State of Utah
Department of Environmental Quality

Utah Toxic Release Inventory Reporting Year 2005 Data Summary Report

Division of Environmental Response and Remediation
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EXECUTIVE SUMMARY

Introduction

Under Section 313 of the federal Emergency Planning and Community Right-to-Know Act (ECPRA) the Toxic Release Inventory (TRI) is compilation of a data submitted by certain facilities subject to the reporting requirements of EPCRA. TRI data provides select information concerning releases and transfers of a list of chemicals defined by the statute into the environment and of transfers of chemicals to other off-site facilities for final disposition. Section 313 requires a facility to submit TRI data to the U.S. Environmental Protection Agency and the State Hazardous Chemical Emergency Response Commission (SERC). This report is a summary of the data submitted to the Utah Department of Environmental Quality (UDEQ) for calendar year 2005. TRI information includes only selected industrial sectors using larger volumes of certain listed chemicals. Therefore, TRI data may only include a relatively small portion of all chemical releases of environmental significance. TRI data can be used to provide basic information on the types and volumes of waste and emissions at a facility, but the data must be used with other concentration, migration, environmental target, and exposure information to assess a level of human health or environmental risk.

Beginning in 2004 and in preparation of receiving the 2005 TRI data, UDEQ engaged in an initiative to develop a more powerful data management platform for EPCRA data. UDEQ was successful in meeting the threshold of requirements that would enable the agency to manage the data with greatest efficiency. The reader is advised to note that these efforts are on-going.

Please note that the duplication of some data received from facilities may be inherent to the reporting process. For example, Facility-A, a waste generator, produces a quantity waste which it ships off-site for disposal. Facility-A reports the quantity shipped under TRI as an off-site transfer. Facility-A has shipped the waste to Facility-B. Facility-B is a treatment, storage and disposal (TSD) facility. The TSD facility proceeds to dispose of, or deposit the waste into its approved waste disposal facility. Facility-B reports the waste disposed under TRI as an on-site release. EPA accounts for this duplication and adjusts total release data accordingly. However, at the current time the UDEQ data system does not yet account for this duplicate reporting scenario: currently the release data from both facilities is summed. UDEQ is working with EPA to determine the most appropriate method in which to account for this duplication of data. This initiative is consistent with our agency's on-going data management development efforts.

EPA makes available a state fact sheet for each reporting year beginning in 2002. State fact sheets are currently available on the EPA website for reporting years 2002 through 2004. A state fact sheet provides a summary of release data state-wide. In a comparison to the EPA Fact Sheets, multi-year trend data presented in this Utah 2005 Report Year TRI Data Summary Report will reflect release data for each year 2002 through 2004 (and possibly others) that are between 5-14% higher than EPA data respectively for each year. UDEQ anticipates that the Utah 2005 reporting year data will be consistent with this discrepancy.

2005 TRI Summary

For reporting year 2005, 199 facilities filed a total of 819 chemical forms comprised of 741 Form-R and 78 Form-A submissions. A total of 110 unique chemicals or chemical categories were reported. For purposes of this report the Wasatch Front is defined by Weber, Davis, Salt Lake, and Utah counties. One-hundred thirty-one facilities (66%) of all facilities that reported in Utah are located along the Wasatch Front.

Total Releases

The combined on-site and off-site total releases reported by facilities in Utah for reporting year 2005 was 193 million pounds. Total releases increased by 6 million pounds from 187 million pounds in 2004. The difference represents a 3.2% increase.

The total combined release quantity from all three reporting Kennecott facilities in 2005 was 127.2 million pounds. This quantity accounts for 65.8% of the total quantity of all releases reported by Utah facilities in 2005.

Releases to Air

Releases to air reported by Utah facilities totaled 10.0 million pounds in 2005. Releases were virtually unchanged with a slight decrease (of 48,000 lbs.) in 2005 from 10.1 million pounds. This represents a drop which is equivalent to less than 1%.

Total emissions to air reported by U.S. Magnesium in 2005 were 4.1 million pounds. This reflects 21.3% decrease from 5.2 million pounds reported by U.S. Magnesium in 2004. Releases to air reported by U.S. Magnesium represent 41% of total quantity of releases to air reported by all facilities in Utah. U.S. Magnesium attributes the reductions in their emissions to implementation of process technology improvements that have significantly increased chlorine recovery and reduced chlorine emissions.

Releases to Land

TRI chemical releases to land in Utah reported totaled 162.1 million pounds in 2005. Releases in 2004 totaled 166.7 million pounds. This change represents a 2.8% decrease for all releases to land reported by Utah facilities. The combined releases reported by all Kennecott facilities for releases to land in 2005 totaled 127.0 million pounds. Kennecott releases to land (all KUC facilities) reported in 2004 totaled 139.9 million pounds. The difference of 12.9 million pounds reflects a 9.2% decrease for Kennecott facilities.

Releases to Surface Water

Total TRI chemical releases to surface water in Utah in 2005 were slightly less than 55,000 pounds. This is a 3.3% decrease from the 56,000 pounds reported in 2004. Chevron Products Company reported a release of approximately 39,000 pounds for nitrate compounds, while Kennecott facilities reported approximately 15,000 pounds for various TRI chemicals. The sum of these two facility reports make up 98.8% of the total release quantities released to surface waters.

Transfers to POTWs

Publicly Owned Treatment Works (POTWs) are publicly owned wastewater treatment plants. Transfers to POTWs totaled 1.2 million pounds in 2005 which is a slight increase relative to total transfers to POTWs of 1.1 million pounds in 2004. Nitrates constitute slightly less than 79% of the total chemicals released, while the remaining 21% is comprised of a variety of organic and inorganic chemicals.

TRI-reported releases to POTWs do not include information concerning the rate of release or concentrations of chemicals in the release. However, State and Federal law requires industrial facilities with wastewater flows exceeding federally established chemical concentrations to operate industrial pretreatment equipment to reduce such concentrations below harmful levels before discharging to the POTWs.

Other Off-Site Transfers

Transfers of TRI chemicals to "other off-site" locations are transfers to facilities other than POTWs. Often these facilities include chemical recyclers and waste disposal sites. Other off-site transfers decreased in 2005 by 11% from 22.5 million pounds reported in 2004 to slightly under 20 million pounds reported in 2005.

Persistent Bioaccumulative Toxic (PBT) Chemicals

Reported releases of dioxin and dioxin-like compounds decreased by 0.3% in 2005. The total amount of dioxin and dioxin-like compounds reported released dropped by 14 grams from 4,365 grams in 2004 to 4,351 grams in 2005. U.S. Magnesium reported 4,336 grams of dioxin and dioxin-like chemicals, which constitutes 99.7% of the total quantity of dioxin and dioxin-like chemicals reported. U.S. Magnesium reported a 0.7% increase in the amount of dioxin and dioxin-like compounds released from 4303 grams in 2004 to 4,336 grams in 2005. Ninety-nine percent of the total volume released was reported as releases to land while the remaining 0.3% was reported as releases to air.

INTRODUCTION

What is the Toxic Release Inventory?

The Toxic Release Inventory (TRI) is a database providing information about releases of certain TRI program specific chemicals and chemical categories into the environment, and transfers to off-site facilities by facilities the manufacture, process, or otherwise use Section 313 chemicals. Nationally, a facility subject to EPCRA reports TRI information annually to the U.S. Environmental Protection Agency (EPA) and to the state in which it is located. The Utah Hazardous Chemical Emergency Response Commission (more commonly known as the State Emergency Response Commission - SERC) was established under Utah Statute §63-5-5. UDEQ acts on behalf of the SERC to administer the EPCRA program in Utah and manage all associated data submitted by facilities subject to the reporting requirements of EPCRA. TRI data must be submitted annually by July 1. Submissions are reported by the July deadline in the year following the year of release. This report is a summary of data submitted to the Utah Department of Environmental Quality for EPCRA reporting year 2005.

Who Must Report a TRI?

A facility must report to TRI if it:

- Conducts operations within specified Standard Industrial Classification (SIC) Codes; and
- Has 10 or more full-time employees (or equivalent); and
- Manufactures or processes more than 25,000 pounds or uses more than 10,000 pounds of any TRI listed chemical during the calendar year.

TRI data only includes reports from manufacturing facilities and federally owned facilities, coal mining, metal mining, electrical generation facilities combusting coal or oil, hazardous waste disposal, wholesale bulk petroleum distribution, chemical wholesale distribution, and solvent recycling.

What Type of Information Must Be Reported?

A facility must report the:

- Amount of each listed chemical released to the air, water, or soil;
- Amount of each listed chemical transferred off-site or sent to a wastewater treatment plant;
- Amount of each listed chemical recycled, treated, or disposed; and
- Facility's pollution reduction activities.

What Types of Chemicals are Subject to Reporting?

Over 600 chemicals and chemical categories were included in the reporting list for 2005, based on acute or chronic human health or environmental effects. Pursuant to the TRI Reporting Forms and Instructions revised 2005 version publication no chemicals were added to the list of chemicals for reporting year 2005, while methyl ethyl ketone (MEK) was removed under court order from the TRI. TRI program specific chemicals are listed under the Code of Federal

Regulations 40 CFR part 355. A copy of the current CFR is available to download from the Internet at www.gpoaccess.gov/index.html. A list of chemicals subject to reporting under TRI for reporting years 1999 through 2005 are currently available on the EPA website http://www.epa.gov/tri/chemical/index.htm (see TRI Chemical Lists). Changes promulgated by EPA to the TRI program, i.e., additions or deletions of TRI program chemicals or chemical categories, are updated annually in the Code of Federal Regulations.

What Are the Benefits and Uses of TRI Data?

TRI data can be used in a variety of ways:

- The public can use TRI data to identify potential concerns.
- Governments can use TRI data to evaluate environmental programs and establish regulatory priorities.
- The data can be used to provide basic information on the types and volumes of waste being generated or managed at a facility and, in conjunction with other data, can be utilized to study and identify potential hazards to the public health or environment.
- Industry can use TRI data to establish release reduction targets and document release reduction progress.

What Are the Limitations of the Data?

- *Not All Toxic Releases/Transfers Are Reported.* Only a few sectors of industry are currently required to submit TRI reports. Thus, only a portion of all chemical releases or transfers is included in the inventory. Additionally, the list of chemicals for which reporting is required is not inclusive of all chemicals known to have significant public health or environmental impact.

- *Reported Release/Transfer Totals Usually Are Based on Estimations Only.* No special monitoring is required to calculate emission or transfer totals. Reported data is often based on estimations.

- *Smaller Release Totals Are Reported as Ranges, Not Exact Numbers.* If a chemical release or transfer estimate was below 1,000 pounds, companies were allowed to report ranges of 1-10, 11-499, and 500-999 pounds. In such cases, staff entered the mid-point of the range in the State database. These estimations may, therefore, be above or below the actual figure.

- *TRI Statewide Totals Cannot Be Compared Easily From Year to Year.* The TRI list of chemicals requiring reporting and methods requiring the estimating of emissions have changed significantly through the 16-year history of TRI reporting. Facilities may meet the TRI reporting requirements and submit TRI reports for some years and not others. These changes make accurate multi-year comparisons of statewide release or transfer totals very difficult.

What Cautions Should Be Used in Interpreting TRI Data?

- *TRI Reports Releases, Not Exposures.* Release estimates alone are not sufficient to determine exposure, risk of exposure, or calculate potential adverse health or environmental affects.

- *TRI Does Not Report Concentrations.* TRI emission totals do not include information on the concentration of chemicals in air, water, or wastes placed on land. A large release may be a large volume at low concentration.

- *TRI Releases Are Often Permitted by State or Federal Law*. TRI releases are often permitted by state or federal environmental agencies after an evaluation has concluded the release will not adversely affect human health or the environment.

How Can the Public Obtain TRI Information?

Extracts of TRI information can be obtained from several sources:

- Computer summaries of Utah TRI information or copies of original TRI submissions can be obtained by submitting a written request to:

  Utah Division of Environmental Response and Remediation
  168 North 1950 West, 1st Floor
  P.O. Box 14840
  Salt Lake City, Utah 84114-4840
  Or email the request to mzucker@utah.gov

A customer may choose to have pages copied by a DERR employee at a cost of $0.25 per single-sided page. Pages copied by the customer are $0.05 per single-sided page with the first 10 pages free. Specialized computer summaries are available for a fee charged at an hourly rate. Most reports require less than one hour's time to create a specialized summary. Please call UDEQ (801-536-4100) for current hourly rates.

