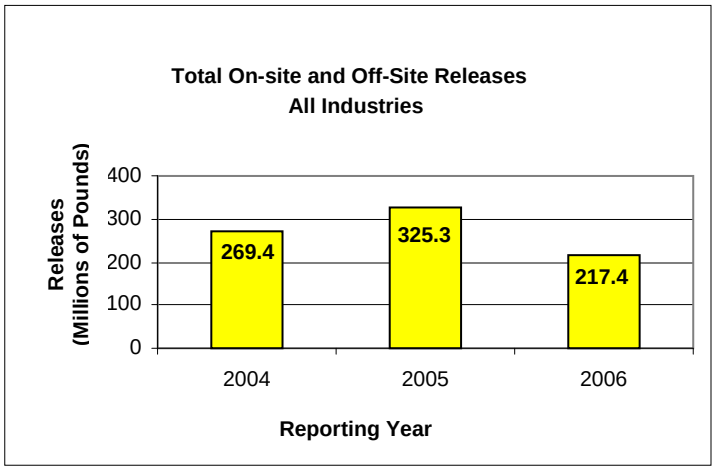
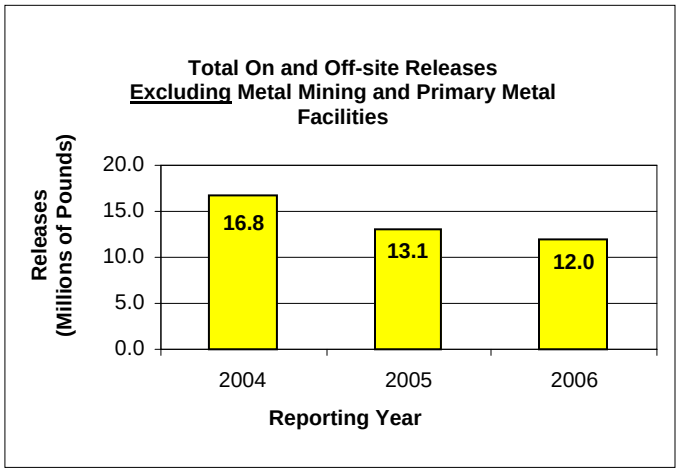
Nevada Report: Toxics Release Inventory *Reporting Year 2006*

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

-- March 2008

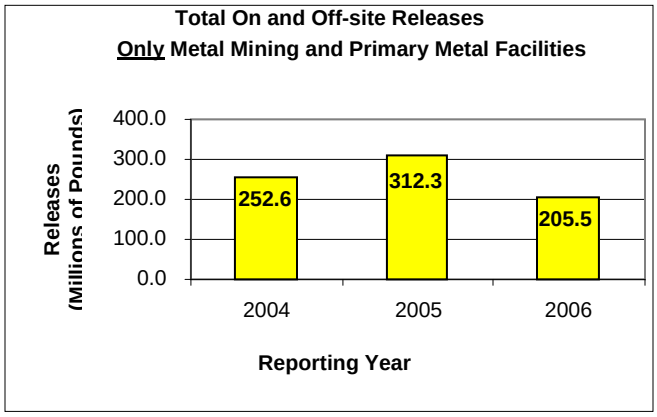
Trends in Toxic Chemical Releases for 2004 - 2006*





Total Releases for Reporting Years 2004-2006

Year	Air	Land	Under Ground Injection	Water	Off-site
2004	1,800,310	266,197,205	5	80,890	1,331,079
2005	1,975,598	321,817,294	6	110,556	1,434,357
2006	1,566,989	214,170,700	4	191,653	1,473,674



The 2006 Public Data Release

EPA has made public the 2006 data on toxic chemicals that were released to Nevada's air, water and land. This information comes from the Toxics Release Inventory (TRI), a federal community right-to-know program. In Nevada, 131 facilities reported a total of 217.4 million pounds of toxic chemical releases.

Facilities that meet certain criteria must report the amounts of toxic chemicals disposed of or otherwise released on-site to air, water, land and injected underground and the amounts of chemicals transferred off-site for disposal or release. Off-site disposal or release can include land disposal at permitted hazardous waste facilities.**

The data does not indicate whether a facility is violating environmental laws. Many of the facilities reporting through this program are subject to state and federal regulations designed to protect human health

** Year to year data comparisons does not reflect changes in reporting requirements.*
*** No adjustments were made to account for double counting that could occur as a result of off-site transfers of some TRI facilities also being reported as on-site releases at permitted hazardous waste landfills and other TRI facilities that receive the on-site transfers.*

and the environment. For instance, Resource Conservation and Recovery Act (RCRA) Subtitle C Landfills, a type of permitted hazardous waste facility, must comply with stringent requirements for liners, leak detection systems, and groundwater monitoring. Disposal in underground injection wells is regulated by EPA's Underground Injection Control Program to provide safeguards so that injection wells do not endanger current and future underground sources of drinking water.

