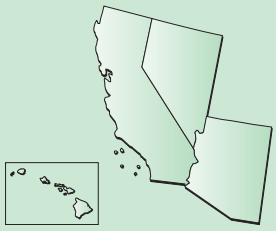
Toxics Release Inventory 2007 Mercury Report



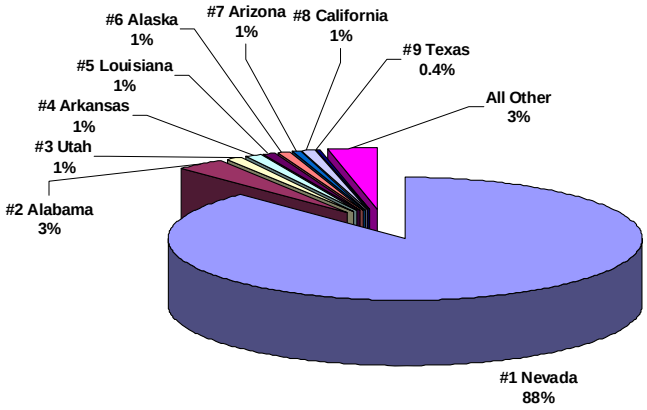
U.S. EPA Region 9: *California, Arizona, Nevada, Hawaii, the Pacific Islands, and Tribal Nations*

The 2007 Data for Mercury

Mercury[1] is a persistent, bioaccumulative and toxic (PBT) chemical. As such, it has a significantly lower Toxic Release Inventory (TRI) reporting threshold (10 pounds) than do non-PBT chemicals (10 thousand or 25 thousand pounds). Metal mining is the largest source of mercury releases reported in Region 9. Other main sources of mercury releases in the Region are hazardous waste treatment and disposal, cement manufacturing and fossil fuel electric power generation facilities.

Nevada ranks #1 in the United States for reported mercury releases, with 88% of all releases. Arizona ranks #7; California #8; and Hawaii #49.

2007 Mercury Releases: Ranking by State



Mercury Releases in Region 9

Within the region, Arizona had the largest percent increase (440%) of mercury releases from 2006, from 8.8 to 47 thousand pounds. The industry with the top mercury releases varies by state: Gold Mining (Nevada), Copper Mining (Arizona); Hazardous Waste Treatment and Disposal (California); Petroleum Refineries (Hawaii).

[1] Includes the mercury present in mercury compounds.

State	2007 Mercury Releases	Largest Releases
Nevada	6,094,786	Gold Mining
Arizona	47,550	CopperMining
California	43,893	HazardousWaste
Hawaii	201	Petroleum Refineries

One hundred forty-six facilities in Region 9 reported 6.2 million pounds of mercury releases, up 1.8 million pounds from 2006. Nevada mining facilities account for 98% of the Region's mercury releases.

Facilities with Largest Mercury Releases (Region 9)

Facility Name	State	2006	2007	Percent Change
Barrick Goldstrike Mines Inc	NV	2,149,211	2,220,174	3%
Newmont Mining Corp Twin Creeks Mine	NV	1,500,697	1,980,659	32%
Newmont Mining Corp - Carlin North Area Mine	NV	87,020	780,166	797%
Ruby Hill Mine	NV	14,229	409,607	2,779%
Newmont Mining Corp - Carlin South Area Mine	NV	90,470	295,554	227%
Cortez Gold Mines	NV	148,949	152,234	2%
Marigold Mining Co	NV	69,001	75,573	10%
Bald Mountain Mine	NV	26,626	62,228	134%
Newmont Mining Corp Lone Tree Mine	NV	109,631	59,630	-46%
Freeport-Mcmoran Morenci Inc	AZ	No report	42,017	—-
Chemical Waste Management Inc	CA	28,073	30,965	10%
US Ecology Nevada Inc.	NV	26,112	25,857	-1%

Releases to the Environment

Total (on- & off-site) mercury releases increased 41.3% (1.8 million pounds) from 2006 to 2007. Releases to land are the largest category of releases, followed by air.

Release Desination	Reporting Year		Percent Change
	2006	2007	
Air	8,563	**7,081**	-17%
Land	4,355,860	**6,177,091**	+42%
Water	6	**6**	-1%
Underground Injection	3	**4**	+24%
Off-site	13,990[2]	**2,414**	-83%
Total Releases	4,378,422	**6,186,595**	+41%

Releases to Land

Mercury releases to land increased 42% since 2006, and 72% since 2005. **Largest Increase:** Gold mines Newmont Mining Corporation (Newmont)-Carlin North Area Mine (693 thousand pounds), Newmont-Twin Creeks Mine, (480 thousand pounds), Ruby Hill Mine (395 thousand pounds) and Newmont-Carlin South Area Mine (205 thousand pounds). **Largest Decrease:** Newmont-Lone Tree (gold) Mine (50 thousand pounds).