The EPA offers access to TRI data on the World Wide Web at the following two websites:

- www.epa.gov/tri
- www.epa.gov/enviro/html/tris

EPA and EPA Region VIII provide a variety of information about the Emergency Planning and Community Right-To-Know Act at these websites:

- www.epa.gov/Region8/toxics_pesticides/epcra/epcra.html
- yosemite.epa.gov/oswer/ceppoweb.nsf/content/epcraoverview.htm

FACILITY OVERVIEW

Number of Reporting Facilities

For calendar year 2005, 199 Utah facilities filed a total of 819 TRI forms. 741 forms were Form-R while 78 forms were Form-A. 110 different TRI-listed chemicals were reported. Figure 1 shows the annual trend in the number of facilities and number of chemical reports. In comparison with 2004 data, the number of facilities that submitted under TRI increased by twenty (20), up from 179, while the number of chemical reports increased by 44 from 775 to 819. The number of unique chemicals reported decreased by 15 from 125 to 110.

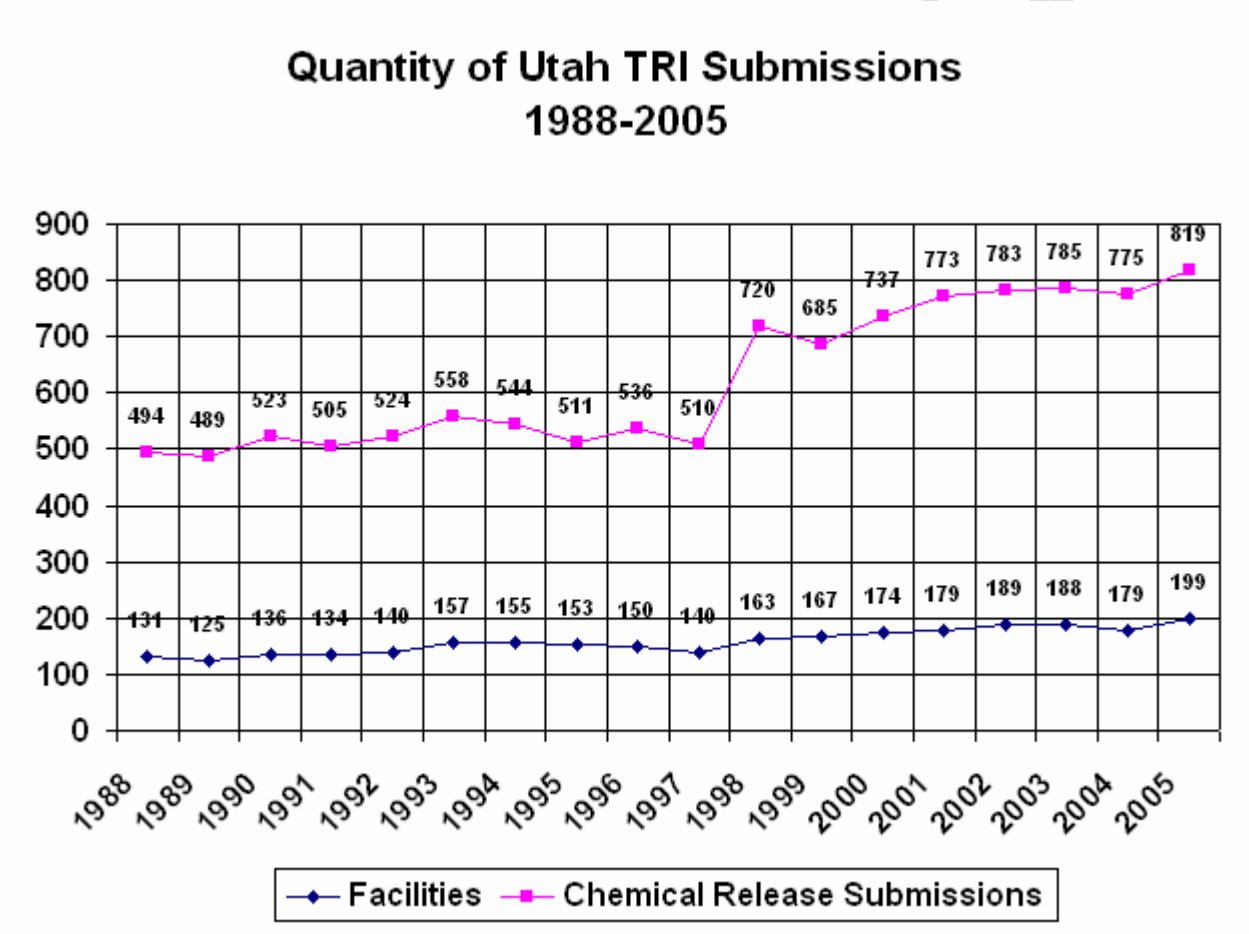

Figure 1

FACILITY LOCATION

Each facility reports its latitude and longitude as part of the TRI submission. This information permits mapping of TRI facility locations. In Figure 2, each dot represents the location of a TRI facility. For purposes of reporting the Wasatch Front is comprised of Weber, Davis, Salt Lake and Utah Counties. Sixty-six percent of all TRI reporting facilities (131 of 199) are located along the Wasatch Front while facilities along the Wasatch Front contributed 74% to the total release amounts reported in Utah.

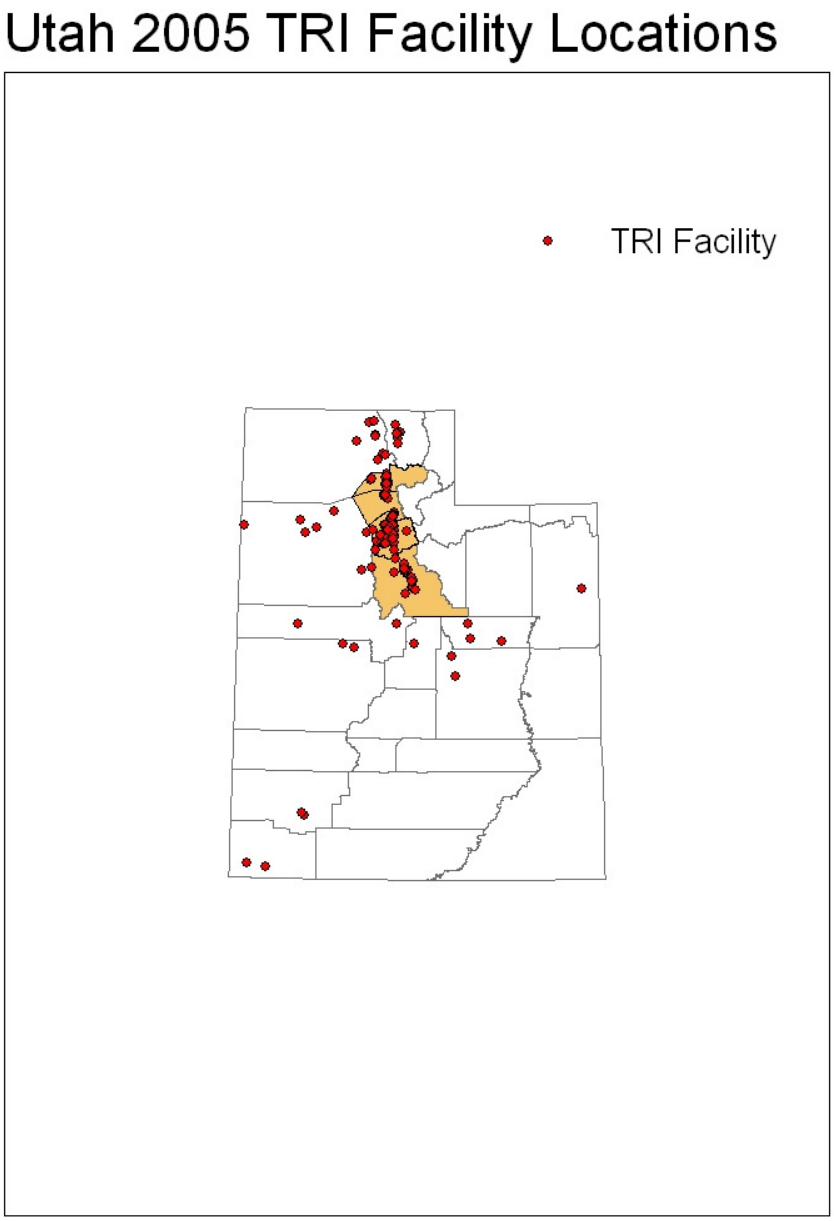

Figure 2

Figure 3 below displays the 2005 TRI reporting by industry sector category. The 199 facilities reporting are categorized into 25 industrial sectors based on Standard Industrial Classification Code groups. The six industrial sectors with the greatest number of facilities reporting are identified in Figure 3. The greatest number of facilities reporting was from the Fabricated Metal Products sector with 24 facilities reporting.

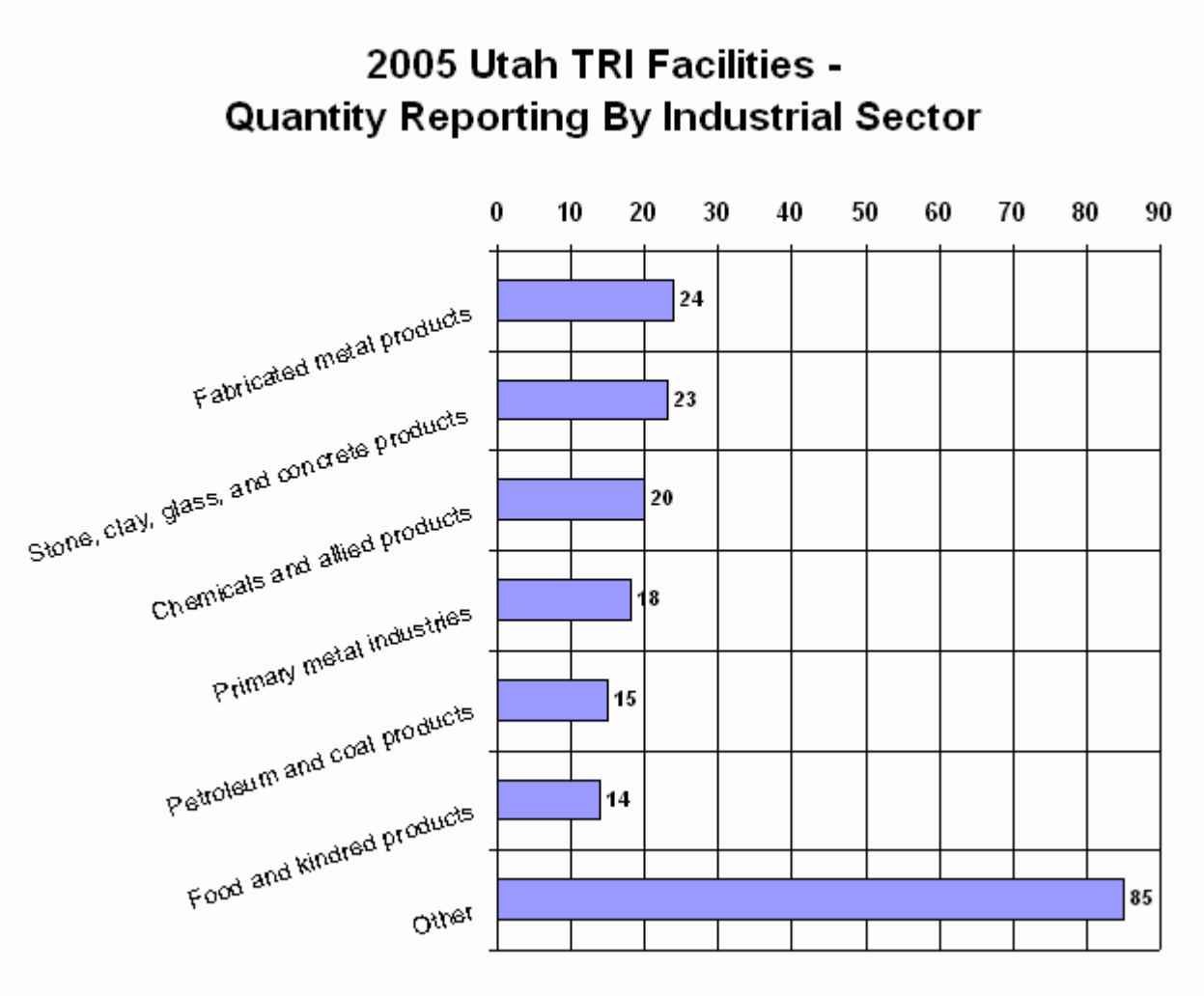

Figure 3

Utah 2005 TRI Facilities – Quantity Reporting From Each Industrial Sector

Nineteen industrial sectors that comprise the "Other" category are:

1. Electrical and electronic equipment
2. Wholesale trade-nondurable goods
3. Transportation equipment
4. Rubber and miscellaneous plastics products
5. Electric, gas, and sanitary services
6. National security and international affairs
7. Instruments and related products

8. Metal Mining
9. Industrial machinery and equipment
10. Miscellaneous manufacturing industries
11. Lumber and wood products
12. Environmental quality and housing
13. Nonmetallic minerals, except fuels
14. Coal mining
15. Forestry
16. Paper and allied products
17. Furniture and fixtures
18. Business services
19. Printing and publishing

Total Releases

Figure 4 shows the trend for total releases in Utah beginning 1988 through 2005.

