

Arizona's Releases

In 2010, 271 facilities reported a total of more than 80 million pounds of toxic chemical releases. Arizona's total reported on-site and off-site releases increased 31% (19 million pounds), when compared to 2009 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 2008 – 2010

Year	Air	Water	On-Site Land	Underground Injection	Off-Site	Total Releases
2008	3,713,733	58,877	90,187,364	5	1,333,133	95,293,111
2009	2,679,622	1,343	57,597,686	0	907,191	61,185,843
2010	2,825,939	1,619	75,951,824	5	1,094,910	79,874,297

Releases to the Environment

Air: Air releases increased 5% (146 thousand pounds) since 2009.

Water: Water releases increased 21% (276 pounds) since 2009.

On-Site Land: On-site land releases increased 32% (18 million pounds) since 2009.

Underground Injection: Underground injection releases increased from 0 to 5 pounds since 2009.

Off-Site Transfers: Total off-site transfers have increased 19% (195 thousand pounds) since 2009.

Facilities with Largest Chemical Releases

The top ten facilities in Arizona for total on-site and off-site releases of all chemicals were the following:

	Facility Name	City	County	Total Releases
1	ASARCO LLC RAY COMPLEX/ HAYDEN SMELTER & CONCENTRATOR	HAYDEN	Gila	31,038,891
2	FREEPORT-MCMORAN MIAMI	CLAYPOOL	Gila	25,395,313
3	SPRINGVILLE GENERATING STATION	SPRINGVILLE	Apache	4,150,144
4	FREEPORT-MCMORAN MORENCI	MORENCI	Greenlee	2,968,986
5	FREEPORT-MCMORAN SIERRITA	GREEN VALLEY	Pima	2,502,369
6	CORONADO GENERATING STATION	SAINT JOHNS	Apache	2,496,507
7	SALT RIVER PROJECT NAVAJO GENERATING STATION	PAGE	Coconino	2,165,120
8	ASARCO LLC MISSION COMPLEX	SAHUARITA	Pima	1,593,887
9	FREEPORT-MCMORAN BAGDAD	BAGDAD	Yavapai	1,258,367
10	MINERAL PARK	GOLDEN VALLEY	Mohave	1,230,286

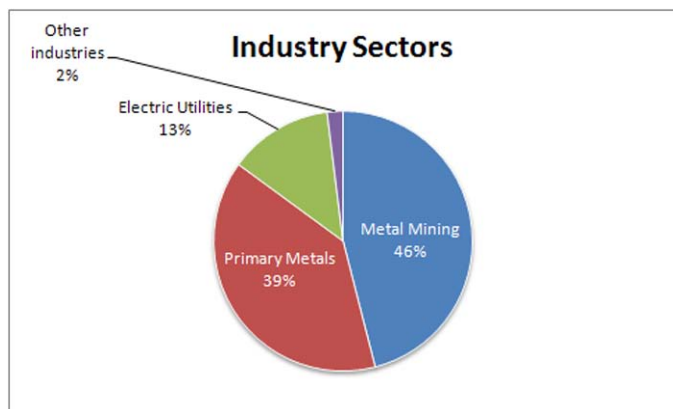
Top 10 Released Chemicals

The top released chemicals based on total on-site and off-site releases in Arizona were the following:

Chemical	Total Releases (pounds)	Percentage of Total Releases
COPPER AND COPPER COMPOUNDS	25,519,639	32.0%
ZINC COMPOUNDS	22,872,122	29.0%
LEAD AND LEAD COMPOUNDS	12,876,891	16.0%
BARIUM AND BARIUM COMPOUNDS	8,165,056	10.0%
MANGANESE AND MANGANESE COMPOUNDS	2,714,051	3.0%
CHROMIUM AND CHROMIUM COMPOUNDS (except Chromite ore mined in Transvaal Region)	2,080,064	3.0%
SULFURIC ACID (1994 AND AFTER ACID AEROSOLS ONLY)	844,470	1.0%
ANTIMONY COMPOUNDS	775,162	1.0%
ARSENIC & ARSENIC COMPOUNDS	565,712	0.7%
METHANOL	405,990	0.5%

Industry Breakdown

Metal ore mining; primary metals and electric utilities account for 98% of total releases in 2010.



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

PBT Chemical Releases

Starting in 2000, EPA established more stringent reporting thresholds for persistent bioaccumulative toxic (PBT) chemicals originally on, or added to, the TRI chemical list. PBT chemicals are of particular concern not only because they are toxic, but also because they remain in the environment for long periods of time, are not readily destroyed, and build up or accumulate in body tissue. The TRI PBT chemicals include dioxin and dioxin-like compounds, lead and lead compounds, mercury and mercury compounds, polycyclic aromatic compounds (PACs), polychlorinated biphenyls (PCBs), and certain pesticides, among other chemicals.

In Arizona, 13 million pounds of total (on-site and off-site) releases of PBT chemicals were reported in 2010. This is an increase of 4 million pounds or 40% since 2009. Lead and lead compounds top the list in 2010. 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.

Chemical	Total On-Site and Off-Site Releases in Pounds		Percent Change
	2009	2010	
LEAD & LEAD COMPOUNDS	9,198,073	12,876,891	40%
POLYCHLORINATED BIPHENYLS	38,641	67,163	74%
MERCURY & MERCURY COMPOUNDS	9,118	11,805	29%
POLYCYCLIC AROMATIC COMPOUNDS	377	596	58%
BENZO(G,H,I)PERYLENE	1	0	-100%

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 MIAMI INC.	CLAYPOOL	Gila	2,282,543
2	ASARCO LLC RAY COMPLEX/ HAYDEN SMELTER & CONCENTRATOR	HAYDEN	Gila	2,116,291
3	FREEPORT-MCMORAN SIERRITA INC.	GREEN VALLEY	Pima	1,703,029
4	FREEPORT-MCMORAN MORENCI INC.	MORENCI	Greenlee	1,682,666
5	ASARCO LLC MISSION COMPLEX	SAHUARITA	Pima	1,379,390
6	MINERAL PARK INC.	GOLDEN VALLEY	Mohave	1,224,465
7	FREEPORT-MCMORAN SAFFORD INC.	SAFFORD	Graham	938,096
8	FREEPORT-MCMORAN BAGDAD	BAGDAD	Yavapai	554,782
9	ASARCO LLC RAY MINE OPERATIONS	KEARNY	Pinal	408,233
10	NORD RESOURCES CORP. JOHNSON CAMP MINE	DRAGOON	Cochise	374,305

For More Information

See www.epa.gov/tri for national TRI information or www.epa.gov/region09/tri for Regional TRI information, or contact Lily Lee, Toxic Release Inventory Coordinator, US EPA Region 9, at lee.lily@epa.gov or 415-947-4187.

Release data alone are not sufficient to determine exposure or to calculate potential risks to human health and the environment. TRI data, in conjunction with other information, such as the toxicity of the chemical, the release medium (e.g., air), and site-specific conditions, can be used as a starting point in evaluating exposures that may result from releases of toxic chemicals.