu County) with 1.5 thousand pounds.
- ó Maalaea Generating Station (Kihei, Maui County) with 1.3 thousand pounds.
- à U.S. Army Makua Military Reservation (Waianae, Honolulu County) with 866 pounds.
- á Hawaiian Electric Co. Inc. Waiau Generating Station (Pearl City, Honolulu County) with 620 pounds.

On-line Access

For national information on data releases, see:

<http://www.epa.gov/tri>

The TRI data is available through 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:

<http://www.epa.gov/ncea/dioxin.htm>

For more information on the EPA's PBT Chemicals Program, go to:

<http://www.epa.gov/opptintr/pbt/>

Information and Assistance

We are happy to answer your questions and assist you in learning more about the TRI Program in Region 9.

U.S. EPA Region 9
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