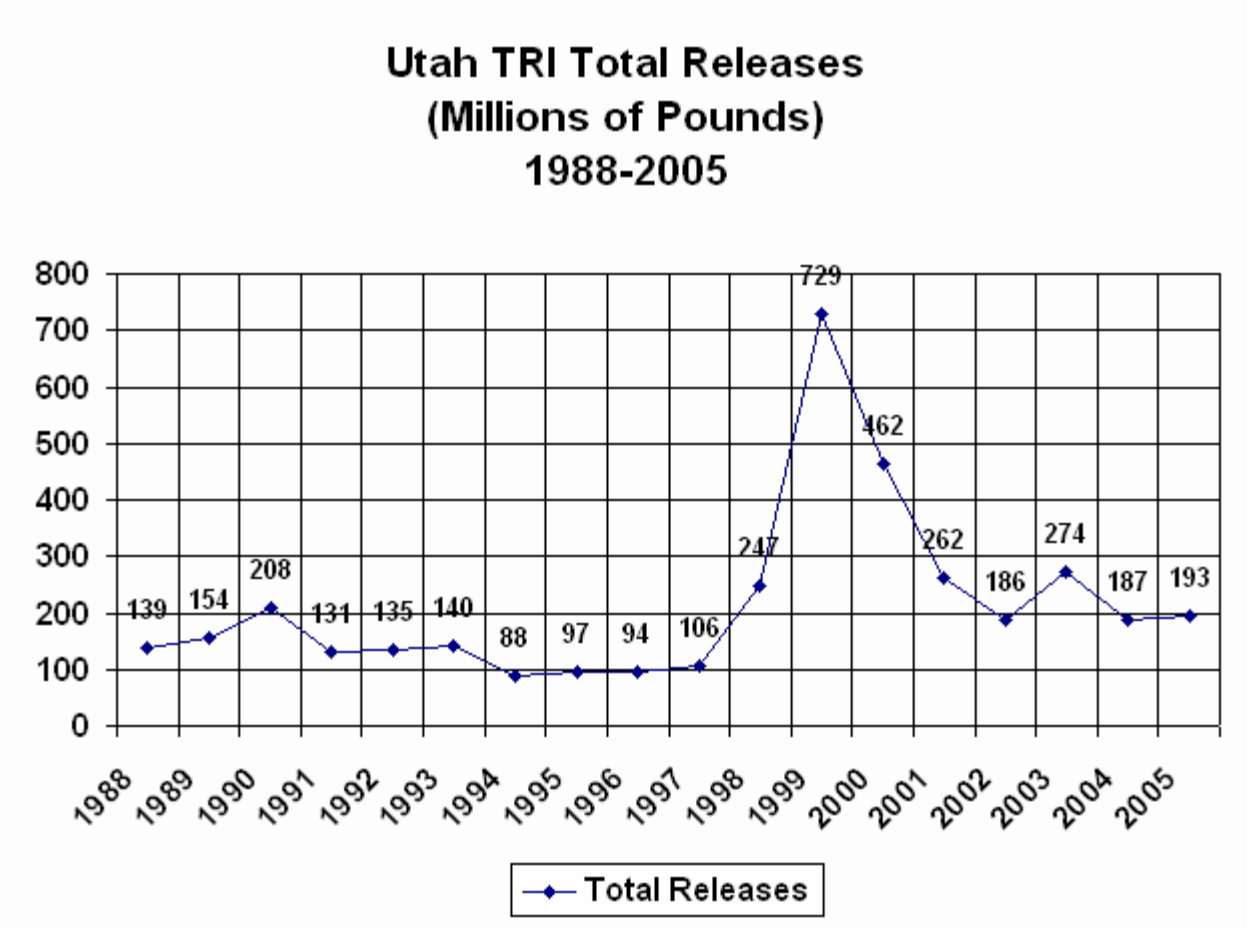

Figure 4

Release totals are typically described under primary categories: (1) *Total On-Site Releases*, and (2) *Total Off-Site Releases (or Transfers)*. These categories may be further sub-divided.

Primary category *Total On-Site Releases* may be sub-divided to include: releases to air, releases to surface water, releases to ground water, and releases to land. The primary category *Total Releases Off-site* (transfers), may be divided to include: *Transfers to Publicly Owned Treatment Works* (POTWs - characterized by discharges to sanitary systems), and *Transfers to Treatment, Storage and Disposal (TSD) Facilities* (as described by the Resource Conservation and Recovery Act (RCRA)).

Total reported releases from Utah facilities rose by 5.4 million pounds, representing a 2.9% increase, from 188.0 million pounds in 2004 to 193.4 million pounds in 2005. The distribution among the primary categories, on-site releases and off-site releases described above, in terms of pounds released were weighted heavily in on-site releases. Total on-site releases were reported in the amount of 172.2 million pounds comprising 89.0% of all releases, while transfers off-site were reported in the amount of 20.0 million pounds comprising 10.3% of all releases.

Within the context of the primary category of *Total Releases On-Site*, the most significant releases were those reported as releases to land. On-site releases to land totaled 162.1 million pounds and comprise 83.8% of total releases in Utah for reporting year 2005. Proceeding in descending order by pounds released, releases to air were reported at 10.0 million pounds representing 5.2% of total releases, and releases to surface water/ground water were reported in the amount slightly less than 54,600 pounds representing 0.03% of total releases in Utah. Total releases of persistent, bioaccumulative, and toxic (PBT) chemicals, specifically dioxin and dioxin-like compounds (hereafter referenced as "Dioxins"), must be considered separately: Dioxins are unique since this category of PBT chemicals are reported in grams. The release of PBT Dioxins decreased slightly by 0.3%.

Within the context of the primary category of *Total Releases Off-Site*, total transfers off-site totaled 21.2 million pounds and represent 11.0% of total releases in Utah. Total transfers to POTWs were reported at 1.2 million pounds, and total transfers to other off-site locations were reported at 20.0 million pounds. The latter includes transfers to TSD facilities whether in-state or out-of-state.

The annual trend for each of several of the sub-categories of on-site releases including releases to air, releases to surface waters, and the sub-category to off-site releases, transfers off-site, showed a decrease from last year.

Total on-site and off-site releases include:

- On-site releases at the reporting facility to air, land, and water.
- Transfers of TRI-listed metals to municipal wastewater treatment plants (POTW). Generally, metals pass untreated through conventional treatment plants and are discharged in the plant effluent.
- TRI chemicals transferred to and disposed at off-site facilities, which are regarded as being released to the environment.

The top 10 facilities for on-site and off-site releases are shown in Table 1. Kennecott Mine, Concentrators & Power Plant, Kennecott Smelter & Refinery facilities, and Envirocare were the top three contributing facilities to total reported releases in Utah in 2005.

Table 1
Top 10 Facilities - Total On-site and Off-site Releases

	Facility Name	Lbs/Year
1	KENNECOTT UTAH COPPER MINE, CONCENTRATORS, & POWER PLANT	96,993,011
2	KENNECOTT UTAH COPPER SMELTER & REFINERY	30,182,620
3	ENVIROCARE OF UTAH, LLC.	23,381,340
4	NUCOR STEEL –A DIVISION OF NUCOR CORPORATION	8,142,116
5	CERROWIRE & CABLE CO.	4,619,006
6	US MAGNESIUM, LLC	4,134,558
7	PACIFICORP – HUNTINGTON PLANT	2,859,530
8	PACIFIC STATES CAST IRON PIPE COMPANY	2,851,240
9	CLEAN HARBORS GRASSY MOUNTAIN, LLC	2,188,858
10	ATK THIOKOL, PROMONTORY	2,115,262

The top 10 on-site and off-site chemical releases are shown in Table 2. Copper compounds, lead compounds, and zinc compounds constitute the chemicals released in greatest quantities.

Table 2
Top 10 Chemicals - Total On-site and Off-site Chemical Releases

	Chemical Name	Lbs/Year
1	COPPER COMPOUNDS	79,325,836
2	LEAD COMPOUNDS	45,104,831
3	ZINC COMPOUNDS	28,723,117
4	ARSENIC COMPOUNDS	4,765,478
5	COPPER	4,691,507
6	HYDROCHLORIC ACID	4,463,281
7	BARIUM COMPOUNDS	3,355,099
8	CHLORINE	3,040,235
9	CHROMIUM COMPOUNDS	2,377,311
10	NITRATE COMPOUNDS	2,048,896

Totals for on-site releases include releases to air, land, and water occurring strictly at the facility, and exclude releases that may occur after materials are transferred off-site. The top 10 facility totals for on-site releases are given in Table 3.

Table 3
Top 10 Facilities - Total On-site Releases

	Facility Name	Lbs/Year
1	KENNECOTT UTAH COPPER MINE, CONCENTRATORS, & POWER PLANT	96,991,889
2	KENNECOTT UTAH COPPER SMELTER & REFINERY	30,129,718
3	ENVIROCARE OF UTAH, LLC.	23,379,569
4	US MAGNESIUM, LLC	4,133,370
5	PACIFICORP - HUNTINGTON PLANT	2,859,380
6	PACIFIC STATES CAST IRON PIPE COMPANY	2,663,390
7	CLEAN HARBORS GRASSY MOUNTAIN, LLC	2,166,747
8	ATK THIOKOL, PROMONTORY	1,850,865
9	BONANZA POWER PLANT	1,552,687
10	INTERMOUNTAIN POWER GENERATING STATION	1,318,161

The top 10 chemicals for on-site releases to land, air, and water are shown in Table 4.

Table 4
Top 10 Chemicals - Total On-site Releases

	Chemical Name	Lbs/Year
1	COPPER COMPOUNDS	78,382,289
2	LEAD COMPOUNDS	43,921,415
3	ZINC COMPOUNDS	21,588,893
4	ARSENIC COMPOUNDS	4,761,778
5	HYDROCHLORIC ACID	4,463,276
6	BARIUM COMPOUNDS	3,271,755
7	CHLORINE	3,040,235
8	CHROMIUM COMPOUNDS	2,012,680
9	MANGANESE COMPOUNDS	1,329,857
10	AMMONIA	1,273,835

The differences are not great between totals presented in Table 1 Total Releases (on-site and off-site), and Table 3 total releases on-site. The differences are comprised of: (1) metals released from POTWs, and (2) TRI chemicals transferred off-site for disposal. Thus the differences presented between total releases (on-site plus off-site) and transfers (off-site) only reflect quantities of TRI metals released to POTWs and other TRI chemicals transferred off-site for disposal. This relative difference indicates that the combined volume of wastes that are transferred to POTWs plus wastes transferred off-site for disposal are relatively low in comparison to volumes that are released on-site.

RELEASES TO AIR

Figure 5 illustrates the trend of total releases to air for years 1988 to 2005. Releases to air decreased by 0.5% from slightly less than 10.1 million pounds in 2004, to 10.0 million pounds in 2005. These amounts continue to be among the lowest air releases for Utah in the 20-year history of the federal TRI program.

