1994 Toxics Release Inventory

for the

Department of Defense

Public Data Report

Executive Summary

The Toxics Release Inventory (TRI) is a database which provides information to the public about releases of toxic chemicals into the environment.

TRI was established under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and expanded under the Pollution Prevention Act of 1990. Presidential Executive Order 12856, *Federal Compliance with Right-to-Know Law and Pollution Prevention Requirements*, was issued in 1993 and directs all Federal facilities to comply with the reporting requirements of the two legislative drivers that established TRI.

This report contains TRI data for calendar year 1994, the first reporting year for all DoD installations. DoD submitted this data to the Environmental Protection Agency and the states in July 1995. DoD has 425 installations in the United States. Of these, 131 installations met the reporting thresholds for the TRI.

Executive Order 12856 also requires Federal agencies to reduce their releases and off-site transfers of toxic chemicals by 50% by 1999 from a 1994 baseline. DoD's baseline by which progress will be measured in future years includes both on-site releases to air, land, water, and underground injection, as well as off-site transfers for treatment, storage, or disposal.

DoD's baseline is 11.46 million pounds. About 7.4 million pounds of this total, or approximately two-thirds, were released on-site; the remaining one-third or 4.0 million pounds were transferred off-site for management.

Of the on-site releases, 7,244,137 pounds were released to air, 92,659 pounds to water, 97,363 pounds to land, and 390 pounds to underground injection wells. Air emissions represented over 97% of all toxic chemicals releases. Of the off-site transfers, 2,595,698 pounds were managed in a waste disposal facility, 1,333,449 pounds in a waste treatment facility, and 100,414 pounds in publicly owned treatment works.

By comparison, private industry releases for the TRI reporting year 1993, the most current available, were 2.8 billion pounds. Thus, DoD represents a small portion of those total TRI releases, approximately 0.41%.

Note: The DoD baseline published in this report may change if DoD installations submit refined data to the Environmental Protection Agency.

The Toxics Release Inventory -- An Introduction

The Toxics Release Inventory (TRI) is a database which provides information to the public about releases of toxic chemicals into the environment.

TRI was established under the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and expanded under the Pollution Prevention Act of 1990. Presidential Executive Order 12856, *Federal Compliance with Right-to-Know Law and Pollution Prevention Requirements*, was issued in 1993 and directs all Federal facilities to comply with the reporting requirements of the two legislative drivers that established TRI.

The Executive Order established calendar year 1994 as the first reporting year for most Federal agencies. The Executive Order required that calendar year 1994 data be submitted to EPA by July 1, 1995. DoD guidance issued in April 1995 instructed installations on complying with EPCRA and developing pollution prevention plans.

