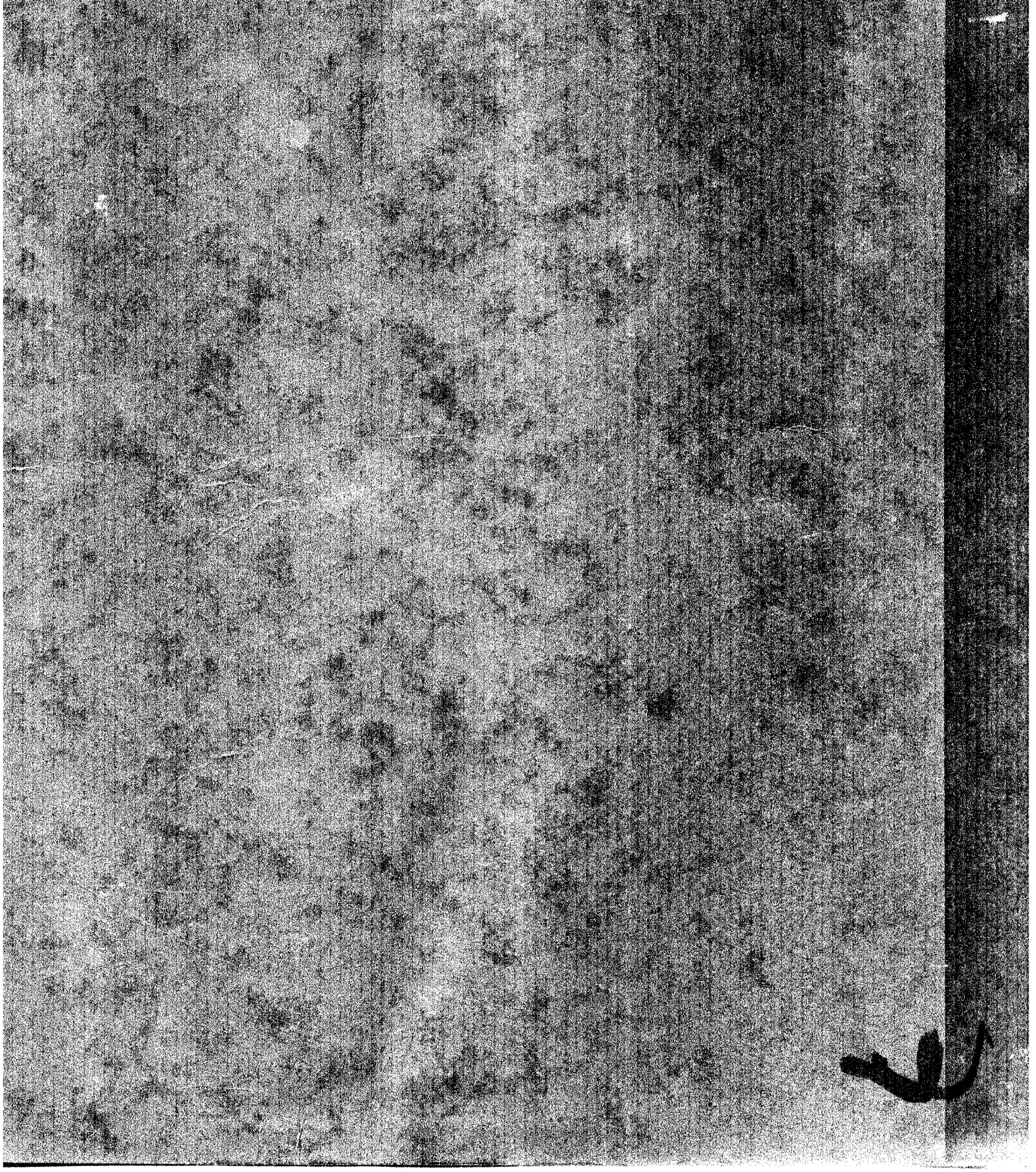

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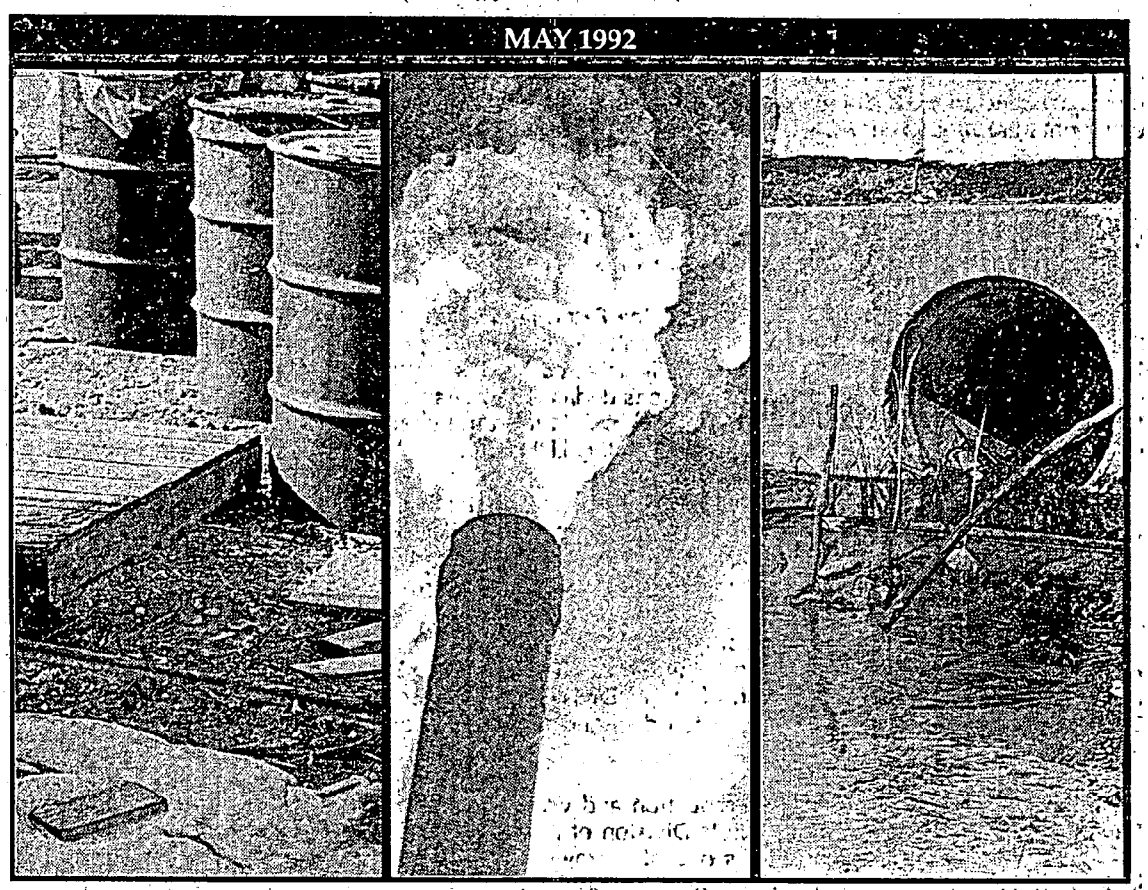
A Citizen Guide to Toxic Chemical Releases on Long Island