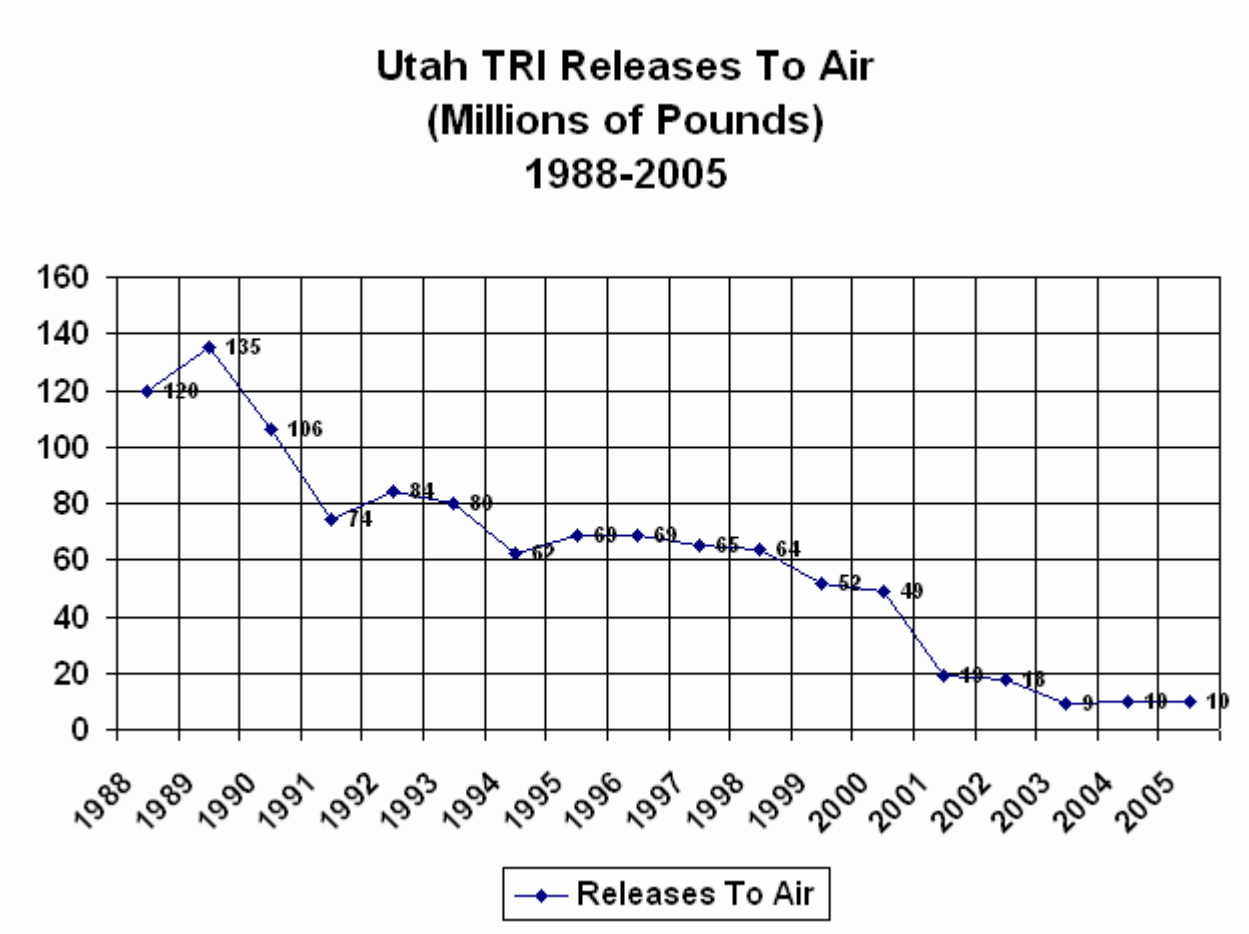

Figure 5

The top 10 facility totals for chemical releases to air are shown in Table 5. U.S. Magnesium reported the greatest release to air in 2005. U.S. Magnesium's annual trend of total releases continues to decrease. Additional discussion about U.S. Magnesium is presented below.

Table 5
Top 10 Facilities - Total Releases to Air

	Facility Name	Lbs/Year
1	US MAGNESIUM, LLC	4,127,971
2	ATK THIOKOL, PROMONTORY	1,750,977
3	PACIFICORP - HUNTINGTON PLANT	1,631,699
4	PACIFICORP - CARBON PLANT	390,733
5	TESORO REFINING AND MARKETING COMPANY	183,962
6	BRUSH RESOURCES INC, MILL	163,403

7	U.S. DOD USAF OGDEN AIR LOGIST ICS CENTER	153,511
8	INTERMOUNTAIN POWER GENERATING STATION	149,805
9	PACIFICORP HUNTER PLANT	140,671
10	UTILITY TRAILER MFG. - CLEARFIELD 2	122,740

For reporting year 2005 U.S. Magnesium, ATK Thiokol-Promotory, and the Pacificorp-Huntington Plant facilities were the primary contributors to total releases to air. U.S. Magnesium reported a total amount released of 4.1 million pounds, ATK Thiokol-Promotory reported a total amount released of 1.7 million pounds, and the Pacificorp–Huntington Plant reported a total amount released of 1.6 million pounds. All other facilities reporting releases to air reported releases that were below 400,000 pounds.

The top 10 chemicals released to air are shown in Table 6.

Table 6
Total 10 Chemicals - Releases to Air

	Chemical Name	Lbs/Year
1	HYDROCHLORIC ACID[1]	4,372,977
2	CHLORINE	3,040,235
3	HYDROFLUORIC ACID	890,557
4	AMMONIA	338,276
5	SULFURIC ACID	258,420
6	1,1-DICHLORO-1-FLUOROETHANE	114,801
7	METHYLENE CHLORIDE	95,898
8	XYLENE (MIXED)	92,625
9	TOLUENE	88,237
10	HEXANE	86,119

The primary industrial contributors to the release of 4.4 million pounds of hydrochloric acid (aerosols only) include: smelting and refining of non-ferrous metals except copper and aluminum (1.1 million pounds), rocket motor manufacturing (1.7 million pounds), and electric services (760,000 pounds) which includes coal fired power generation. These contributors comprise 92.4% of the hydrochloric acid released.

ATK Thiokol total releases to air in 2005 increased by 100.7% from 2004. The facility's releases to air of hydrochloric acid specifically increased by 103.6% from 847,000 pounds in 2004 to 1.7 million pounds in 2005.

ATK Thiokol – Promontory

The increased quantity of hydrochloric acid (aerosol forms only) reported as releases to air in 2005 by ATK Thiokol-Promontory are attributable to three primary activities. 1. The facility operates an anaerobic bio-reactor which is used to recover fuel from a motor wash-out process. Motors subject to washout are Reusable Solid Rocket Motors (RSRMs) that have exceeded a pre-designated 5-year shelf life. ATK reports that the bio-reactor unit was not operational from April 2005 until June 2006. For this reason, the propellant recovered from the

[1] Since 1995, under the TRI program, reporting releases of hydrochloric acid refers only to aerosolized forms.

wash-out process was not sent to the recovery facility. Instead, it had to be disposed of via Open Burning/Open Detonation (OBOD) at the ATK permitted facility. 2. The facility is currently under contract until 2010 to wash out and recast missiles using the same process. 3. The third activity involves a recent change in the permit parameters pertaining to static motor testing. A permit modification (August 2005) combined OBOD and RSRM static testing into one permit, allowing 4.2 million lbs in a 12 month rolling average. The permit formerly accommodated static testing of four-segment RSRMs; the permit modification now provides for static testing of five-stage RSRMs.[2] OBOD is the main source of ATK's HCL emissions. The increase in materials released is proportional to process modifications, the addition of new contract work, and changes associated with permit modifications. Each contributes to a corresponding increase in the quantity of materials processed.

U.S. Magnesium

U.S. Magnesium (USM) is located along the southwest side of the Great Salt Lake in the western desert of Tooele County. USM produces magnesium metal by extraction of magnesium chloride from brines drawn from the lake. Chlorine and hydrochloric acid are produced as by-products of the magnesium extraction process. In 2003 USM implemented process upgrades to improve chlorine recovery and reduce emissions.

Historically this facility was among the top contributors of TRI releases to air in Utah. The position of USM on the national stage has changed dramatically in recent years. For reporting year 2000 USM was ranked #1 nation-wide for total releases to air. A nation-wide review of all facilities that released chlorine and hydrochloric acid (aerosol forms only) for reporting year 2004 (the latest year available on the EPA website) shows that USM has dropped to 28th in the nation[3].

[2] Personal communication ATK Thiokol – Promontory facility environmental management personnel, March 7, 2007.

[3] Query of EPA's web-based TRI program application TRI Explorer executed 6-March-07. Query parameters chosen: Reports by Facility; Year of Data: "2004"; Geographic Location: "All of United States"; Chemical Released: "Chlorine," and "Hydrochloric Acid (1995 And After "Acid Aerosols" only)"; Industry: "All Industries."

Figure 6 shows the annual trend for releases to air reported by USM.

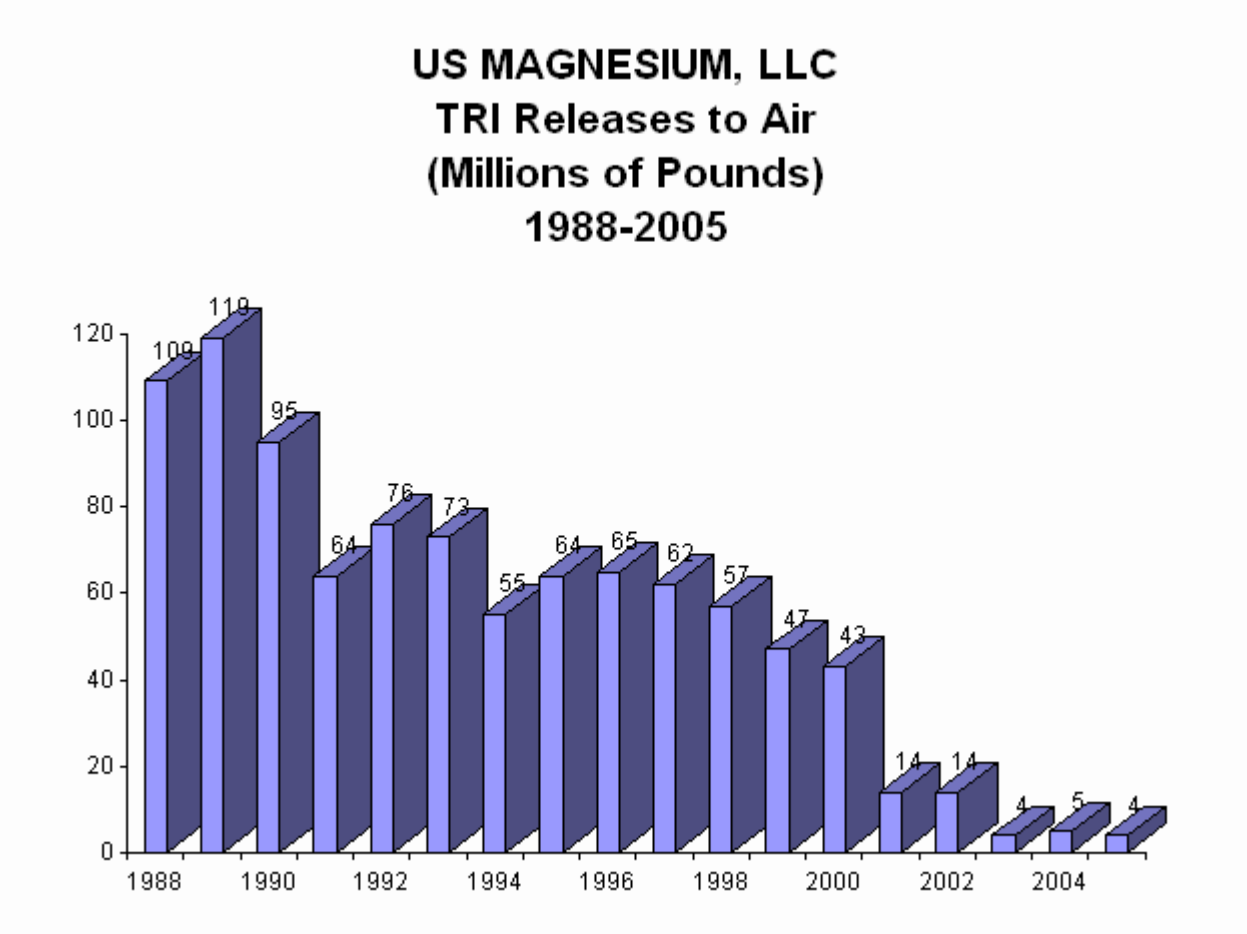

Figure 6

USM continues to trend downward reducing total releases and chlorine releases. USM total release amounts to air (all chemicals) decreased by 1.1 million pounds from 5.2 million pounds in 2004 to 4.1 million pounds in 2005. These reductions represent a 21.3% drop for the facility. Total chlorine released to air by USM decreased from 4.0 million pounds in 2004 to 3.0 million pounds in 2005 for a 25.0% decrease. Total release of hydrochloric acid (aerosol only) decreased slightly from 1.2 million pounds in 2004 to 1.1 million pounds in 2005 showing an 8.8% drop.

