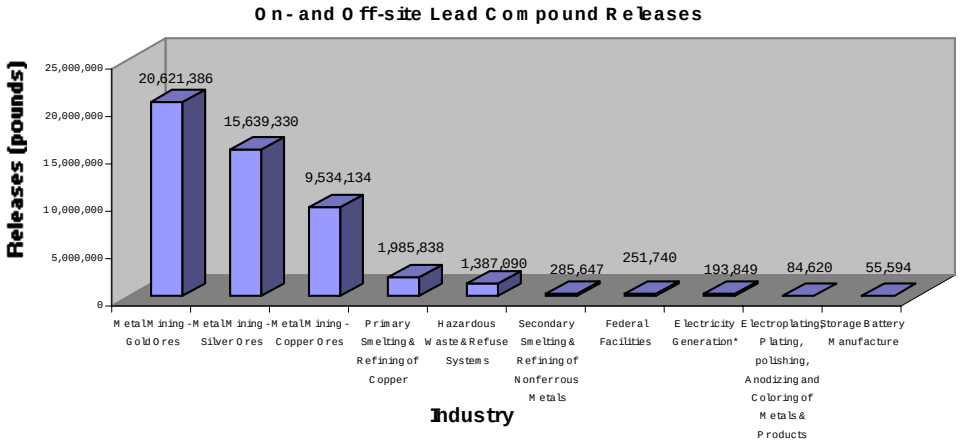
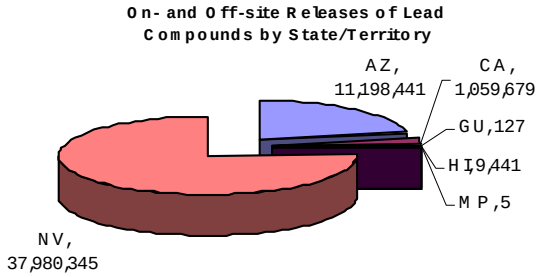
Lead Compounds Report: 2001 Toxics Release Inventory

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

a)



b)



Note: On- and off-site releases is defined as the amount of toxic chemical releases on-site (to air, water, underground injection, landfills and other land disposal), and the amount transferred off-site for disposal. Chart **a** shows lead compound releases (in pounds) for the top industries. Chart **b** gives state/territory totals for on- and off-site lead releases (in pounds).

The 2001 Data for Lead Compounds

EPA has just made public the 2001 data on toxic chemicals that were released* to the air, water and land within the Pacific Southwest region. This information comes from the Toxics Release Inventory (TRI), a federal community right-to-know program.

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.

For the year 2001, lead and lead compounds were reported as persistent, bioaccumulative and toxic (PBT) chemicals for the first time. While 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

**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.*

change has resulted in more comprehensive release information for these compounds.

A Note on Risk

It is important to note that releases 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 the case of lead compounds, the TRI data does not indicate whether a facility is violating environmental laws. The majority of the major industrial sources of lead compounds are subject to strict controls.

Industries

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. These sectors are metal and coal mining, electricity generation, commercial hazardous waste treatment, solvent recovery, petroleum bulk terminals, and wholesale chemical distributors.

Releases

In a state-by-state comparison California, Arizona, Nevada and Hawaii ranked 25, 8, 3, and 48 respectively for total on- and off-site releases of lead compounds.

Lead Compound Releases (in pounds) by State or U.S. Territory

	Air	*Water*	*Land*	*Under-ground Injection*	*Off-site Release*	*Total On- and Off-site*
AZ	31,143	6	11,107,738	0	59,553	11,198,440
CA	14,447	524	563,402	8	481,298	1,059,679
GU	31	1	95	0	0	127
HI	5,167	20	3	4	4,246	9,441
MP	3	0	2	0	0	5
NV	5,513	48	37,970,968	0	3,816	37,980,345

Reporting Industry Sectors–the 2001 Data

A review of the TRI data suggests that among the TRI-regulated industry sectors, metal mining is the largest contributor of lead compound releases in the Region. This industry sector accounts for 91% of the Region 9 total. The primary metals industry and hazardous waste refuse systems are also large contributors.