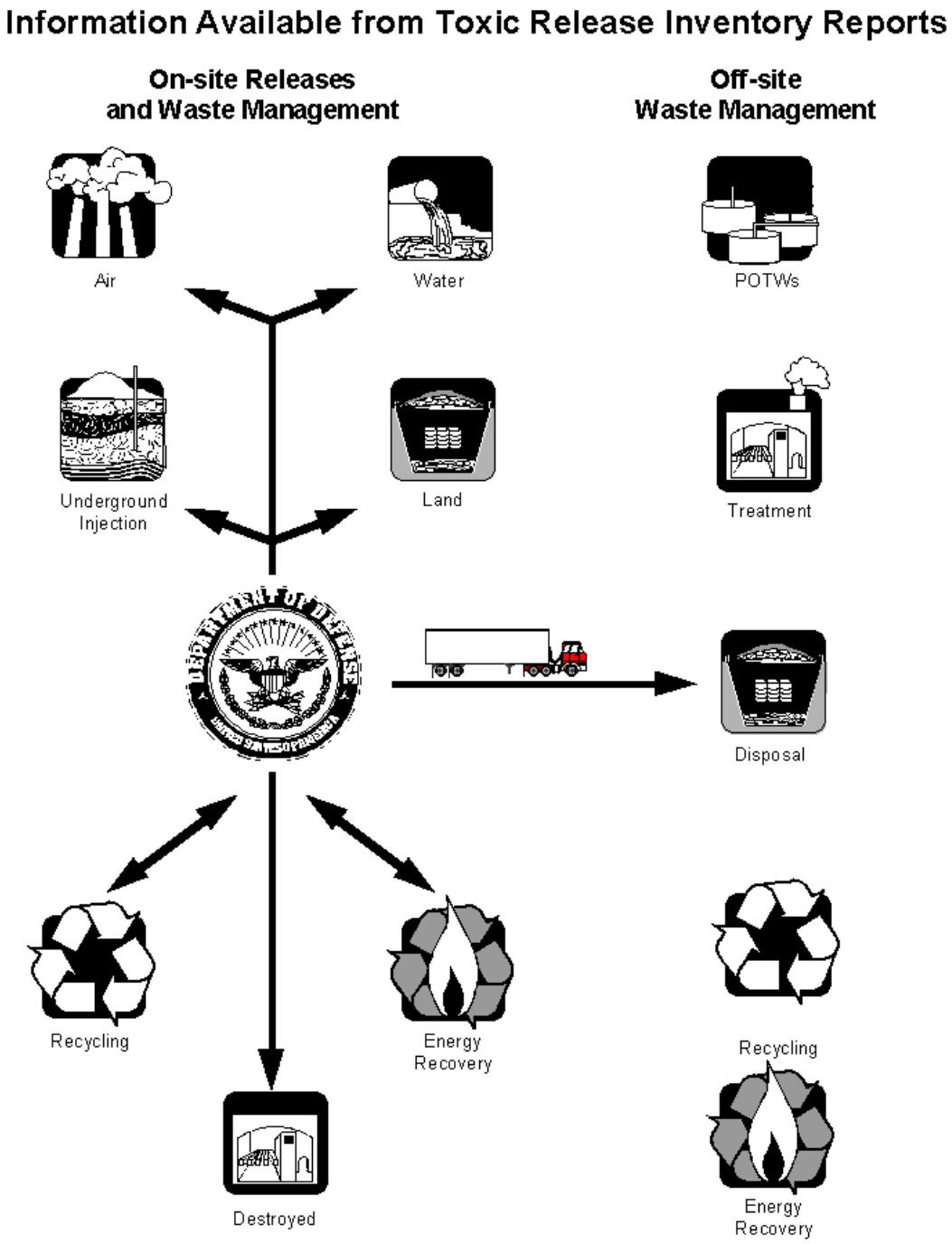
EPA will issue its Toxics Release Inventory National Report later this year which will provide more comprehensive information on DoD's TRI data. DoD is providing this advance report to inform communities surrounding its installations about the Department's toxic releases and waste management practices.

For 1994, TRI reporting was required for over 300 chemicals and 20 chemical categories. Facilities file a separate reporting form, called a "Form R," for each chemical they manufacture, process, or use in excess of reporting thresholds. Only those facilities that manufacture or process listed toxic chemicals in excess of 25,000 pounds within one calendar year or otherwise use listed toxic chemicals in excess of 10,000 pounds within one calendar year are required to submit TRI reports to EPA and the states.

The thresholds are chemical-specific and do not apply to the aggregate of all chemicals manufactured or used at a facility. Once a facility meets a threshold for individual toxic chemicals, the facility must submit a TRI Form R report that details the amount of the particular toxic chemical released into the environment. DoD has 425 installations in the United States. Of these, 131 installations filed 531 Form R's. Facilities report the amount released to the air, water, and land, as well as the amounts associated with waste management activities.

Figure 1 shows the different types of releases and associated waste management activities that are included in TRI reporting. Facilities report the amounts of the listed toxic chemicals that are released on-site directly to air, water, land, or injected in underground wells. In addition, facilities must report amounts of chemicals that are transported off-site to facilities that treat, store, or dispose of the chemical wastes. Finally, facilities must report amounts of chemicals recycled, burned for energy recovery, or treated (see the Appendix I -- Explanation of Terms for further discussion on these terms).

Figure 1



DoD's 1994 Toxics Release Inventory Data

Executive Order 12856 requires that federal agencies reduce their releases and off-site transfers of toxic chemicals by 50% by 1999 from a 1994 baseline. DoD's baseline by which progress will be measured in future years includes both on-site releases to air, land, water, and underground injection, as well as off-site transfers for treatment, storage, or disposal. The actual quantity is the sum of the amounts that appear on the EPA Form R section 8.1 (quantity released) and section 8.7 (quantity treated off-site). In Figure 2, the data above the horizontal dotted line represents DoD's baseline of 11.46 million pounds.