Over the past several years the company has implemented new process technology. The process cells do not generate as much chlorine and have also increased chlorine capture efficiency and chlorine process reuse.[4] U.S. Magnesium attributes their reductions to process improvements in operations.

[4] Utah Division of Air Quality site manager provided additional explanation of increased process efficiencies achieved by the plant; electronic correspondence March 24, 2005.

RELEASES TO LAND

Releases to land include releases made to: (1) landfills designed to receive solid waste; (2) surface impoundments for liquid waste; (3) land treatment, incorporating the waste into the soil; or (4) other disposal, such as placing material containing TRI chemicals on land.

Table 7 shows the top 10 facility total releases to land. TRI chemical releases to land in Utah comprise 83.8% of total releases reported in 2005. Releases to land decreased slightly by 2.8% from 166.7 million pounds in 2004 to 162.1 million pounds in 2005.

The combined total releases to land reported by Kennecott Utah Copper facilities, (1) Copper Mine Concentrators and Power Plant, and (2) Copper Smelter and Refinery with a combined sum release to land of 127.0 million pounds comprise 78.3% of all releases to land reported in Utah for 2005. Envirocare reported releases to land slightly less than 23.4 million pounds in 2005.

The combined sum release to land of all three facilities reported constitutes about 92.8% of the total releases to land in Utah in 2005.

Table 7
Top 10 Facilities - Total Releases to Land

	Facility Name	Lbs/Year
1	KENNECOTT UTAH COPPER MINE, CONCENTRATORS, & POWER PLANT	96,963,730
2	KENNECOTT UTAH COPPER SMELTER & REFINERY	29,999,877
3	ENVIROCARE OF UTAH, LLC.	23,379,569
4	PACIFIC STATES CAST IRON PIPE COMPANY	2,636,300
5	CLEAN HARBORS GRASSY MOUNTAIN, LLC	2,166,568
6	BONANZA POWER PLANT	1,487,532
7	PACIFICORP - HUNTINGTON PLANT	1,227,680
8	INTERMOUNTAIN POWER GENERATING STATION	1,168,355
9	WESTERN ZIRCONIUM	1,030,599
10	PACIFICORP HUNTER PLANT	793,636

Total releases to land reported by the KUC Copper Mine, Concentrators and Power Plant decreased by 12% from 110.2 million pounds in 2004 to 97.0 million pounds in 2005. The quantity of release to land reported by the Copper Smelter and Refinery increased slightly from 29.8 million pounds in 2004 to 30.0 million pounds in 2005. Releases to land reported by Envirocare increased from 3.2 million pounds in 2004 to 23.4 million pounds in 2005. Further discussion of the increase reported by Envirocare is presented later in this report.

The decrease in lead and slight increases in copper and zinc compounds reported as releases to land by Kennecott facilities are attributable to differences in the quality and concentrations of these constituent chemicals in the ore and waste rock. Changes occurring in the ore and waste rock are values reflected within the amounts reported in the TRI data. [5]

[5] Personal communication with Kennecott Environmental Management personnel, March 7, 2007.

Table 8 identifies the top 10 chemicals released to land in 2005.

Table 8
Top 10 Chemicals - Total Releases to Land

	Chemical Name	Lbs/Year
1	COPPER COMPOUNDS	78,319,680
2	LEAD COMPOUNDS	43,904,404
3	ZINC COMPOUNDS	21,573,827
4	ARSENIC COMPOUNDS	4,755,313
5	BARIUM COMPOUNDS	3,267,116
6	CHROMIUM COMPOUNDS	2,009,371
7	MANGANESE COMPOUNDS	1,322,334
8	NICKEL COMPOUNDS	1,161,197
9	NITRATE COMPOUNDS	992,919
10	MANGANESE	959,506

In reference to specific chemicals and/or chemical compounds reported released in 2005, copper compounds, lead compounds, zinc compounds, and arsenic compounds occupy the top four positions respectively in amounts released to land. In 2005, the amount of copper compounds reported released increased from 64.2 million pounds to 78.3 million pounds, the amount of lead compounds reported released decreased from 61.6 million pounds to 43.9 million pounds, the amount of zinc compounds reported released increased from 16.3 million pounds to 21.6 million pounds, and the amount of arsenic compounds reported released dropped from 6.4 million pounds reported in 2004 to 4.8 million pounds in 2005. The combined reported release-to-land sum of these four chemical categories constitutes approximately 91.7% of all releases to land reported in 2005.

Data reported by the (1) KUC Copper Mine, Concentrator & Power Plant, (2) KUC Smelter & Refinery, and (3) Envirocare facilities reflect the largest releases of copper compounds. Releases of copper compounds by the KUC Mine Concentrator & Power Plant facility, the KUC Concentrator, Smelter and Refinery facility reported an estimated total of 57.7 million pounds, and 7.8 million pounds respectively, while the Envirocare facility reported an estimated 12.2 million pounds.

The chemical categories arsenic compounds, barium compounds, chromium compounds, manganese compounds, and nickel compounds (presented in descending order by pounds reported) comprise the remaining segment of the largest quantity releases to land reported which exceeded 1 million pounds.

Mining

Three mining facilities reported under the TRI program for reporting year 2005:

- Kennecott Utah Copper Mine, Concentrators & Power Plant
- Brush Resources, Inc., Mill
- Kennecott Barneys Canyon Mining Company

Kennecott Facilities

Kennecott Utah Copper (KUC) operates extensive mining, milling, smelting, and refining operations in western Salt Lake County. The company's mine is one of the world's largest open pit mines. Annually the facility extracts millions of tons of overburden, waste rock, and ore as part of its operations. Ore is concentrated and shipped by pipeline to the smelter, which produces copper, and gold. Sulfuric acid is also produced out of the process. The Kennecott Barneys Canyon Mine is an open pit gold mine. For reporting year 2005 Kennecott facilities total releases to land were reported in the form of compounds of copper, lead, zinc, arsenic, barium, and in lesser amounts compounds of chromium, manganese, and nickel. The release quantity reported by Kennecott facilities account for 78.3% of the total quantity of chemicals reporting by all facilities in Utah for the category of *total releases to land*.

Kennecott Copper Mine Concentrators and Power Plant - Figure 7 shows the annual trend for releases to land from the Kennecott Copper Mine, Concentrators and Power Plant facility. For reporting year 2005 the total amount of material released to land decreased by 12.0% from 110.2 million pounds in 2004 to 97.0 million pounds in 2005.

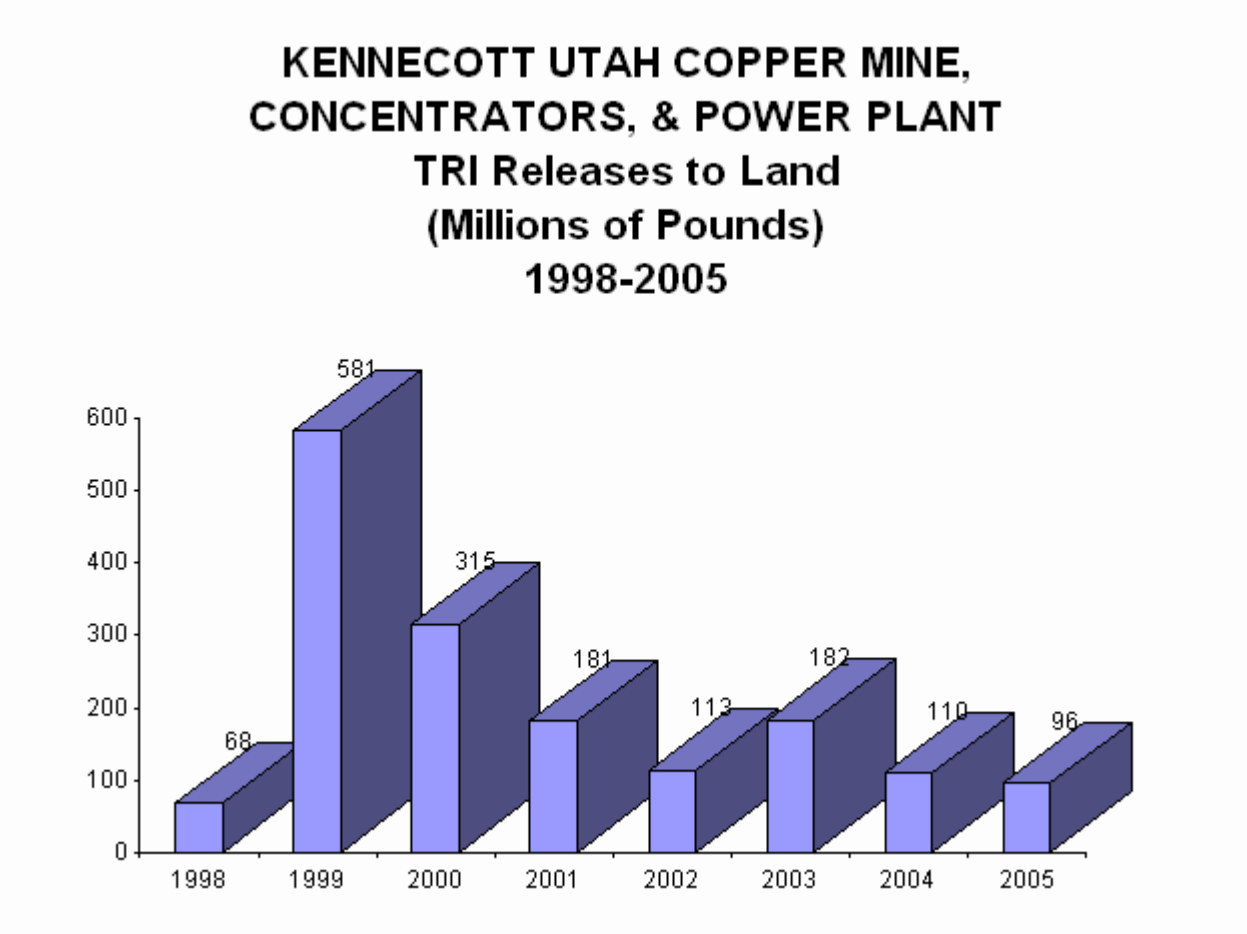

Figure 7

Chemical groups representing the highest total releases to land in 2005 from the Mine, Concentrators and Power Plant in descending order by amount are copper compounds (57.7

million pounds), lead compounds 35.2 million pounds), and zinc compounds 1.6 million pounds).

Kennecott Copper Smelter and Refinery – The Copper Smelter and Refinery files separate TRI reports from the mining, concentrators, and power plant facility, and has been doing so since 1987. Figure 8 shows the trend in releases to land originating from Kennecott Copper Smelter and Refinery facility. Releases increased slightly from 29.8 million pounds in 2004 to 30.0 million pounds reported in 2005.