Releases and Risk

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.

It is important to note that a release should not be directly equated with risk. To evaluate risk, release data must be combined with information about site-specific conditions, exposure, and chemical toxicity. TRI chemicals vary widely in toxicity. High volume releases of less toxic chemicals may pose less environmental risk than lower volume releases of highly toxic chemicals. Increases in on-site releases at permitted hazardous waste facilities may indicate a reduction in risk.

Industries

A facility is subject to TRI reporting requirements if it: has 10 or more full-time employees; is classified under a reportable North American Industry Classification System (NAICS) code; and manufactures, processes, or otherwise uses any of the listed toxic chemicals in amounts greater than the threshold quantities. For most chemicals (excluding Persistent, Bioaccumulative and Toxic (PBT) chemicals) the thresholds are 25,000 pounds for manufactured or processed and 10,000 pounds for otherwise used.

Manufacturing industries have been reporting their releases since 1987, and federal facilities started reporting in 1994. In 1998, an additional seven industry sectors began reporting their toxic chemical releases for the first time. These sectors are metal and coal mining, electricity generation, commercial hazardous waste treatment, solvent recovery, petroleum bulk terminals, and wholesale chemical distributors.

Nevada's Releases

Nevada industries as a whole reported a decrease from 2005 levels. Total on-site and off-site releases decreased 33% a 107.9 million pound decrease. Leading the trend was a decrease of 107.6 million pounds in reported releases to land, a 33.5% change. Reductions came primarily from three facilities; the silver mine Coeur Rochester Mine reported a reduction of 42 million pounds; the gold mine Newmont Carlin South reported a 32 million pound reduction; and Newmont Twin Creeks reported a decrease of 24 million pounds.

Many mines extract, move, store, process, and dispose of large amounts of waste rock and ore, materials which often contain low concentrations of naturally occurring metals. The vast majority of this material is placed in surface impoundments or on the land, and the metals are reported as on-site releases to land.

In the state of Nevada, metal mining and primary metal facilities account for 95% of all on-site and off-site releases and 96% of the on-site releases to land. Metal mining and primary metal facilities decreased 34% (107 million pounds) in land releases from 2005.

Overall, the state's air releases decreased 409 thousand pounds or 21%. The decrease in air releases can be attributed primarily to the Mohave Generating Station, which reduced its air releases by 536 thousand pounds from last year. RR Donnelly & Sons reported an increase in air emissions of 108 thousand pounds. Metal mining facilities saw a 15%, or 60 thousand pound, increase in air releases from reporting year 2005.

There was an 81.1 thousand pound or 73% increase in water discharges. Newmont Mining Lone Tree Mine's releases (81 thousand pounds) accounted nearly all of this increase. A large portion of this increase came from an increase in ammonia discharges.

The state experienced a 3% (39 thousand pounds) increase in off-site releases. 21st Century Environmental Management Inc. reported an increase

of 112 thousand pounds, while the U.S. DOE NNSA/NSO Nevada Test Site and Tronox LLC reported decreases of 83 and 47 thousand pounds, respectively.

Persistent, Bioaccumulative, and Toxic Chemicals

In the year 2000, TRI was expanded to include additional Persistent Bioaccumulative and Toxic (PBT) chemicals and to require reporting for these chemicals at lower thresholds, ranging from 0.1 grams to 100 pounds. PBT pollutants are toxic chemicals that persist in the environment and bioaccumulate in food chains, posing risks to human health and ecosystems.

In Nevada, just over 59 million pounds of total on-site and off-site releases of PBT chemicals were reported in 2006. There was a 34% (30.8 million pounds) decrease in PBT releases. This change was driven by the decrease in lead and lead compound releases.

Table of PBT Chemical Releases in Nevada

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

PBT Chemical	2005	2006	% Change
Lead And Lead Compounds	86,551,331	55,003,311	-36%
Mercury And Mercury Compounds	3,573,812	4,325,098	21%
Chlordane	493	4,900	894%
Trifluralin	3,252	2,841	-13%
Hexachloro-benzene	4,093	704	-83%
Polychlorinated Biphenyls	10,970	682	-94%
Polycyclic Aromatic Compounds	199	43	-79%
Heptachlor	122	22	-82%
Benzo(G,H,I) Perylene	1.5	0.5	-68%
Dioxin And Dioxin-Like Compounds (in grams)	10.4	6.4	-38%

To determine 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. Hence, the table above gives combined values for lead and lead compound releases and mercury and mercury compound releases. The PBT chemicals are ranked by 2006 total releases. The data is in pounds for all chemicals except dioxin and dioxin compounds, which is in grams.