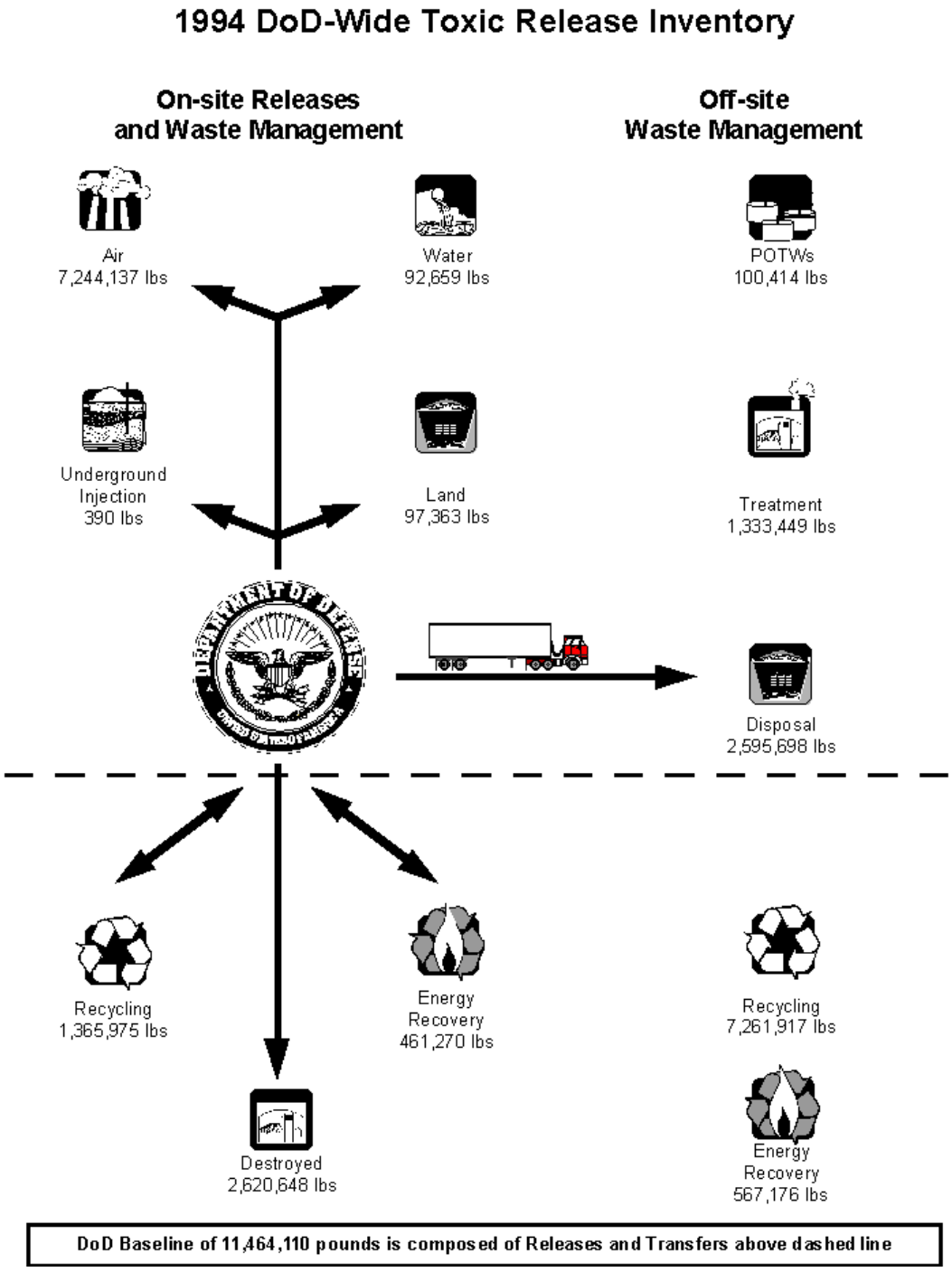
DoD has 425 installations in the United States. Of these, 131 met the threshold reporting levels for one or more chemicals and filed a Form R for each chemical with EPA and the state. About 7.4 million pounds of the baseline or approximately two-thirds were released on-site; the remaining one-third or 4.0 million pounds were transferred off-site for management.

Of the on-site releases, 7,244,137 pounds were released to air, 92,659 pounds to water, 97,363 pounds to land, and 390 pounds to underground injection wells. Of the off-site transfers, 2,595,698 pounds were managed in a waste disposal facility, 1,333,449 pounds in a waste treatment facility, and 100,414 pounds in publicly owned treatment works. DoD anticipated that its releases would be relatively low when compared with private industry as the Department is primarily a downstream user of chemicals, and does not produce chemicals or have large-scale manufacturing processes as is the case with the largest TRI reporters.

By comparison, private industry releases for the TRI reporting year 1993, the most current available, were 2.8 billion pounds. Thus, DoD represents a small portion of those total TRI releases, approximately 0.41%.

Note: The DoD baseline published in this report may change if DoD installations submit refined data to the Environmental Protection Agency.

Figure 2.