Releases to Air

Reported mercury releases to air decreased 17% (1,483 pounds). **Largest Decrease:** Marigold (gold) Mining Co. (903 pounds), Lehigh Southwest Cement (442 pounds), Kennecott Rawhide Mining Co (290 pounds), Hanson Permanente Cement (258 pounds), and Bald Mountain (gold) Mine (147 pounds). **Largest Increase:** The Salt River Project Navajo Generation Station (326 pounds), Newmont Mining-Carlin South Area Mine (196 pounds), Newmont Mining Corp-Carlin North Area Mine (146 pounds), Barrick Goldstrike (gold) Mines, Inc. (115 pounds) and Cortez Gold Mines (103 pounds).

[2] Freeport McMoran (formerly Phelps Dodge) Miami revised its 2006 off-site releases from 39 thousand to 21 pounds.

Off-site Transfer and Disposal

Reported off-site releases decreased 83% from 2006 to 2007. **Largest Decrease:** Clean Harbors San Jose LLC (hazardous waste facility) – 11 thousand pounds, 99% reduction. **Largest Increase:** US Ecology Nevada Inc. (hazardous waste facility) – 469 pounds, a 100% increase.

2007 Mercury Releases (in pounds) by State

State	Air	Land	Underground Injection	Water	Off-site	Total Releases
AZ	1,966	45,355	0	0	112	47,433
CA	1,677	40,960	1	2	1,193	43,832
HI	55	0	3	4	141	203
NV	3,383	6,090,776	0	0	968	6,095,127
Total	7,081	6,177,091	4	6	2,414	6,186,595

Nevada's Elko, Humboldt and Eureka Counties released the largest amounts of mercury in 2007. The counties with the largest releases of mercury in Arizona and California are Greenlee County and Kings County, respectively.

10 Counties with Largest Mercury Releases (Region 9)

County	State	2007
ELKO	NV	2,220,562
HUMBOLDT	NV	2,119,216
EUREKA	NV	1,485,327
LANDER	NV	169,238
WHITE PINE	NV	62,228
GREENLEE	AZ	42,017
NYE	NV	33,154
KINGS	CA	30,965
IMPERIAL	CA	9,940
PERSHING	NV	4,704

Industry Sectors

The gold mining industry accounts for 98% of reported mercury releases in Region 9. Among the remaining two percent, hazardous waste treatment and disposal, non-gold metal mining, and fossil fuel electric power generation are the top contributors.

Mercury Releases (in pounds) by Industry Sector	
Industry Sector	**2007 Releases (lbs.)**
Gold Ore Mining	6,073,999
Hazardous Waste Treatment and Disposal	57,401
Copper Ore & Nickel Ore Mining	44,210
Silver Ore Mining	4,381
Fossil Fuel Electric Power Generation	3,335
Cement Manufacturing	1,137
Petroleum Refineries	1,002
Other	1,129
Total	**6,186,595**

Gold Mining

Mercury can be processed as a trace constituent in metal ores or recovered as a by-product from gold ores. Many mines extract, move, store, process, and dispose of large amounts of waste rock and ore materials containing low concentrations of naturally-occurring metals.

The vast majority of this material is placed in surface impoundments or on land, and the metals are reported as on-site releases to land. This material is subject to leaching by rain, snow, and acid mine drainage, and must be carefully managed and monitored to prevent surface or ground water contamination. Gold ore processing and metal refining operations also release mercury to the air.

In the Pacific Southwest Region, 16 gold mines reported 6.1 million pounds of total mercury releases, most of which were released on-site to land. These gold mines reported a total of 3,236 pounds of mercury releases to the air.

Copper Mining

Five copper mines in Region 9, all located in Arizona, reported 44 thousand pounds of mercury releases. The majority of these mercury releases were to land.

Hazardous Waste Disposal

Hazardous waste facilities reported 57 thousand pounds of mercury released to land. These facilities also reported 1,063 pounds of off-site releases.

Silver Mining

One silver mining facility, Coeur Rochester (NV), reported mercury releases of 4,365 pounds to land and 16 pounds to air.

Electricity Generation

Only facilities that burn coal or oil to generate electricity commercially are required to report to TRI. Mercury compounds may be formed during the combustion process. Eighteen fossil fuel electricity generation facilities reported 3,335 pounds of mercury releases, with 62% to air and 38% to land.

Cement Manufacturing

Mercury may be processed or otherwise used as a trace element in raw materials and fuels in the manufacture of hydraulic cement. Eleven facilities reported 1,137 pounds of mercury releases, 99% of which were releases to air.

Petroleum Refineries

Mercury may be processed or otherwise used as trace components in crude oil. In 2007, 21 petroleum refineries reported 1,002 pounds of mercury releases, with 73% transferred off-site, and 26% released to the air.

National Security Facilities

The U.S Navy Naval Air Weapons Station China Lake is the only federal national security facility in Region 9 to report mercury releases in 2007. Of the 454 pounds in total releases, 429 pounds were transferred off-site and 25 pounds were released to the air.