



Toxics Release Inventory 2008 Arizona Report

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

Arizona's Releases

In 2008, 274 facilities reported a total of 95 million pounds of toxic chemical releases. Arizona's total reported on-site and off-site releases increased 7% (6.6 million pounds), when compared to 2007 data.

What is a Release?

A TRI "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.

Total Releases for Reporting Years 2006 – 2008

Year	Air	Water	On-Site Land	Underground Injection	Off-Site
2006	4,561,810	3,726	91,535,626	10	2,473,700
2007	4,180,110	4,364	82,508,259	10	1,868,776
2008	3,579,583	58,877	90,184,744	5	1,365,367

Releases to the Environment

Air: Air releases decreased 14% (601 thousand pounds) since 2007.

Water: Water releases increased 1,250% (55 thousand pounds) since 2007.

On-Site Land: On-site land releases increased 9% (7.7 million pounds) since 2007

Underground Injection: Underground Injection releases decreased 50% (5 pounds) since 2007.

Off-Site Transfers: Total off-site transfers have decreased 27% (503 thousand pounds) since 2007.

Facilities with Largest Chemical Releases

The top facilities in Arizona for total on-site and off-site releases of chemicals are:

	Facility Name	City	County	Total Releases
1	ASARCO LLC RAY COMPLEX/ HAYDEN SMELTER & CONCENTRATOR	HAYDEN	Gila, AZ	25,316,913
2	FREEPORT-MCMORAN MIAMI INC.	CLAYPOOL	Gila, AZ	25,304,600
3	CYPRUS TOHONO CORP.	CASA GRANDE	Pinal, AZ	13,394,257
4	FREEPORT-MCMORAN MORENCI INC.	MORENCI	Greenlee, AZ	8,630,764
5	SPRINGERVILLE GENERATING STATION	SPRINGERVILLE	Apache, AZ	3,194,773
6	FREEPORT-MCMORAN SIERRITA INC.	GREEN VALLEY	Pima, AZ	2,394,534
7	CHOLLA POWER PLANT	JOSEPH CITY	Navajo, AZ	2,353,324
8	CORONADO GENERATING STATION	SAINT JOHNS	Apache, AZ	2,214,812
9	FREEPORT-MCMORAN BAGDAD INC.	BAGDAD	Yavapai, AZ	2,065,794
10	BHP COPPER INC. PINTO VALLEY OPERATION	MIAMI	Gila, AZ	2,019,233

Top 10 Released Chemicals

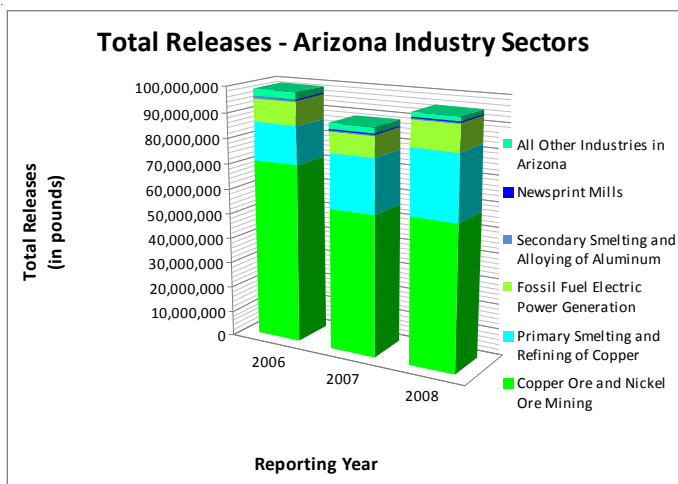
The top released chemicals based on total on-site and off-site releases in Arizona are:

Chemical	Total Releases (pounds)	Percentage of Total Releases
COPPER AND COPPER COMPOUNDS	38,779,216	41
ZINC (FUME OR DUST) AND ZINC COMPOUNDS	17,736,087	19
LEAD AND LEAD COMPOUNDS	17,369,499	18
BARIUM AND BARIUM COMPOUNDS	7,597,966	8
MANGANESE AND MANGANESE COMPOUNDS	3,589,481	4
CHROMIUM AND CHROMIUM COMPOUNDS (except Chromite ore mined in Transvaal Region)	2,548,339	3
SULFURIC ACID (1994 AND AFTER ACID AEROSOLS ONLY)	843,586	1
HYDROGEN FLUORIDE	707,782	1
ANTIMONY COMPOUNDS	566,828	1
ARSENIC AND ARSENIC COMPOUNDS	550,230	1

Industry Breakdown

Copper ore and nickel ore mining, primary smelting and refining of copper, and fossil fuel electric power generation account for 98% of total releases in 2008.

Industry	Total Releases	Percentage of Total Releases
Copper and Nickel Mining	57,249,079	60%
Primary Smelting and Refining of Copper	25,316,913	27%
Fossil Fuel Electric Power Generation	10,348,340	11%



PBT Chemical Releases

Releases of Persistent, Bioaccumulative and Toxic (PBT) chemicals are in pounds. Dioxin and dioxin-like compounds data are in grams, not in Toxicity Equivalence (TEQ).

In Arizona, 17.5 million pounds of total (on-site and off-site) releases of PBT chemicals were reported. This is a decrease of 1.6 million pounds or 8% since 2007. Lead and lead compounds top the list in 2008. In determining release quantities for metal compounds, facilities only consider the primary metal portion of the compound. For instance, a facility reporting for lead compounds only reports the lead portion of the lead compounds released. The PBT Chemicals in the table are ranked in descending order by 2008 total on-site and off-site releases.

Chemical	Total On-Site and Off-Site Releases		Percent Change
	2007	2008	
LEAD & LEAD COMPOUNDS	18,994,016	17,369,499	-9
POLYCHLORINATED BIPHENYLS	63,840	130,750	105
MERCURY & MERCURY COMPOUNDS	47,611	35,700	-25
POLYCYCLIC AROMATIC COMPOUNDS	254	326	28
BENZO(G,H,I)PERYLENE	0.67	1.06	57
DIOXIN AND DIOXIN-LIKE COMPOUNDS (grams)	13.18	14.34	9

Facilities with Largest PBT Releases

The top ten facilities in Arizona for total on-site and off-site releases of PBT chemicals are:

	Facility Name	City	County	Total Releases
1	FREEPORT-MCMORAN MORENCI INC.	MORENCI	Greenlee, AZ	4,031,939
2	FREEPORT-MCMORAN MIAMI INC.	CLAYPOOL	Gila, AZ	3,850,685
3	ASARCO LLC RAY COMPLEX/ HAYDEN SMELTER & CONCENTRATOR	HAYDEN	Gila, AZ	2,542,338
4	ASARCO LLC MISSION COMPLEX	SAHUARITA	Pima, AZ	1,629,823
5	FREEPORT-MCMORAN SIERRITA INC.	GREEN VALLEY	Pima, AZ	1,410,494
6	BHP COPPER INC. PINTO VALLEY OPERATION	MIAMI	Gila, AZ	1,369,331
7	FREEPORT-MCMORAN SAFFORD INC.	SAFFORD	Graham, AZ	888,045
8	FREEPORT-MCMORAN BAGDAD INC.	BAGDAD	Yavapai, AZ	697,819
9	CYPRUS TOHONO CORP	CASA GRANDE	Pinal, AZ	394,007
10	ASARCO LLC RAY MINE OPERATIONS	KEARNY	Pinal, AZ	386,267