Environmental Distribution of TRI Releases

In 1994, air emissions represented over 97% of all toxic chemicals releases as shown in Figure 3. Surface water releases represented approximately 1% of all releases and releases to the land accounted for the remaining 1%.

DoD's releases are primarily to the air and are associated with maintenance activities such as painting and depainting aircraft, cleaning, and degreasing.

Figure 3.

Chemical Distribution

The top ten chemicals in DoD's baseline account for 68% of the 1994 DoD TRI total (see Table 1). Overall, DoD installations reported on 74 different TRI chemicals. Dichloromethane, or methylene chloride, is the most reported chemical and it accounts for 19% of DoD's total baseline. Facilities also reported large amounts of methyl ethyl ketone (MEK), 1,1,1-Trichloroethane, toluene, phenol, tetrachloroethylene, and hexachloroethane. Each of these are solvents that are used in a variety of painting, depainting, cleaning, degreasing, and other maintenance operations. In addition, DoD installations reported large amounts of ethylene glycol, used in de-icing operations, as antifreeze, and as a constituent of other materials; zinc, used in munitions manufacturing; and hydrochloric acid, used in metal coating operations.

Table 1. List of top 10 chemical baselines for DoD, 1994

Chemical	Total Baseline (pounds)
Dichloromethane	2,225,154
Methyl ethyl ketone	1,488,138
1,1,1-Trichloroethane	1,231,470
Ethylene glycol	588,067
Toluene	444,500
Phenol	411,988
Zinc compounds	409,180
Tetrachloroethylene	359,039
Hexachloroethane	351,370
Hydrochloric acid	298,896

DoD's Pollution Prevention program is actively engaged in numerous initiatives to find, develop, and implement less toxic alternatives. For example, in the case of dichloromethane, used primarily in depainting aircraft and stripping component parts, DoD is either testing or now using a variety of alternative techniques including:

- Pressurized water and benzyl alcohol mixtures
- Plastic media (small plastic pellets) blasting
- High-pressure water blasting
- Sodium bicarbonate (baking soda) blasting
- Laser systems
- "Ice blast" mixtures

Tinker Air Force Base and Robins Air Force Base have used two of these techniques to reduce the use of dichloromethane. Tinker AFB uses a robotic high-pressure blast system for aircraft component paint stripping. Tinker first operated the system in February 1995. During its first year of implementation, the system achieved a reduction of 131,348 pounds in dichloromethane, or 15% of total dichloromethane released. This same technology concurrently reduced 32,195 pounds of phenol, or 14% of the total phenol released.

Robins Air Force Base initiated a prototype effort, called the Aquamizer, to test bicarbonate of soda stripping (BOSS) on the C-130 and C-141 aircraft. Previously, Robins Air Force Base personnel used dichloromethane for aircraft stripping. Based on earlier studies of chemical

use, Robins Air Force Base staff found that dichloromethane constituted approximately 78% of the EPA-17 chemicals used at the base in 1992. Under the old system, approximately 22,496 pounds of dichloromethane were required per C-130 aircraft. Through the use of the Aquamizer, this requirement has been reduced to 608 pounds per aircraft. The cost to implement the Aquamizer was quoted at $1.3 million for C-141 aircraft and $645,000 for C-130 aircraft. Overall, the Aquamizer has reduced dichloromethane use by 1.5 million pounds, decreasing usage of the chemical from 1,982,000 pounds (the CY92 baseline) to 440,000 pounds (the CY94 TRI baseline).

DoD has similar initiatives underway to find replacements for methyl ethyl ketone (MEK) which is also used in stripping and cleaning of aircraft components. As shown in Table 1, MEK ranks second in DoD's baseline. In addition to employing many of the same methods that limit the use of dichloromethane, DoD is examining the following techniques to limit releases associated with MEK:

- Vapor recovery systems to limit release of vapors associated with MEK
- Solvent recovery systems to recycle MEK needed to perform a stripping operation
- Alternative cleaning materials for spot removal of paints and other foreign material on aircraft surfaces and components
- Replacement of MEK handwipes with tank cleaning systems that do not use MEK
- High pressure water and environmentally friendly detergents

These initiatives that focus on specific chemicals are part of an extensive DoD pollution prevention program that is described later in this report.

Geographic Distribution

DoD's large maintenance and depot operations, primarily those engaged in overhauling and repairing aircraft, reported the largest volumes in DoD's baseline for 1994 (see Table 2). Of the 131 DoD installations reporting, the top ten installations represent 52% of DoD's baseline. The top installations in the baseline vary in the type of operations conducted, in size, and in the types of weapon systems maintained.