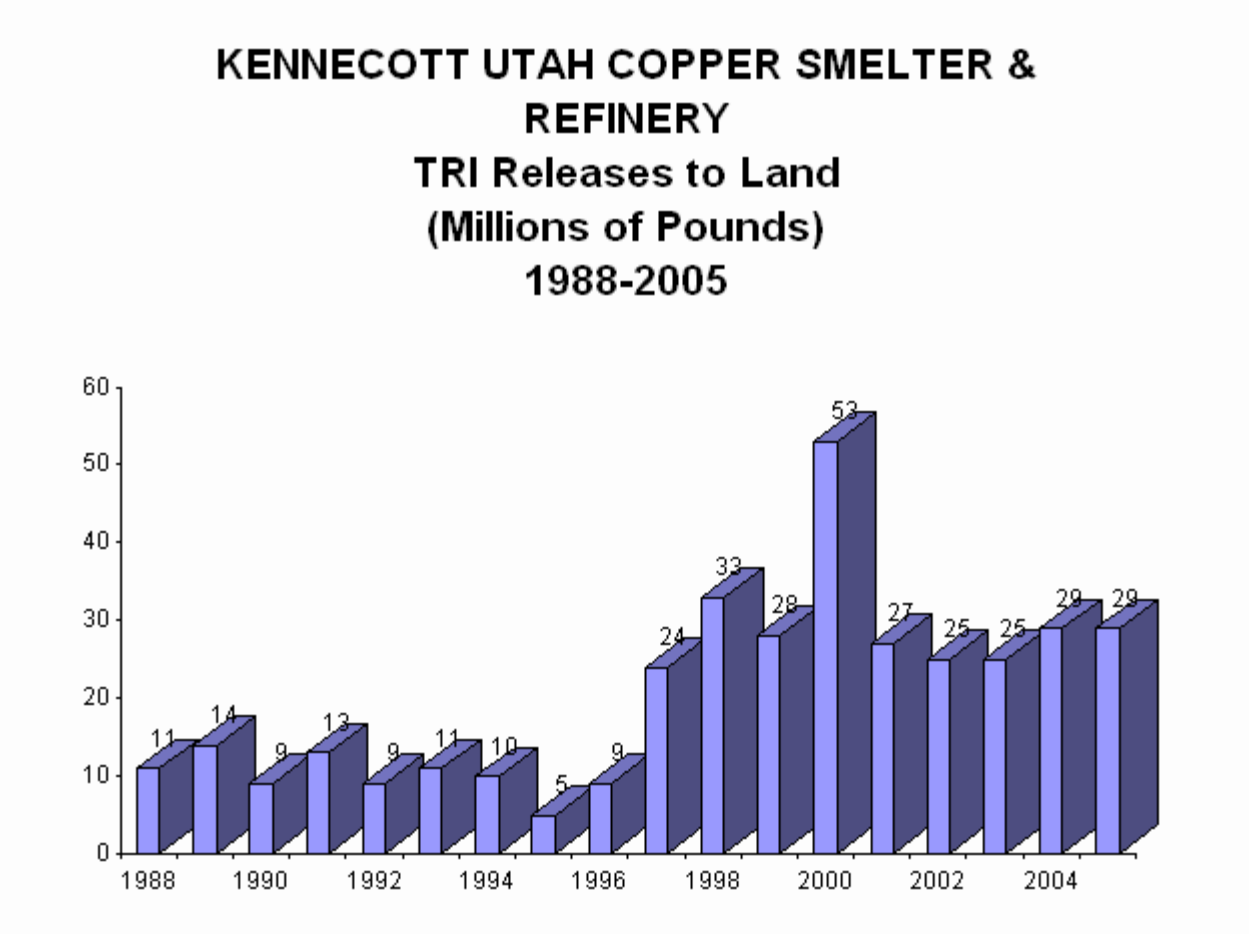

Figure 8

Chemical groups representing the highest total releases to land in 2005 from the Kennecott Smelter & Refinery facility (presented in descending order by amount) are zinc compounds 11.0 million pounds, copper compounds 7.8 million pounds, lead compounds 5.4 million pounds and arsenic compounds 4.3 million pounds.

Waste Disposal Facilities

Waste disposal facilities that treat, store, and/or dispose of hazardous waste comprise an industrial sector required to submit TRI reports. Subtitle C of the Resource Conservation and

Recovery Act and the Utah Solid and Hazardous Waste Act regulate these facilities. The EPA TRI definition of a *release* to land includes the placement of TRI chemicals into landfills, including landfills specifically constructed under requirements of RCRA and Utah Law to contain the waste inside the landfill and preclude a release.

Facilities in this class reporting releases to land in 2005 include:

- Envirocare (now Energy Solutions)
- Clean Harbors Grassy Mountain, LLC

Table 9 lists Clean Harbors Grassy Mountain and Envirocare as the two facilities to report releases to land from a waste disposal facility in 2005.

Table 9
Waste Disposal Facilities - Releases to Land

	Facility Name	Lbs/Year
1	ENVIROCARE OF UTAH, LLC.	23,379,569
2	CLEAN HARBORS GRASSY MOUNTAIN, LLC	2,166,568

Virtually 100% of the releases reported by these facilities were reported as releases to land. In 2005 the Envirocare facility reported a release to land of 23.4 million pounds and the Clean Harbors Grassy Mountain facility reported a release to land of 2.2 million pounds.

Figure 9 shows the increase of releases to land reported by Envirocare in 2005. The release quantity reported by Envirocare reflects a 631% increase over the quantity reported in 2004. Virtually all of this increase originated from the waste received from a single generator. A large Department of Energy operation to decommission a facility was completed in 2005. The wastes consisted largely of debris materials derived from the demolition of component infrastructure resulting from this operation. Envirocare anticipates numbers will return to more traditional levels, pending absence of any unique disposal operations, in the next reporting cycle.

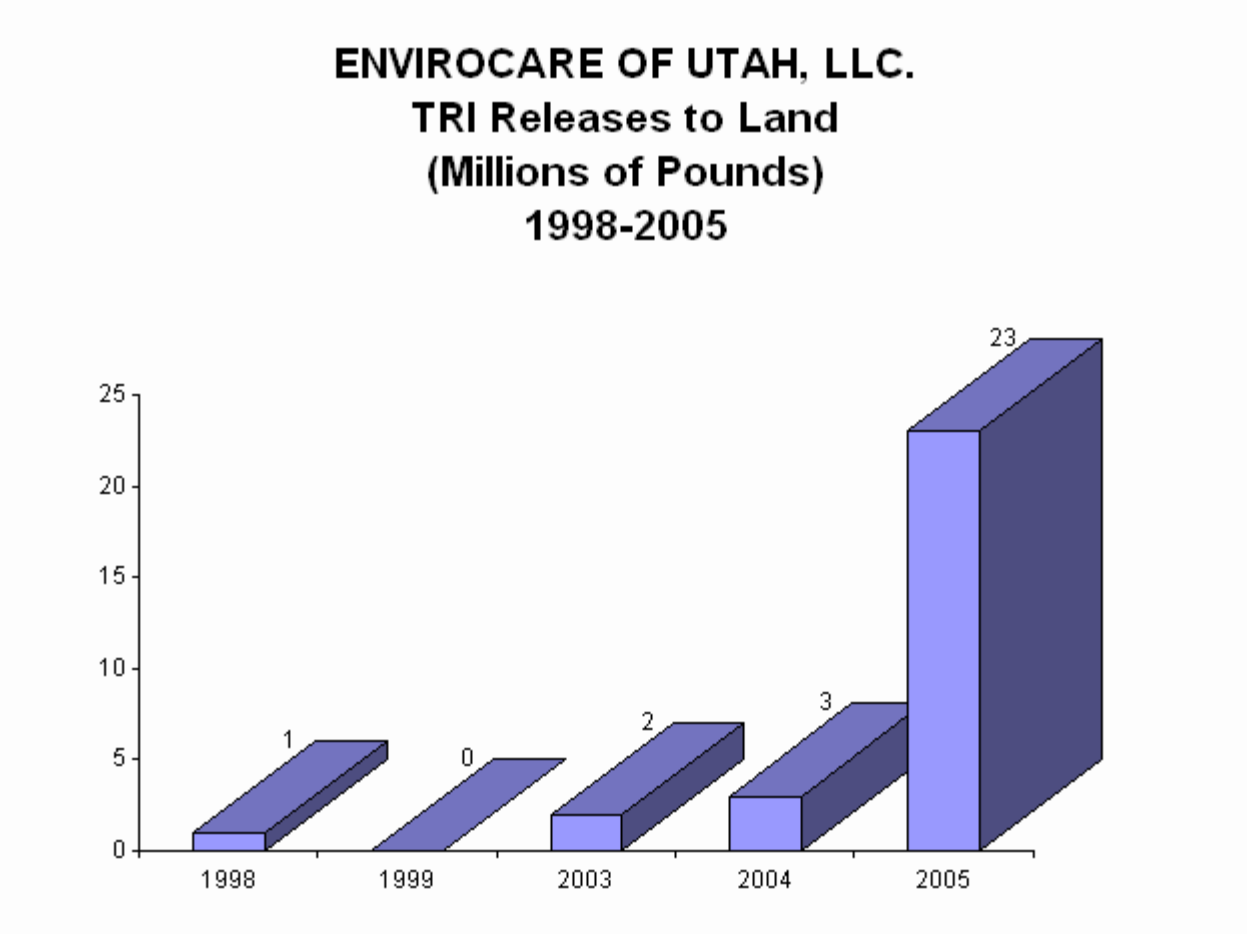

Figure 9

Envirocare data indicates releases to land reported by the facility comprise about 13.8% (22.3 million pounds) of all releases to land reported in Utah in 2005. The dataset received for reporting year 2005 indicates that 12.2 million pounds of copper compounds and slightly less than 7.1 million pounds of zinc compounds were reported by Envirocare.

Table 10 lists the top 10 TRI chemical totals released to land from waste disposal facilities. Releases to land are comprised of metals compounds, primarily copper, zinc, and lead with lesser amounts of a variety of additional metals and polychlorinated biphenyls.

Table 10
Top 10 Chemical Releases to Land
From Waste Disposal Facilities

	Chemical Name	Lbs/Year
1	COPPER COMPOUNDS	12,621,594
2	ZINC COMPOUNDS	7,177,625
3	LEAD COMPOUNDS	3,198,750
4	CHROMIUM COMPOUNDS	661,939
5	POLYCHLORINATED BIPHENYLS (PCBS)	386,589

6	NICKEL COMPOUNDS	296,541
7	CYANIDE COMPOUNDS	158,924
8	SELENIUM COMPOUNDS	132,530
9	BARIUM COMPOUNDS	96,688
10	VANADIUM COMPOUNDS	93,059

Electric Utilities

Electric utilities that burn coal or oil for electric energy production were first required to submit TRI reports in 1998. Table 11 shows electric utility facilities reporting in 2005.

Table 11
Coal-Fired Electric Utilities - Releases to Land

	Facility Name	Lbs/Year
1	BONANZA POWER PLANT	1,487,532
2	INTERMOUNTAIN POWER GENERATING STATION	1,168,355
3	PACIFICORP - CARBON PLANT	120,046
4	SUNNYSIDE COGENERATION ASSOCIATES	18,800

Releases to land reported from Electric utilities totaled 2.8 million pounds in 2005.

Table 12 below provides the list chemicals released to land by the coal-fired electric utility sector.

Table 12
Chemical Releases to Land
From Coal-Fired Electric Utilities

	Chemical Name	Lbs/Year
1	BARIUM COMPOUNDS	2,010,118
2	CHROMIUM COMPOUNDS	178,616
3	MANGANESE COMPOUNDS	135,935
4	LEAD COMPOUNDS	81,445
5	COPPER COMPOUNDS	76,084
6	ZINC COMPOUNDS	72,000
7	VANADIUM COMPOUNDS	68,730
8	ARSENIC COMPOUNDS	68,000
9	NICKEL COMPOUNDS	27,000
10	ANTIMONY COMPOUNDS	23,300
11	LEAD	18,698
12	COBALT COMPOUNDS	17,500
13	SELENIUM COMPOUNDS	16,400
14	MERCURY COMPOUNDS	549
15	AMMONIA	250
16	MERCURY	102
17	DIOXIN AND DIOXIN-LIKE COMPOUNDS[6]	7

[6] Dioxin and dioxin-like compounds are reported in grams.

