



# Toxics Release Inventory 2009 Arizona Report

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

## Arizona's Releases

In 2009, 268 facilities reported a total of 61 million pounds of toxic chemical releases. Arizona's total reported on-site and off-site releases decreased 36% (34 million pounds), when compared to 2008 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 2007 – 2009

Year	Air	Water	On-Site Land	Underground Injection	Off-Site
2007	4,311,794	4,364	83,094,570	10	1,893,029
2008	3,713,630	58,877	90,184,749	5	1,402,287
2009	2,676,813	1,343	57,314,001	0	1,036,683

## Releases to the Environment

**Air:** Air releases decreased 28% (1 million pounds) since 2008.

**Water:** Water releases decreased 98% (58 thousand pounds) since 2008.

**On-Site Land:** On-site land releases decreased 36% (33 million pounds) since 2008.

**Underground Injection:** Underground Injection releases decreased 100% (5 pounds) since 2008.

**Off-Site Transfers:** Total off-site transfers have decreased 26% (366 thousand pounds) since 2008.

## 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	20,996,567
2	FREEPORT-MCMORAN MIAMI INC.	CLAYPOOL	Gila, AZ	20,423,690
3	SPRINGVILLE GENERATING STATION	SPRINGVILLE	Apache, AZ	2,635,628
4	FREEPORT-MCMORAN SIERRITA INC.	GREEN VALLEY	Pima, AZ	2,421,465
5	CHOLLA POWER PLANT	JOSEPH CITY	Navajo, AZ	2,227,390
6	CORONADO GENERATING STATION	SAINT JOHNS	Apache, AZ	2,115,187
7	SALT RIVER PROJECT NAVAJO GENERATING STATION	PAGE	Coconino, AZ	2,060,692
8	ASARCO LLC MISSION COMPLEX	SAHUARITA	Pima, AZ	1,756,420
9	FREEPORT-MCMORAN MORENCI INC.	MORENCI	Greenlee, AZ	1,272,976
10	FREEPORT-MCMORAN BAGDAD INC.	BAGDAD	Yavapai, AZ	1,180,367

## Top 10 Released Chemicals

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

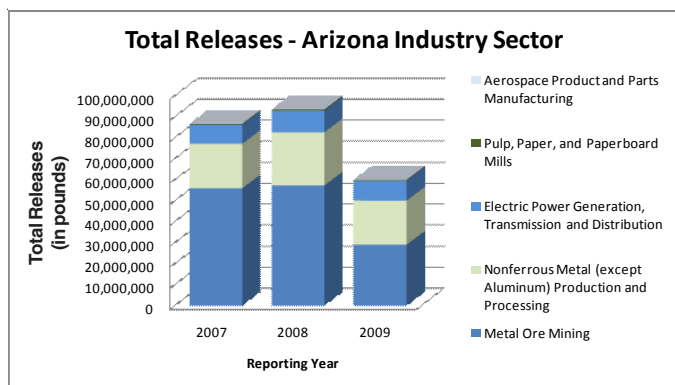
Chemical	Total Releases (pounds)	Percentage of Total Releases
COPPER AND COPPER COMPOUNDS	24,116,817	40
ZINC (FUME OR DUST) AND ZINC COMPOUNDS	10,953,638	18
LEAD AND LEAD COMPOUNDS	8,922,820	15
BARIUM AND BARIUM COMPOUNDS	7,418,649	12
MANGANESE AND MANGANESE COMPOUNDS	2,239,349	4
CHROMIUM AND CHROMIUM COMPOUNDS (except Chromite ore mined in Transvaal Region)	1,841,768	3
SULFURIC ACID (1994 AND AFTER ACID AEROSOLS ONLY)	835,001	1
ANTIMONY AND ANTIMONY COMPOUNDS	615,377	1
NICKEL AND NICKEL COMPOUNDS	452,068	0.7
ARSENIC AND ARSENIC COMPOUNDS	436,910	0.7

## Industry Breakdown

Metal ore mining; nonferrous metal (except aluminum) production and processing; and electric power generation, transmission and distribution account for 97% of total releases in 2009.

Industry	Total Releases	Percentage of Total Releases
Metal Ore Mining <sup>1</sup>	29,043,953	48%
Nonferrous Metal (except Aluminum) Production and Processing	21,003,825	34%
Electric Power Generation, Transmission and Distribution	9,451,003	15%

<sup>1</sup> The metal ore mining category includes the following metals: iron, gold, silver, lead, zinc, copper, nickel, uranium, radium and vanadium.



## 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).*

**PBT Releases Text:** In Arizona, 9 million pounds of total (on-site and off-site) releases of PBT chemicals were reported. This is a decrease of 8.5 million pounds or 49% since 2008. Lead and lead compounds top the list in 2009. 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 2009.

Chemical	Total On-Site and Off-Site Releases		Percent Change
	2008	2009	
LEAD & LEAD COMPOUNDS	17,369,529	8,922,819	-49
POLYCHLORINATED BIPHENYLS	130,750	75,832	-42
MERCURY & MERCURY COMPOUNDS	35,700	9,031	-75
POLYCYCLIC AROMATIC COMPOUNDS	326	322	-1
BENZO(G,H,I)PERYLENE	1	1	0
DIOXIN AND DIOXIN-LIKE COMPOUNDS (grams)*	0.0350	0.0284	-19

## 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	ASARCO LLC RAY COMPLEX/HAYDEN SMELTER & CONCENTRATOR	HAYDEN	Gila, AZ	2,103,194
2	ASARCO LLC MISSION COMPLEX	SAHUARITA	Pima, AZ	1,379,317
3	FREEPORT-MCMORAN SIERRITA INC.	GREEN VALLEY	Pima, AZ	1,295,040
4	FREEPORT-MCMORAN MIAMI INC.	CLAYPOOL	Gila, AZ	1,158,120
5	FREEPORT-MCMORAN SAFFORD INC.	SAFFORD	Graham, AZ	938,074
6	FREEPORT-MCMORAN BAGDAD INC.	BAGDAD	Yavapai, AZ	562,402
7	ASARCO LLC RAY MINE OPERATIONS	KEARNY	Pinal, AZ	471,066
8	FREEPORT-MCMORAN MORENCI INC.	MORENCI	Greenlee, AZ	392,846
9	BHP COPPER INC. PINTO VALLEY OPERATION	MIAMI	Gila, AZ	211,444
10	NORD RESOURCES CORP. JOHNSON CAMP MINE	DRAGOON	Cochise, AZ	211,112