For example, Tinker Air Force Base is a large installation encompassing 5,000 acres and 761 buildings that enclose approximately 15.2 million square feet of floor space. The installation provides worldwide logistics support for a variety of mission critical large-frame aircraft including B1B, B2, B-52, E-3, and the multipurpose KC-135 series, as well as providing depot support for Navy E-6 aircraft.

The Naval Air Station Jacksonville hosts the Naval Aviation Depot (NADEP). The primary mission of the NADEP is to provide a full range of high quality maintenance, engineering, logistics, and support services to the fleet and other DoD components. The Depot serves as a production center concentrating on repair and modification of patrol, fighter, electronic counter measure, and attack aircraft, engines, and associated components. The Depot has 102 acres and 44 buildings that enclose approximately 1.8 million square feet of floor space.

Table 2. List of top 10 baselines by DoD installation, 1994

DoD Component	Installation Name	Total Baseline (Pounds)
Air Force	Tinker Air Force Base, OK	1,569,614
Air Force	Robins Air Force Base, GA	776,616
Army	Pine Bluff Arsenal, AR	721,364
Air Force	Lockheed-Martin, Marietta, GA	554,555
Army	Anniston Army Depot, AL	548,073
Navy	Vought Aircraft Company, Dallas, TX	462,481
Air Force	Hill Air Force Base, UT	367,909
Air Force	Kelly Air Force Base, TX	344,631
Air Force	McClellan Air Force Base, CA	340,750
Navy	Naval Air Station Jacksonville, FL	325,648

The Lockheed-Martin plant in Georgia and the Vought Aircraft plant in Texas are government owned, contractor operated sites.

All ten of the top installations have pollution prevention plans in place to identify and prioritize pollution prevention opportunities. At Tinker AFB, for example, the pollution prevention plan identifies projects that will reduce TRI releases 82% by 1999. In particular, the plan identifies the following projects:

- Water blast robotics technology for paint stripping to reduce use of dichloromethane by 96%;
- Solvent recovery, high pressure water wasters, and material substitutions for cleaning applications to reduce use of MEK by 47%;
- Aqueous cleaning systems, spray washers, and material substitutions for cleaning and degreasing to reduce use of tetrachloethylene by 93%.

DoD's Pollution Prevention Program

The specific initiatives discussed above are part of an extensive DoD Pollution Prevention program. A key goal of this program is to reduce DoD's TRI baseline 50% by 1999. Through planning, improved management practices, and technology insertion, DoD is well-organized to meet that goal. Below is an overview of the DoD Pollution Prevention Program.

DoD's Comprehensive Pollution Prevention Strategy

In the past decade DoD has embraced a new approach to eliminate rather than control its toxic and chemical releases. Pollution prevention is the preferred solution in DoD's environmental management hierarchy. This hierarchy includes a broad variety of source reduction, waste minimization, and recycling practices from redesigning weapon systems to improving installation management techniques. DoD turned to pollution prevention to keep pace with its legal requirements, to curb cleanup and compliance costs, and to eliminate inefficient use of resources. Pollution prevention is also critical to ensure operational readiness of weapon systems; DoD experience demonstrates that selection of materials and processes can enhance or harm the performance of systems, operational productivity, or product yield.

On August 11, 1994, the Secretary of Defense signed DoD's Comprehensive Pollution Prevention Strategy. The strategy requires DoD Components to consider pollution prevention as the first option in meeting compliance requirements; to integrate pollution prevention into both installation and weapon systems management; to foster an environmentally educated work force across all DoD mission areas; and to develop and transfer alternatives to toxic chemicals and processes. Some of the major pollution prevention initiatives for the Department follow:

Pollution Prevention Planning

DoD's strategy is to conduct opportunity assessments for both installations and weapon system management processes, and then develop an implementation plan that reduces the greatest environmental risks at the least cost. These plans are used to prioritize and implement pollution prevention opportunities, and to identify areas where no solutions are available. This information is also used to guide DoD's research and development and budget programs. All DoD installations were required to have pollution prevention plans in place by the end of 1995.

Best Management Practices

Some of the most successful measures to reduce the use and release of toxic chemicals at DoD are through improved management practices such centralized purchase, storage, distribution, and disposal of hazardous materials at installations. Each of the DoD components has established centralized control and other management practices that drastically reduce the use of hazardous materials such as "just in time" purchasing and distribution, exact quantity distribution, and distribution to authorized users. Best management practices can reduce waste, liabilities, environmental violations, and costs and can result in higher efficiency in maintenance activities. For example, the Navy's Consolidated Hazardous Material Reutilization and Inventory Management Program showed cost avoidance savings of $7.25 million in one year through reduced hazardous material purchases and hazardous waste generation. Air Force and Army have achieved similar savings through improved materials management.