Lead Compound Releases (in pounds) by Industry Sector

Industry	*Air*	*Water*	*Land*	*Off-site Release*	*Total On- and Off-site*
Metal Mining - Gold Ores	1,902	58	20,617,094	2,332	20,621,386
Metal Mining - Silver Ores	1,700	0	15,637,630	0	15,639,330
Metal Mining - Copper Ores	13,766	2	9,519,498	867	9,534,133
Primary Smelting & Refining of Copper	12,702	0	1,973,136	0	1,985,838
Hazardous Waste & Refuse Systems	100	0	1,321,882	65,108	1,387,090
Secondary Smelting & Refining of Nonferrous Metals	1,206	0	0	284,441	285,647
Federal Facilities	6,793	0	244,772	175	251,740
Electricity Generation*	6,100	8	183,512	4,229	193,854
Electroplating, Plating, polishing, Anodizing and Coloring of Metals & Products	3	22	52,596	31,999	84,620
Storage Battery Manufacture	3,209	248	0	52,137	55,594

* Four pounds were released by underground injection

Metal Mining

Lead compounds may be present in the ores when mining for copper, zinc, gold, lead and coal. In Region 9, there are thirty-three facilities in the gold, silver and copper industries that collectively reported over 45.8 million pounds of releases of lead compounds. The Echo Bay Minerals Company Mccoy/Cove Silver Mine reported over 12.2 million pounds of lead compound releases.

Primary Metals Industry - Primary and Secondary Smelting

Secondary smelting and refining of non-ferrous metals may utilize scrap metal feed containing lead compounds. In the Region, five facilities reported over 2.2 million pounds of lead compound releases.

Hazardous Waste Refuse Systems
This industry includes hazardous waste treatment and disposal and material recovery facilities.
Seven hazardous waste treatment facilities reported disposing around 1.3 million pounds of lead compounds into on-site landfills.

Top Counties for Lead Compound Releases

The top 10 counties for total on-site releases in Arizona, California, Hawaii, and Nevada are:

- Lander County, Nevada - 13,507,786 pounds
- Eureka County, Nevada - 7,280,796 pounds
- Pima County, Arizona - 5,303,299 pounds
- Elko County, Nevada - 4,983,003 pounds
- Humboldt County, Nevada - 4,007,931 pounds
- Pershing County, Nevada - 3,844,232 pounds
- Gila County, Arizona - 3,397,641 pounds
- Nye County, Nevada - 2,731,703 pounds
- Pinal County, Arizona - 2,047,016 pounds
- White Pine County, Nevada - 1,000,010 pounds

Top Facilities for Lead Compound Releases

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

- Echo Bay Minerals Co. Mccoy/Cove Mine (12.2 million pounds) Battle Mountain, NV, Lander County
- Newmont Mining Corp. Carlin South (5.8 million pounds) Carlin, NV, Eureka County
- Barrick Goldstrike Mine (4.7 million pounds) Elko, NV, Elko County
- ASARCO Inc. Mission Complex (4.2 million pounds) Sahuarita, AZ, Pima County
- Coeur Rochester Inc. (3.4 million pounds) Lovelock, NV, Pershing County
- Newmont Mining Corp. Twin Creeks Mine (3.2 million pounds Golconda, NV, Humboldt County
- ASARCO Inc. Ray OPS. Mine (2.0 million pounds) Kearny, AZ, Pinal County
- ASARCO Inc. Ray Complex/Hayden Smelter (2.0 million pounds Hayden, AZ, Gila County
- Phelps Dodge Miami Inc. (1.4 million pounds) Claypool, AZ, Gila County
- Newmont Mining Corp. Carlin North Area (1.3 million pounds) Carlin, NV, Eureka County

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

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.

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