Lead and Lead Compounds

Starting in the year 2001, lead and lead compounds were reported as Persistent Bioaccumulative and Toxic (PBT) chemicals. While lead and lead compounds have been on the list of reportable chemicals since 1987, for the year 2001 the reporting threshold was drastically lowered (from 25,000 pounds manufactured or processed, and 10,000 pounds otherwise used to 100 pounds manufactured, processed or other wise used). As a result, additional facilities are required to report releases of lead and lead compounds.

Approximately 55 million pound of total releases of lead was reported in Nevada, a 36% decrease. Sixty-eight percent of these releases were land releases from gold ore metal mining industries. The 31.5 million pound reduction in lead was driven by a 42.1 million pound decrease of land releases at one silver mine, Coeur Rochester Inc.

There was also a 2,073 thousand pound (36%) increase in lead air releases. The facility with the largest increase (5,281 pounds) in air releases of lead was Ruby Hill Mine.

Mercury and Mercury Compounds

The reported 21% (751 thousand pounds) increase in mercury and mercury compounds was driven by increases at Newmont Twin Creeks (730,105 pounds) and Newmont Carlin North (71,002 pounds). The largest decrease in these releases was reported by Newmont Carlin South (82,351 pounds).

Mercury air releases decreased by 10% (509 pounds). Decreases at Barrick Goldstrike (1,076 pounds) and Cortez Gold Mines (690 pounds) were offset by increases at Glamis Marigold Mines (596 pounds) and Newmont Lone Tree (568 pounds)

Polychlorinated Biphenyls (PCBs)

There were 682 pounds of reported releases of PCBs in 2006, a decrease of 10,288 pounds from 2005. All of the PCB releases in 2006 were on-site land releases in a RCRA Subtitle C Landfill at US Ecology Nevada Inc., in Beatty.

Facilities Releasing Largest Quantities of Chemicals

The top facilities in Nevada for total on-site and off-site releases of all chemicals are as follows:

1. Newmont Mining Corp Twin Creeks Mine (Golconda, Humboldt County) with 56.9 million pounds
2. Barrick Goldstrike Mines Inc (Elko, Elko County) with 48.6 million pounds
3. Newmont Mining Corp Carlin South Area (Carlin, Eureka County) with 28.5 million pounds
4. Newmont Mining Corp Lone Tree Mine (Valmy, Humboldt County) with 25.1 million pounds
5. Newmont Mining Corp Copper Canyon Mine (Battle Mountain, Lander County) with 17.8 million pounds
6. Robinson Nevada Mining Co (Ruth, White Pine County) with 10.9 million pounds
7. US Ecology Nevada Inc. (Beatty, Nye County) with 7.8 million pounds
8. Coeur Rochester Inc (Lovelock, Pershing County) with 5.6 million pounds
9. Cortez Gold Mines (Crescent Valley, Lander County) with 3.2 million pounds
10. Jerritt Canyon Mine (Elko, Elko County) with 2.6 million pounds

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

1. Newmont Mining Corp Copper Canyon Facility (Battle Mountain, Lander) with 17,000,348 pounds
2. Robinson Nevada Mining Co (Ruth, White Pine) with 10,504,043 pounds
3. Barrick Goldstrike Mines Inc (Elko, Elko) with 7,853,836 pounds
4. Newmont Mining Corp Twin Creeks Mine (Golconda, Humboldt) with 5,824,145 pounds
5. Coeur Rochester Inc. (Lovelock, Pershing) with 5,579,201 pounds
6. Newmont Mining Corp - Carlin South Area (Carlin, Eureka) with 3,802,757 pounds
7. Cortez Gold Mines (Crescent Valley, Lander) with 2,696,102 pounds
8. Smoky Valley Common Operation (Round Mountain, Nye) with 1,714,109 pounds
9. Us Ecology Nevada Inc.(Beatty, Nye) with 1,218,050 pounds
10. Glamis Marigold Mine (Valmy, Humboldt) with 848,859 pounds

On-line Access

For national information on data releases, see: http://www.epa.gov/tri

The TRI data is available through Envirofacts Warehouse, EPA's internet site for distributing environmental information at: http://www.epa.gov/enviro or the TRI Explorer tool: http://www.epa.gov/triexplorer

For general information on the Toxics Release Inventory, including reporting requirements for businesses, go to: http://www.epa.gov/region09/toxic/tri

For more information on the EPA's PBT Chemicals Program, go to: http://www.epa.gov/opptintr/pbt/

Information and Assistance

Region 9 staff will answer questions and assist you in learning more about the TRI Program in Region 9.

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