The release of barium compounds reported by the electric utility sector comprises 74.1% of total releases to land reported by this sector, while the combined releases of chromium compounds and manganese compounds make up another 11.3% of this sector's total releases to land.

RELEASES TO SURFACE WATER

TRI-reported releases to surface water in Utah are a small percentage of total releases reported under TRI. Since only a small percentage of industries in Utah are required to submit TRI reports, this TRI report identifies only a portion of the total chemical discharges to surface water bodies. However, in addition to TRI reports, many facilities are also required to submit "discharge monitoring reports" to the Utah Division of Water Quality which provide additional information on chemical concentrations and chemical amounts released to surface water.

In 2005, facilities reporting TRI chemical releases to surface waters reported a total slightly less than 54,600 pounds. Releases to surface waters decreased by 3.2% from 56,400 pounds reported in 2004. Table 13 provides the list of the top facilities that released TRI chemicals to surface waters in 2005.

Table 13
Top 10 Facility Releases to Surface Water

	Facility Name	Lbs/Year
1	CHEVRON PRODUCTS COMPANY- SALT LAKE REFINERY	38,693
2	KENNECOTT UTAH COPPER SMELTER & REFINERY	8,249
3	KENNECOTT UTAH COPPER MINE, CONCENTRATORS, & POWER PLANT	6,964
4	VALMONT COATINGS - INTERMOUNTAIN GALVANIZING	240
5	USA INDUSTRIES	157
6	PACIFIC STATES CAST IRON PIPE COMPANY	124
7	PACIFICORP - CARBON PLANT	100
8	NUCOR STEEL -A DIVISION OF NUCOR CORPORATION	35
9	RUBBER ENGINEERING	14
10	CERROWIRE & CABLE CO.	5

Table 14 gives the distribution of chemicals released to surface water in 2005.

Table 14
Top 10 Chemical Releases to Surface Water

	Chemical Name	Lbs/Year
1	NITRATE COMPOUNDS	35,000
2	ARSENIC COMPOUNDS	3,150
3	NICKEL COMPOUNDS	2,650
4	ZINC COMPOUNDS	1,818
5	SELENIUM COMPOUNDS	1,750
6	XYLENE (MIXED)	1,100
7	COPPER COMPOUNDS	1,012
8	AMMONIA	1,000
9	TOLUENE	750
10	BENZENE	750

The bulk of releases to surface waters were made by Chevron Products Company who reported about 70.9% of the total while Kennecott reported about 27.9% of the total. Nitrate compound releases of 34,000 pounds, organic compounds, and ammonia were reported by Chevron while all remaining metal compound releases were reported by Kennecott facilities.

TRANSFERS TO PUBLICLY OWNED TREATMENT WORKS

POTWs are publicly owned wastewater treatment plants designed to treat sanitary sewage. They may also receive industrial wastewater. TRI "transfers to POTWs" identify the annual total amount of TRI chemicals discharged to POTW facilities.

Total releases to POTWs increased by 10.3% from slightly less than 1.1 million pounds in 2004 to 1.2 million pounds in 2005.

Table 15 identifies the top 10 facilities that released chemicals to POTWs during 2005.

Table 15
Top 10 Facilities Transferring to POTWs

	Facility Name	Lbs/Year
1	EASTON TECHNICAL PRODUCTS	190,495
2	JOHNSON MATTHEY	132,955
3	COMPEQ INTERNATIONAL	130,582
4	GENEVA NITROGEN LLC	126,440
5	TYCO PRINTED CIRCUIT GROUP, LP, LOGAN DIVISION	116,798
6	DANNON COMPANY, THE	91,864
7	FAIRCHILD SEMICONDUCTOR	87,670
8	FUTURA INDUSTRIES	74,045
9	NESTLE USA - PREPARED FOODS DIVISION, INC.	72,039
10	BUCYRUS BLADES, INC.	46,716

Table 16 lists top chemical transfers to POTWs during 2005. Nitrate compounds accounted for about 78.5% of all releases to POTWs while ammonia accounts for 10.7% of all releases to POTWs in 2005.

Table 16
Top 10 Chemicals Transferred to POTWs

	Chemical Name	Lbs/Year
1	NITRATE COMPOUNDS	946,870
2	AMMONIA	129,096
3	GLYCOL ETHERS	56,000
4	NITRIC ACID	49,929
5	TOLUENE	7,377
6	XYLENE (MIXED)	5,534
7	DIETHANOLAMINE	4,810
8	BENZENE	4,741
9	COPPER COMPOUNDS	495
10	ETHYLBENZENE	242

TRI-reported releases to POTWs do not include information concerning the rate of release or concentration of chemicals in the release. However, State and Federal law requires industrial facilities exceeding federally established chemical concentrations in wastewater to operate industrial pretreatment equipment to reduce such concentrations below harmful levels before discharging to the POTWs.

UTAH FACILITY TRANSFERS TO OTHER OFF-SITE LOCATIONS

Transfers to "other off-site" locations are transfers of TRI chemicals to facilities other than POTWs. Often these facilities include chemical recyclers and waste disposal sites. If the chemical is disposed of at these facilities, it is considered a release to the environment. The material transferred may or may not be classified a "hazardous waste", but it contains a listed TRI chemical.

Table 17 lists the top 10 facilities that transferred chemicals to off-site locations in 2005. The total amount of TRI chemicals transferred off-site decreased by 11.1% from 22.5 million pounds in 2004 to 20.0 million pounds in 2005.

Table 17
Top 10 Facilities Transferring Chemicals Off-site

	Facility Name	Lbs/Year
1	NUCOR STEEL -A DIVISION OF NUCOR CORPORATION	8,133,783.30
2	CERROWIRE & CABLE CO.	4,619,001.00
3	MARK STEEL CORP, JORDAN RIVER PLANT	1,576,500.00
4	CLEAN HARBORS ARAGONITE, LLC.	1,353,506.04
5	COMPEQ INTERNATIONAL	389,454.93
6	STERIGENICS EO, INC	368,161.00
7	PETERSEN INC.	278,400.00
8	TYCO PRINTED CIRCUIT GROUP, LP ., LOGAN DIVISION	265,209.00
9	ATK THIOKOL, PROMONTORY	264,397.00
10	ATK THIOKOL BACCHUS	205,905.70

Transfers reported from the four leading facilities listed in Table 17 comprise 78.5% of the entire amount of waste transferred in 2005.

Table 18 lists the top 10 chemicals transferred off-site. As shown, the chemicals of released in greatest amounts are zinc compounds, copper, lead compounds, copper compounds, chromium, nickel, manganese and manganese compounds make up the bulk of the chemicals transferred to off-site facilities during 2005. These eight chemical and chemical compounds also contributed to the upper percentile of materials transferred off-site.

Table 18
Top 10 Chemicals - Transferred to Off-site Facilities

	Chemical Name	Lbs/Year
1	ZINC COMPOUNDS	7,134,100
2	COPPER	4,690,102
3	LEAD COMPOUNDS	1,183,358
4	COPPER COMPOUNDS	943,051
5	CHROMIUM	847,404
6	NICKEL	828,373

7	MANGANESE	754,560
8	MANGANESE COMPOUNDS	672,082
9	ETHYLENE GLYCOL	371,432
10	CHROMIUM COMPOUNDS	364,504

Figure 10 displays how chemicals were managed after being transferred from Utah facilities. The graphic shows that 51% of chemicals were transferred for disposal, 47% were transferred for recycling, and the remaining percentages were transferred for treatment and energy recovery.

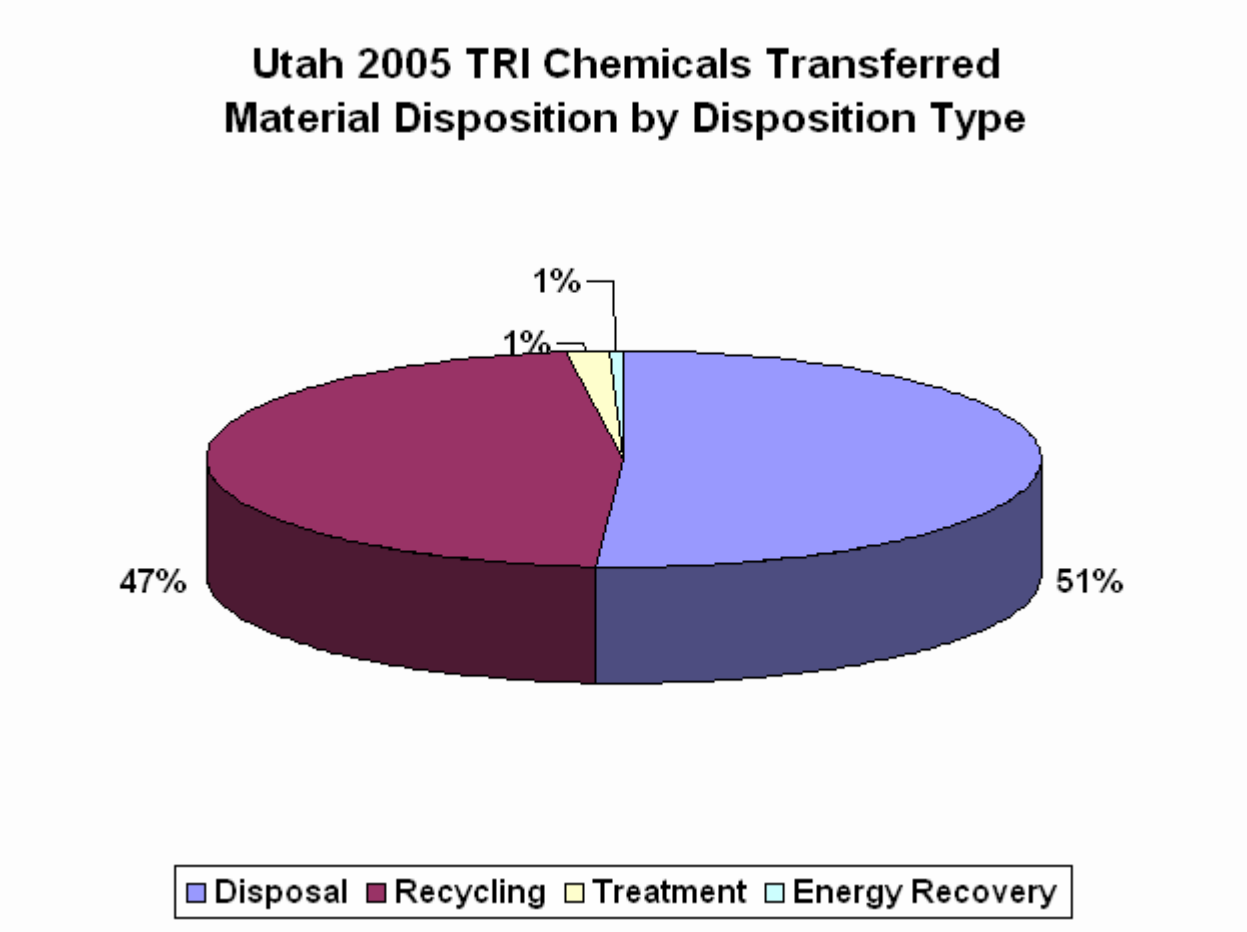

Figure 10

Figure 11 depicts the percentages of chemicals transferred in 2005 to various states. Transfers off-site include transfers to facilities both inside and outside of Utah. An amount just under 20 million pounds of wastes were transferred off-site in 2005. Idaho received 75%, Utah received 17%, California received 4%, Indiana and Missouri each received about 1% and the remaining 1% was transferred to other states.