In addition, the Department is deploying an information system that allows installations to track toxic chemicals and other hazardous materials from the time they arrive at the installation to the time they are disposed. This "cradle to grave" tracking provides the environmental managers with a detailed picture of how and where base personnel use hazardous materials and with a means to rapidly identify processes and materials for which less harmful alternatives may be substituted. The system also enhances DoD's ability to comply with federal, state, and local environmental regulations, to purchase less hazardous chemicals, and to communicate important health and safety information to personnel and the surrounding community.

Weapon System Pollution Prevention

There are toxic releases associated with every phase of a weapon system's life cycle -- from research, test, and evaluation to production, operations, maintenance, and disposal. DoD employs a two-fold strategy for weapon systems. For new systems, DoD's strategy is to ensure

that the full environmental consequences of all phases of system's life cycle are considered in the design and development phase. For existing systems, DoD is focusing its efforts on finding less toxic alternative materials and processes to operate and maintain the system inventory. This strategy is being implemented through a variety of programs: educating and training weapon system program managers, revising acquisition system policies, providing better life-cycle costing tools, revising military specifications and standards that require the use of toxic substances and processes, and researching and developing alternatives.

Ozone-Depleting Substance Reduction Program

DoD was one of the largest industrial users of ozone depleting substances (ODS) in the nation. ODSs are used as solvents, refrigerants, firefighting agents, and in foams in virtually every weapon system in the inventory and at every one of DoD's facilities. Their use is required by thousands of specifications and standards. Phase-out of the production of ODS as required by national and international law has had a profound effect on design, engineering, manufacture, operation, and support of most weapon systems and facilities. DoD has established a comprehensive program to reduce and eliminate the requirements for ODS use in its operations. It includes four elements: identifying critical uses through an exhaustive search of standardization documents; finding alternatives through a research and development program; implementing alternatives into new and existing systems; and establishing a reserve for mission-critical uses where alternatives cannot be identified or implemented. DoD has made enormous progress in decreasing its use of ODSs. In just five years, the Department decreased its use of halon from 10,325,000 pounds in 1990 to 231,000 pounds in 1995; and its use of CFCs from 14,588,000 pounds in 1990 to 313,000 pounds in 1995.

ENVVEST

On March 16, 1995, the President announced the "Reinventing Environmental Regulation" initiative. This initiative contains innovative approaches to achieving environmental protection, in a cost-effective manner. One of the pilot programs jointly sponsored by the Department of Defense and the Environmental Protection Agency is entitled "ENVVEST."

ENVVEST was designed to test whether alternative regulatory strategies can produce greater environmental benefits over time than current regulatory requirements at the same or lower cost.

The "ENVVEST" concept will allow selected military installations to identify a combination of actions, both pollution prevention and "end-of-pipe" controls, that would protect human health and achieve greater overall environmental performance at less cost.

The installation and the regulators would agree to the best combination of pollution prevention and "end-of-pipe" controls in lieu of current regulatory requirements. They would also agree to a system to measure the environmental improvement. The results of these discussions will be recorded in a site-specific Final Project Agreement.

A key to this initiative will be involvement of the states, as well as partnerships with local stakeholders. To ensure full citizen involvement, the military installation and the local regulators will set up a partnership with local stakeholders. DoD will establish an independent evaluation process to measure the results and produce reports to allow all interested stakeholders to assess the progress at each selected site.

On November 2, 1995, EPA and DoD signed an umbrella Memorandum of Agreement that established the framework for testing "ENVVEST." The test will be conducted at up to five military installations. Efforts are well underway to begin testing the "ENVVEST" concept. The Military Departments are considering installations in Alaska, California, Florida, Texas, and Washington. Vandenberg Air Force Base in California will be the first installation to have a Final Project Agreement.

As a result of the ENVVEST effort, DoD hopes to improve environmental performance while finding ways to reduce environmental funding requirements. EPA and states hope to find new ways to improve environmental management at facilities nation-wide.

Toxic Reduction Investment and Management (TRIM)

DoD believes that the TRI data will provide a valuable tool to assist Components in evaluating and solving some of their largest pollution problems and in achieving the Department's goal to reduce its TRI baseline 50% by 1999. In a pilot initiative the Department is calling Toxics Reduction Investment and Management, DoD intends to first identify and quantify the industrial and maintenance processes that produced the releases, then identify the military specification, standard, procedure, or other technical document that requires the process to use the TRI chemical. This analysis, although it cannot be used as the sole basis for prioritization, will provide valuable assistance to the Department in developing its pollution prevention investment strategy, managing environmental technology efforts, and prioritizing the revision of standardized documents.

