



Toxics Release Inventory Update Arizona Mexico Border Reporting Years 2007-2009

December 2010

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

The EPA made public the 2009 data on toxic chemicals that were released to the air, water, and land of Arizona's Border Region.* This report provides data from the Toxics Release Inventory (TRI) for the facilities in Arizona that are located within 100 kilometers (using 70 zip code areas) of the U.S./Mexico Border.

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.

Releases and Health Effects

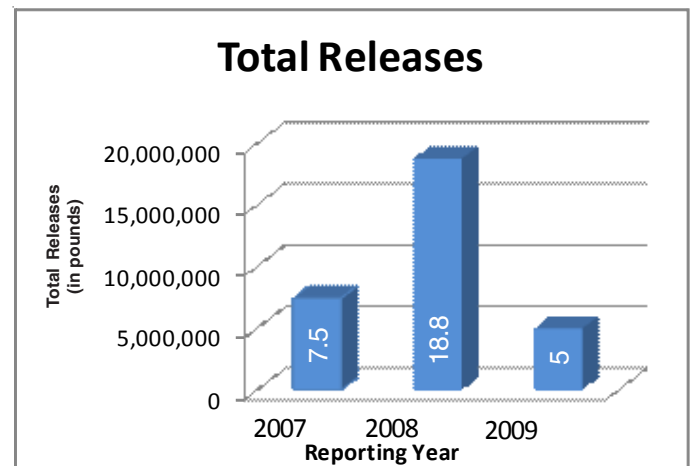
It is important to note that releases should not be directly equated with risk. To evaluate risk, release data must be combined with information about chemical toxicity, site-specific conditions, and exposure. In addition, this data does not indicate whether or not a facility is violating environmental laws. Many of the substances reported through this program are subject to state and federal regulations designed to protect human health and the environment.

Who is Reporting?

A facility is subject to TRI reporting requirements if it has 10 or more full-time employee equivalents (20,000 work hours per year); is classified under a reportable North American Industrial Classification System (NAICS) Code; and manufactures, processes, or otherwise uses any of the TRI chemicals in amounts above established threshold amounts. For most chemicals the thresholds are 25,000 pounds for "manufactured" or "processed," and 10,000 pounds for "otherwise used."

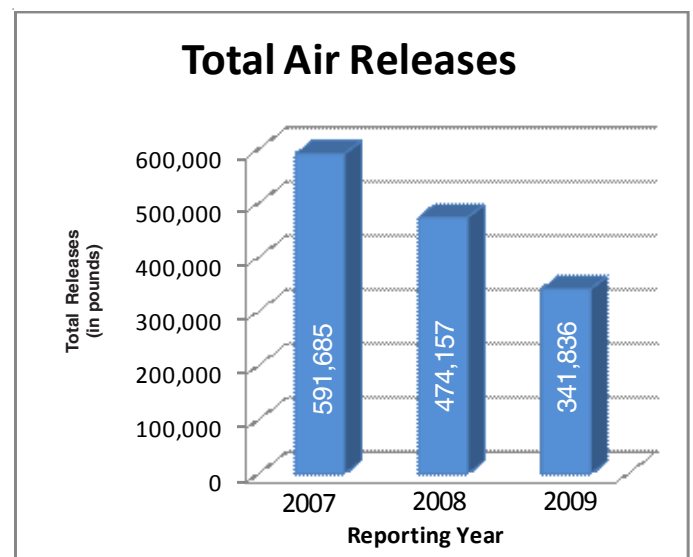
Chemical Releases

Total (on-site and off-site) TRI chemical releases reported in the Arizona Mexico Border Region during the past three years are displayed in the chart below:**



In 2009, reported releases in the Border area of Arizona (5 million pounds) accounted for about 8% of the State's 61 million pounds of releases.

Total reported air releases in Border area of Arizona during the past three years are as follows:



*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.

**Year to year data comparisons do not reflect changes in reporting requirements.

Trends in Releases

In 2009, 33 facilities in the Border area of Arizona reported releases of approximately 5 million pounds of toxic chemicals to the TRI Program. The following chart tracks releases to the environment for reporting years 2007 through 2009.

| Total Releases for Reporting Years 2006 – 2008 | | | | | |
|--|---------|-------|--------------|-----------------------|----------|
| Year | Air | Water | On-Site Land | Underground Injection | Off-Site |
| 2007 | 591,685 | 2,877 | 6,744,058 | - | 127,870 |
| 2008 | 474,157 | 250 | 18,296,913 | - | 10,687 |
| 2009 | 341,836 | 0 | 4,658,709 | - | 10,170 |

Largest Releases by Industry Type

In 2009, two industries – Metal Ore Mining and Electric Power Generation – account for 96% of the total 5 million pounds of reported releases in the Border area of Arizona.

| Industry | Total Release (pounds) | Percentage of Total Releases |
|-------------------------------|------------------------|------------------------------|
| Metal Ore Mining ¹ | 4,404,780 | 88% |
| Electric Power Generation | 412,105 | 8% |

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

Largest Releases by Chemical Type

The top five chemicals released in the Border area of Arizona in 2009, ranked by total on-site and off-site releases, are as follows:

| Chemical Name | Total Release (pounds) | Percentage of Total Releases |
|---------------------------------|------------------------|------------------------------|
| Lead & Lead Compounds | 2,932,203 | 59% |
| Manganese & Manganese Compounds | 1,029,389 | 21% |
| Chromium & Chromium Compounds | 491,044 | 10% |
| Nitrate Compounds | 342,476 | 7% |
| Barium & Barium Compounds | 140,842 | 3% |

Facilities Releasing Largest Quantities of Chemicals

Ten facilities, listed in descending order, released the largest total on-site and off-site releases in the Border area of Arizona:

| | Facility Name | City Name | Total Releases (pounds) |
|----|---|--------------|---|
| 1 | Freeport-McMoran Sierrita Inc. | Green Valley | 2,421,465 (53% lead compounds releases) |
| 2 | Asarco LLC Mission Complex | Sahuarita | 1,756,420 (79% lead compounds releases) |
| 3 | Arizona Electric Power Cooperative Inc. | Cochise | 391,650 (34% barium compounds releases) |
| 4 | Nord Resources Corp Johnson Camp Mine | Dragoon | 218,865 (96% barium compounds releases) |
| 5 | Learjet Inc. | Tucson | 90,758 (50% ethylbenzene, 50% naphthalene releases) |
| 6 | US Marine Corps Barry M Goldwater Range Complex | Yuma | 36,309 (52% lead, 48% copper releases) |
| 7 | Irrington Generating Station | Tucson | 20,455 (60% hydrogen fluoride releases) |
| 8 | Southwest Fiberglass LLC | Tucson | 17,470 (100% styrene releases) |
| 9 | Apache Nitrogen Products Inc. | Benson | 14,606 (58% ammonia, 25% nitric acid releases) |
| 10 | U.S. DOD USAF Davis-Monthan AFB | Tucson | 12,000 (100% lead releases) |

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>

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