

Toxics Release Inventory 2007 Arizona Report



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

Arizona's Releases

In Arizona, 297 facilities reported a total of 88 million pounds of toxic chemical releases. Arizona's total reported on-site and off-site releases decreased 9% (8.6 million pounds), when compared to 2006 data. Large decreases in reported on-site land releases and off-site transfers caused the decrease in 2007.

| Total Releases for Reporting Years 2005 - 2007 | | | | | | | |
|--|-----------|-------|--------------|--------------------------|-----------|--|--|
| Year | Air | Water | On-Site Land | Underground Injection | Off-Site | | |
| 2005 | 4,335,527 | 681 | 58,559,307 | 10.0 | 1,064,544 | | |
| 2006 | 4,562,587 | 3,726 | 89,672,871 | 10.0 | 2,406,640 | | |
| 2007 | 3,971,674 | 4,364 | 82,284,258 | 10.0 | 1,775,932 | | |

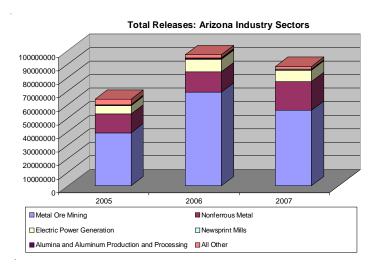
Facilities with Largest Chemical Releases

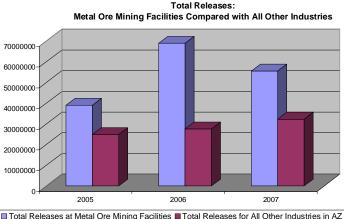
The top ten facilities in Arizona for total on-site and off-site releases of all chemicals are:

| | Facility Name | City | Total Releases |
|----|---|---------------|-------------------|
| 1 | FREEPORT-MCMORAN MIAMI, INC | CLAYPOOL | 37,167,504 |
| 2 | ASARCO LLC RAY COMPLEX/HAYDEN SMELTER & CONCENTRATOR | HAYDEN | 21,182,975 |
| 3 | FREEPORT-MCMORAN MORENCI, INC | MORENCI | 8,096,460 |
| 4 | ASARCO LLC MISSION COMPLEX | SAHUARITA | 4,040,432 |
| 5 | TUCSON ELECTRIC POWER CO SPRINGERVILLE GENERATION STATION | SPRINGERVILLE | 3,553,540 |
| 6 | FREEPORT-MCMORAN BAGDAD INC | BAGDAD | 2,065,004 |
| 7 | FREEPORT-MCMORAN SIERRITA INC | GREEN VALLEY | 2,029,531 |
| 8 | CHOLLA POWER PLANT | JOSEPH CITY | 1,899,675 |
| 9 | CORONADO GENERATING STATION | ST JOHNS | 1,133,850 |
| 10 | ASARCO LLC RAY MINE OPERATIONS | KEARNY | 1,068,253 |

Industry Breakdown

The copper and nickel ore mining industry accounts for 63% of Arizona's Toxic Release Inventory (TRI) chemical releases, including 62% of the releases to land.





■ Total Releases at Metal Ore Mining Facilities ■ Total Releases for All Other Industries in AZ

Releases to the Environment

Land: On-site land releases decreased by 7.4 million pounds (8%). Freeport-McMoran Miami, Inc., a copper and nickel ore mining facility in Claypool, reported a decrease in land releases of 21 million pounds, (37%).

Air: Air releases decreased by 13%, a reduction of 591 thousand pounds. Head/Penn Racquet Sports, a sporting and athletic goods manufacturer in Phoenix, reported a 100% decrease in air releases at a reduction of 224 thousand pounds.

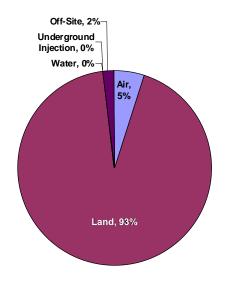
Water: Water releases increased 638 pounds, (17%) from 2006. Silver Bell Mining, LLC, a copper and nickel ore mining facility in Marana, led the water releases, a total release of 2,877 pounds.

Underground Injection: All of Arizona's releases (10 pounds) were reported by Pimalco, an aluminum product manufacturer in Chandler. There was no change from 2006.

Off-Site Releases (Transfers and Disposal): Off-site transfers decreased by 631 thousand

Off-site transfers decreased by 631 thousand pounds. Freeport-McMoran Miami, Inc. reported a 275 thousand pound decrease in off-site transfers, a reduction of 22%.