DoD installations have conducted similar analyses of chemical use in the past. For example, Tinker Air Force Base is aggressively reducing the amount of toxic chemicals purchased and used in the depot-level operations. In 1992, Tinker AFB completed a comprehensive Process Assessment. This assessment identified and quantified high chemical use processes and suggested potential substitute technologies. From the assessment, a TRI roadmap was developed to systematically reduce TRI chemicals through implementation of pollution prevention projects. TRI chemical usage has been reduced at Tinker AFB by 59% since 1992.

Appendix I -- An Explanation of Terms

Air Releases. Releases to air are reported either as stack or fugitive emissions. Stack emissions are releases to air that occur through confined air streams, such as stacks, vents, ducts, or pipes. Fugitive emissions include equipment leaks, evaporative losses from surface impoundments and spills, and releases from building ventilation systems.

Surface Water Releases. Releases to water include discharges to streams, rivers, lakes, oceans, and other bodies of water. This includes releases from contained sources, such as industrial process outflow pipes or open trenches. Releases caused by runoff, including stormwater runoff, are also reportable under TRI.

Land Releases. Releases to land covered under TRI are those that occur within the boundaries of the reporting facility. Releases to land include disposal of toxic chemicals into landfills, land treatment/application farming (in which a waste containing a listed chemical is applied to or incorporated into soil), surface impoundments (which are uncovered holding areas used to volatilize and/or settle waste materials), and other land disposal (such as spills, leaks, or waste piles).

Underground Injection. Underground injection is a contained release of a fluid into a subsurface well for the purpose of waste disposal.

Recycling. Toxic chemicals can be either recycled on-site or sent off-site for recycling. The toxic chemicals may be recovered or regenerated by a variety of methods, including solvent recovery, metals recovery, and acid regeneration. Once recycled, these chemicals may be returned to the installation or sold for further processing or use. The quantity reported as on-site recycling in the Form R represents the quantity recovered at the facility, not the quantity that entered the recycling operation. The quantity reported as off-site recycling in the Form R represents the quantity that left the installation boundary for recycling, not the amount recovered at the off-site location.

Energy Recovery. Toxic chemicals can be either processed on-site or sent off-site for energy recovery. The toxic chemicals are combusted in industrial furnaces or boilers that generate heat or energy for use at that location. Treatment of a chemical by incineration is not considered to be energy recovery. The quantity reported as on-site energy recovery in the Form R represents the quantity of the toxic chemical that was destroyed in the combustion process, not the amount that entered the energy recovery unit. The quantity reported as off-site energy recovery in the Form R represents the quantity of the toxic chemical that left the installation boundary for recovery, not the amount destroyed at the off-site location.

Destruction. Toxic chemicals can be destroyed on-site using a variety of methods. After destruction, no further treatment or transfer to an off-site location is necessary. The quantity reported in the Form R represents the quantity of the toxic chemical that was destroyed in the on-site waste treatment operations, not the amount that entered any treatment operation.

POTWs. Toxic chemicals can be transferred off-site to a publicly owned treatment works (POTW). Wastewaters are transferred through pipes or sewers to a POTW. Not all TRI chemicals can be treated or removed by a POTW. The quantity reported in the Form R represents the quantity of the toxic chemical that left the installation boundary for POTW treatment, not the amount that was destroyed at the off-site location.

Treatment. Toxic chemicals may be sent off-site for treatment using a variety of methods, including biological treatment, neutralization, incineration, stabilization, and physical separation. These methods result in varying degrees of destruction of the toxic chemical.

Disposal. Toxic chemicals sent off-site to a facility for disposal generally are either released to land or injected underground at the off-site location.

Appendix II -- DoD Component Data

The following pages provide DoD Component specific details on the 1994 DoD baseline. Facilities shown as (GOCO) are government-owned, contractor-operated plants.