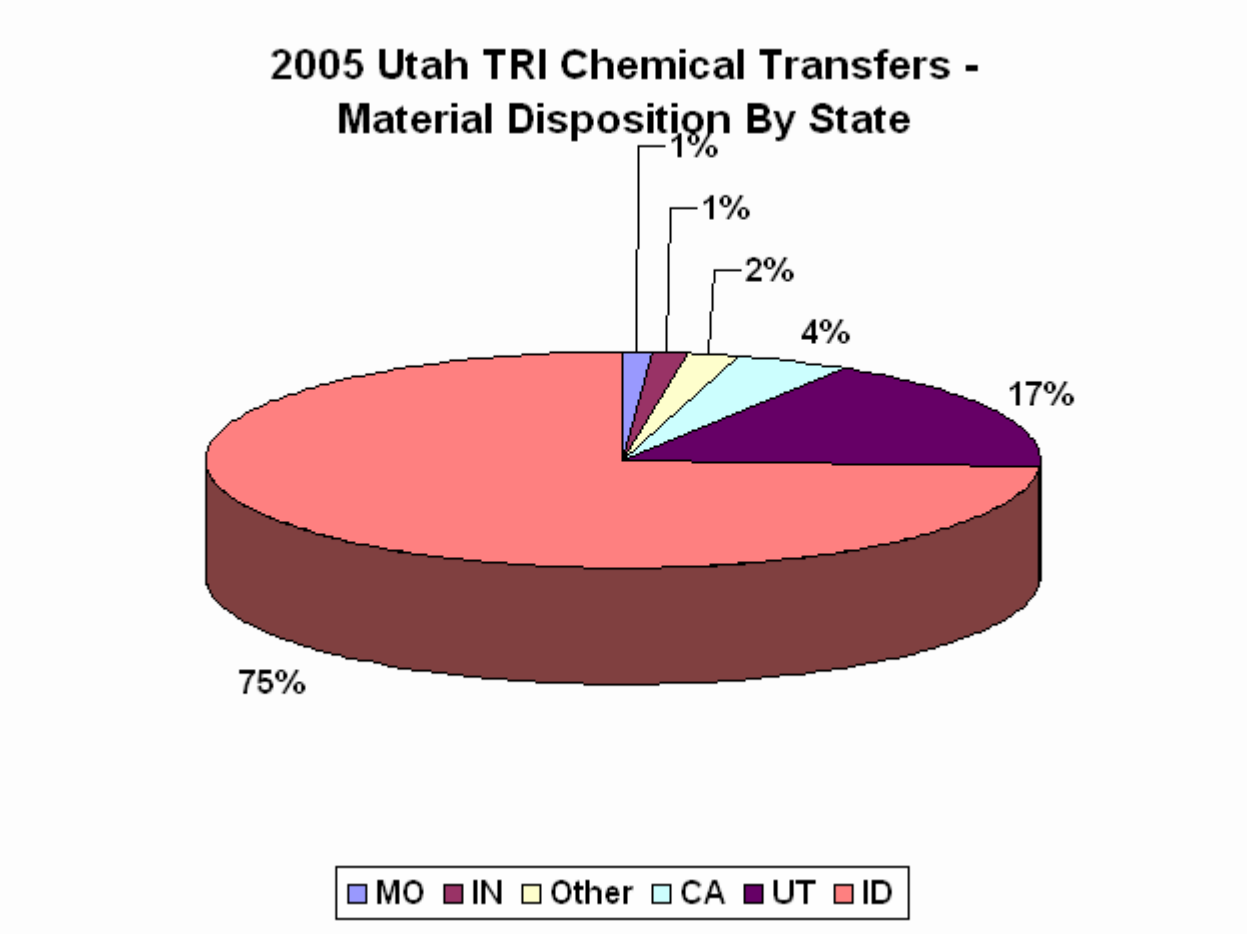

Figure 11

Figure 12 shows the distribution of releases to media. The distribution of releases to land captured the highest quantity of releases in which 162.1 million pounds (93%) of all chemicals reported were released to land in 2005. Releases to air and water made up the remaining 6% and 1% respectively.

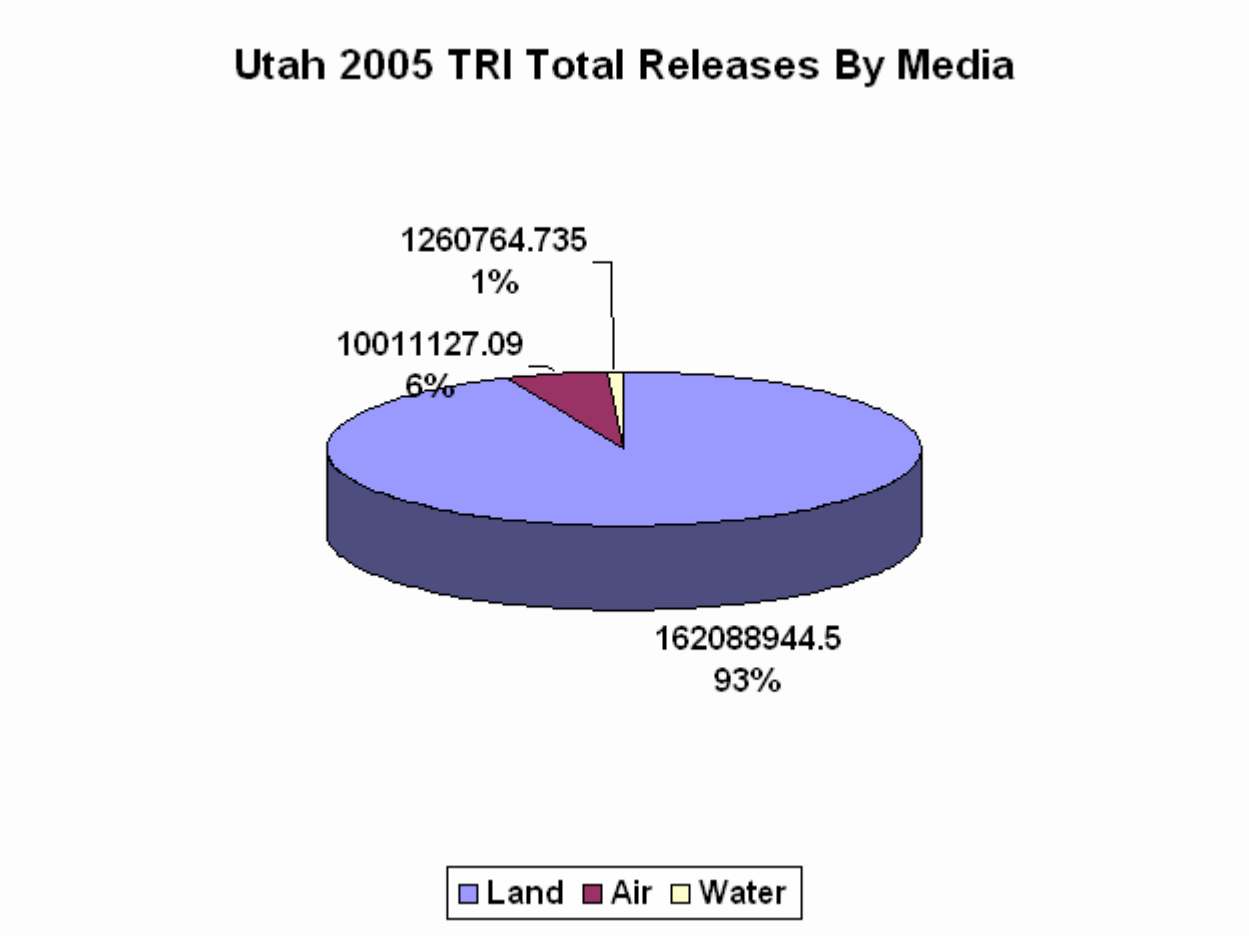

Figure 12

PERSISTENT BIOACCUMULATIVE TOXIC (PBT) CHEMICALS

In October 1999 EPA published a final rule (64 FR 58666), for the addition of seven chemicals and two chemical compound categories to the list of toxic chemicals subject to reporting under EPCRA Section 313 that meet the criteria for persistence and bioaccumulation. Dioxin and dioxin-like compounds and polycyclic aromatic compounds (PACs) were the two chemical compound categories added.

EPA also lowered the reporting threshold on certain other toxic chemicals. Under the 1999 rule, EPA lowered the reporting thresholds for the dioxin and dioxin-like compounds chemical category to 0.1 gram.

Table 19 shows the 17 facilities in Utah reporting releases of dioxin and dioxin-like compounds and the amount of these chemicals released by each facility.

Table 19

Facilities PBT Dioxin and Dioxin-like Compound Releases (Units in Grams)

	Facility Name	Total Air	Total Land	Total Release
1	BONANZA POWER PLANT	3.35	0.00	3.35
2	US MAGNESIUM, LLC	3.04	4332.8	4335.8
3	INTERMOUNTAIN POWER GENERATING STATION	1.98	6.82	8.80
4	SUNNYSIDE COGENERATION ASSOCIATES	0.69	0.00	0.69
5	PACIFICORP HUNTER PLANT	0.69	0.00	0.69
6	PACIFICORP - HUNTINGTON PLANT	0.44	0.00	0.44
7	KENNECOTT UTAH COPPER MINE, CONCENTRATORS, & POWER PLANT	0.43	0.00	0.43
8	GRAYMONT WESTERN US INC., CRICKET MTN LIME PRODUCTION	0.22	0.00	0.22
9	ASH GROVE CEMENT COMPANY	0.12	0.00	0.12
10	PACIFICORP - CARBON PLANT	0.10	0.00	0.10
11	CHEVRON PRODUCTS COMPANY- SALT LAKE REFINERY	0.10	0.00	0.10
12	HOLCIM (US) INC., DEVIL'S SLIDE PLANT	0.05	0.00	0.05
13	TESORO REFINING AND MARKETING COMPANY	0.01	0.00	0.01
14	WESTERN ZIRCONIUM	0.00	0.14	0.14
15	CLEAN HARBORS ARAGONITE, LLC.	0.00	0.00	0.00
16	KENNECOTT UTAH COPPER SMELTER & REFINERY	0.00	0.00	0.00
	Totals	11.22	4339.7	4350.9

For reporting year 2005, 16 facilities in Utah reported a total release of 4,350.9 grams of dioxin and dioxin-like chemicals. The total amount of dioxin and dioxin-like chemicals reported released in 2004 was 4,365.13 grams. This is represents a 0.3% decrease. The 99.7% of the total amount released was reported as releases to land with the remaining percentage reported as releases to air. No dioxins were reported being released to surface water.

SUMMARY

Changes recognized in the Toxic Release Inventory data for reporting year 2005 relative to reporting year 2004 may be summarized as follows:

- *Total On-site and Off-site Releases* increased by 3.9%, an increase of 5.4 million pounds, from 188.0 million pounds in 2004 to 193.4 million pounds in 2005.

- *Total Releases to Air* decreased by 0.5% in 2005. Releases of hydrochloric acid (aerosol forms only) and chlorine rank as first and second highest chemicals respectively released to air. Changes in ATK Thiokol's contract obligations (decommissioning of missiles and the removal and consumption of fuel), rocket motor safety and performance testing on 5-stage motors, and consumption of ammonium perchlorate by more traditional means which is normally consumed by a bio-reaction treatment system, contributed to the increase of hydrochloric acid aerosols. U.S. Magnesium's installation of improved process technology during the past several years continues to contribute to increased chlorine recovery and re-use reducing emissions by the facility.

- *Total Releases to Land* decreased by 2.8% a drop of 4.6 million pounds from 166.7 million pounds in 2004 to 162.1 million pounds in 2005. Releases to land reported by Kennecott facilities comprise 78.3% of the total amount reported as releases to land in Utah in 2005. Kennecott releases to land decreased by 13 million pounds. Envirocare reported a significant increase in 2005 in which virtually the entire increase reported by the facility is attributed to a unique federal DOE cleanup project completed in 2005.

- *Total Releases to Surfaces Water* decreased by 3.2% from 56,400 pounds in 2004 to 54,600 pounds in 2005.

- *Total Transfers to Publicly Owned Treatment Works* increased by 10.3% from slightly less than 1.1 million pounds in 2004 to 1.2 million pounds in 2005.

- *Transfers Offsite* to treatment, storage & disposal facilities, which typically include chemical recyclers and waste disposal facilities, decreased by 11.1% from 22.5 million pounds in 2004 down to 20.0 million pounds in 2005.

- The most notable PBT chemical category is dioxin and dioxin-like compounds. Dioxin and dioxin-like compounds are unique in that it is the only chemical/chemical category throughout the TRI program in which the releases are reported in grams. Releases of PBT chemicals, dioxin and dioxin-like compounds, decreased by 0.3% from 4,365 grams in 2004 to 4351grams in 2005. Releases to land constitute 99.7% of all Dioxin and dioxin-like chemicals released.