Total Releases: Reporting Year 2007



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, 19.1 million pounds of total on-site and off-site releases of PBT chemicals were reported. This is an increase of 22% (3.5 million pounds) from the previous reporting year. The increase in lead and lead compounds releases drove the overall increase of PBT releases.

In determining release quantities for metal compounds, facilities only consider the primary metal portion of the compound. For instance, a facility reporting lead compounds only reports the lead portion of the lead compounds released. The PBT chemicals are ranked by 2007 total releases.

| Chemical | Total On-Site Rele | Percent Change | | |
|----------------------------------|-----------------------|-------------------|--------|--|
| | 2006 | 2007 | Ghange | |
| LEAD & LEAD COMPOUNDS | 15,544,229 | 18,971,650 | 22% | |
| POLYCHLORINATED BIPHENYLS | 71,266 | 63,840 | -10% | |
| MERCURY & MERCURY COMPOUNDS | 8,789 | 47,433 | 440% | |
| POLYCYCLIC AROMATIC COMPOUNDS | 543 | 253 | -53% | |
| BENZO(G,H,I) PERYLENE | .587 | .673 | 15% | |
| CHLORDANE | 1 | 0 | -100% | |
| DIOXIN AND DIOXIN-LIKE COMPOUNDS | 14 | 9 | -36% | |

Lead and Lead Compounds Releases

Approximately 19 million pounds of total lead releases were reported. The copper ore and nickel ore mining industry released the largest amounts of reported lead, releasing 17.1 million pounds. Ninety-nine percent of the lead reported was released to land (approximately 18.8 million pounds).

There was a 54% decrease in off-site transfers, a reduction of 152 thousand pounds from 2006. Freeport-McMoran Miami Inc. in Claypool reported a reduction of almost 79 thousand pounds in off-site transfers, a 99.9% decrease from 2006.

Mercury and Mercury Compounds

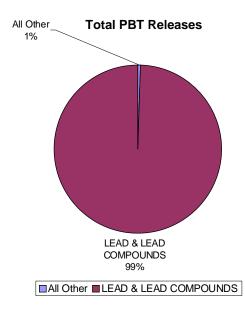
Total releases for mercury have increased 440% from 2006 data. This was driven by Freeport-McMoran Morenci Inc., a copper and nickel mining facility located in Morenci, reporting 42 thousand pounds of mercury releases.

On-Site land releases of mercury have increased 536%, approximately 38 thousand pounds compared to 2006. Freeport-McMoran Morenci Inc. released 99% of its reported releases to land.

There was a reported 27% increase in mercury air releases, a 420 pound increase from 2006. The largest release of 609 pounds occurred at the Salt River Project Navajo Generating Station in Page. The majority of mercury air releases came from the fossil fuel electric power generating industry; which released 94% or 1,840 pounds.

Polychlorinated Biphenyls (PCBs) and Polycyclic Aromatic Compounds (PACs)

Earth Protection Services Inc., a materials recovery facility in Phoenix, reported 99% of the total (63 thousand pounds) PCB releases. Total releases of PACs decreased 53%, a reduction of 290 pounds. The reported decrease in PACs releases was driven by a 77% (278 pounds) reduction from 2006 by Tucson Electric Power Co. in Springerville.



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 | Total Releases |
|----|--|---------------|-------------------|
| 1 | FREEPORT-MCMORAN MORENCI INC | MORENCI | 5,343,333 |
| 2 | FREEPORT-MCMORAN MIAMI INC | CLAYPOOL | 4,708,839 |
| 3 | ASARCO LLC MISSION COMPLEX | SAHUARITA | 3,386,245 |
| 4 | ASARCO LLC RAY COMPLEX/HAYDEN SMELTER & CONCENTRATOR | HAYDEN | 1,576,903 |
| 5 | FREEPORT-MCMORAN SIERRITAINC | GREEN VALLEY | 1,201,985 |
| 6 | ASARCO LLC RAY MINE OPERATIONS | KEARNY | 1,056,725 |
| 7 | BHP COPPER INC PINTO VALLEY OPERATION | MIAMI | 802,273 |
| 8 | FREEPORT-MCMORAN BAGDAD | BAGDAD | 632,484 |
| 9 | EARTH PROTECTION SERVICES INC | PHOENIX | 63,200 |
| 10 | TUCSON ELECTRIC POWER CO SPRINGERVILLE GENERATION STATION | SPRINGERVILLE | 57,133 |