Army TRI Data

Top Installations - Baseline, 1994

Installation	Total Baseline (pounds)
Pine Bluff Arsenal, AR	721,364
Anniston Army Depot, AL	548,073
Red River Army Depot, TX	180,224
Letterkenny Army Depot, PA	144,485
Watervliet Arsenal, NY	104,275
Holston Army Ammunition Plant, TN	101,917
Lake City Army Ammunition Plant, MO	83,911
Rock Island Arsenal, IL	67,000
Fort Hood, TX	57,550
Stratford Engineering Plant, CT (GOCO)	55,442

Top Chemicals - Baseline, 1994

Chemical	Total Baseline (pounds)
Zinc compounds	368,971
Hexachloroethane	351,370
Methyl ethyl ketone	230,817
1,1,1-Trichloroethane	225,777
Trichloroethylene	214,223
Dichloromethane	182,229
Ethylene glycol	173,143
Phosphoric acid	135,990
Chlorine	69,562
Ethylbenzene	56,590

Navy TRI Data

Top Installations - Baseline, 1994

Installation	Total Baseline (pounds)
Vought Aircraft Company, TX (GOCO)	462,481
Naval Air Station Jacksonville, FL	325,648
Naval Air Station Alameda, CA	227,500
Norfolk Naval Shipyard, VA	186,090
Grumman Aerospace Corporation, NY (GOCO)	184,602
Norfolk Naval Base, VA	133,830
Philadelphia Naval Shipyard, PA	129,340
Naval Weapons Industrial Reserve Plant, Hercules, TX (GOCO)	120,586
Puget Sound Naval Shipyard, WA	94,900
Naval Air Warfare Center, Patuxent River, MD	76,174

Top Chemicals - Baseline, 1994

Chemical	Total Baseline (pounds)
1,1,1-Trichloroethane	596,172
Dichloromethane	358,283
Methyl ethyl ketone	288,488
N-butyl alcohol	184,055
Nitric acid	160,872
Xylene (mixed isomers)	130,312
Freon 113	129,933
Toluene	92,078
Hydrochloric acid	49,663
Phenol	48,068

Marine Corps TRI Data

Top Installations - Baseline, 1994

Installation	Total Baseline (pounds)
Marine Corps Logistics Base Barstow, CA	322,011
Marine Corps Air Station Cherry Point, NC	315,370
Marine Corps Logistics Base Albany, GA	282,273
Marine Corps Blount Island Command, FL	20,000
Marine Corps Air Station Yuma, AZ	1,050
Marine Corps Base Quantico, VA	34
Marine Corps Recruit Depot, Parris Island, SC	5

Top Chemicals -Baseline, 1994

Chemical	Total Baseline (pounds)
Ethylene glycol	236,679
Dichloromethane	149,650
Methyl ethyl ketone	127,896
1,1,1-Trichloroethane	76,062
Toluene	68,054
Hydrochloric acid	52,000
Xylene (mixed isomers)	51,535
Freon 113	28,000
Glycol ethers	28,000
Chromium	25,897

Air Force TRI Data

Top Installations - Baseline, 1994

Installation	Total Baseline (pounds)
Tinker Air Force Base, OK	1,569,614
Robins Air Force Base, GA	776,616
Lockheed-Martin, GA (GOCO)	554,555
Hill Air Force Base, UT	367,909
Kelly Air Force Base, TX	344,631
McClellan Air Force Base, CA	340,750
Edwards Air Force Base, CA	170,976
Arnold Air Force Base, TN	154,096
Hughes Missile Systems, AZ (GOCO)	124,410
Rockwell International, OK (GOCO)	123,413

Top Chemicals - Baseline, 1994

Chemical	Total Baseline (pounds)
Dichloromethane	1,534,992
Methyl ethyl ketone	840,937
Phenol	363,920
Tetrachloroethylene	335,798
1,1,1-Trichloroethane	333,459
Toluene	225,563
Ethylene glycol	162,300
Hydrochloric acid	161,733
Chromium compounds	151,886
Glycol ethers	139,390

Defense Logistics Agency TRI Data

Top Installations - Baseline, 1994

Installation	Total Baseline (pounds)
Grand Fork Fuel Support Point, ND (GOCO)	10,872
Verona Fuel Support Point, CA (GOCO)	5,516
Charleston Fuel Support Point, SC (GOCO)	4,274
Escanaba Fuel Support Point, CA (GOCO)	2,819
Defense General Supply Center, VA	2,432
Searsport Fuel Support Point, ME (GOCO)	1,780
San Pedro Fuel Support Point, CA (GOCO)	1,200
Tampa Fuel Support Point, FL (GOCO)	1,175
Melville Fuel Support Point, RI (GOCO)	1,035
Anchorage Fuel Support Point, AK (GOCO)	967

Top Chemicals - Baseline, 1994

Chemical	Total Baseline (pounds)
Toluene	10,890
Cyclohexane	8,037
Benzene	6,353
Naphthalene	2,919
Xylene (mixed isomers)	2,648
Bromotrifluoromethane	1,372
Bromochlorodifluoromethane	960
Ethylbenzene	494
Dichlorodifluoromethane	100