A publication of the Toxics Project of the
New York Public Interest Research Group, Inc. (NYPIRG)

RECYCLED PAPER

The ***New York Public Interest Research Group, Inc. (NYPIRG)*** is a not-for-profit, nonpartisan research and advocacy organization established, directed, and supported by New York State college and university students. NYPIRG's staff of organizers, researchers, and lawyers work with students and other citizens across New York State developing citizenship skills and shaping pubic policy. Consumer protection, environmental preservation, energy policy, government and corporate accountability, political reform, fiscal responsibility, and social justice are NYPIRG's principal areas of concern.

NYPIRG's ***Toxics Project*** was established in 1976. The Project's staff members prepare independent reports and testimony and coordinate organizing activities designed to promote citizen understanding and action in the areas of public policy that affect the environment and public health. Since 1984, the Toxics Project has played a leading role in New York State and throughout the nation in developing safe and sensible waste reduction, recycling, and reuse alternatives to garbage landfilling and incineration.

Acknowledgments

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The data for individual facilities on Long Island was obtained by request through the Division of Water of the state Department of Environmental Conservation (DEC). The Division collects and compiles Toxic Release Inventory data for New York State. This information was summarized in DEC's report, New York State 1990 Toxic Release Inventory (TRI) Review (September 1991).

General background on the TRI program also was provided by the U.S. Environmental Protection Agency (EPA), the U.S. General Accounting Office (GAO), and the Working Group on Community Right-To-Know. In addition, the staff of DEC's Division of Air Resources and Nassau County's Department of Health generously furnished data and descriptions of their respective air toxics regulatory programs.

Information regarding toxics use reduction and waste reduction efforts was obtained from EPA, the Bureau of Pollution Prevention of DEC's Division of Hazardous Substances Regulation, and Massachusetts PIRG (Massachusetts is one of a growing number of states which have passed legislation requiring industry to reduce the use of toxic chemicals). Legislative initiatives to expand and strengthen the TRI program in New York were provided by the New York State Department of Law and the state Legislative Commission on Toxic Substances and Hazardous Wastes.

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Summary

For decades, America's manufacturing industries have been the backbone of the nation's economy, providing jobs, capital, and a wealth of products and materials. But a federal environmental inventory established in 1986 has revealed that these same industries also dump billions of pounds of toxic chemicals into the environment on a routine basis, posing untold threats to the public's health and environment.

A Citizen Guide to Toxic Chemical Releases on Long Island shows that Long Island has not escaped these industrial chemical pollution hazards. In fact, according to the Toxic Release Inventory (TRI), almost 80 manufacturing facilities throughout Nassau and Suffolk counties in 1990 reported releasing as much as 4.3 million pounds of 51 toxic chemicals into the environment. (1990 is the latest year for which TRI data are available.) These chemicals can cause cancer or other chronic health effects, yet government regulations allow staggering amounts to be released to the air, land, and water. Moreover, due to several reporting loopholes, these figures actually underestimate the amount and number of toxic chemicals discharged to the environment.

Some of the pollutants which were released on Long Island in 1990 in the largest amounts are suspected cancer-causing chemicals, such as methylene chloride (more than 750,000 pounds), tetrachloroethylene (more than 573,000 pounds), and trichloroethylene (more than 390,000 pounds). Others are capable of causing birth defects and other chronic health effects, such as 2-butanone (methyl ethyl ketone), toluene, and 1,1,1-trichloroethane—the chemical released throughout Long Island in 1990 in the greatest amount: more than 1.3 million pounds.

Several facilities each released hundreds of thousands of pounds of an array of chemicals. Combined, the releases from the top ten facilities in Nassau and Suffolk counties accounted for more than 85 percent of the total reported releases.

In Nassau County, Grumman Aerospace Corporation in Bethpage reported the largest release of toxic chemicals: more than 1.1 million pounds. Approximately half this amount was due to the release of 522,000 pounds of the suspected carcinogen tetrachloroethylene.

Photocircuits Corporation in Glen Cove released more than 780,000 pounds of chemicals, including 355,000 pounds of 1,1,1-trichloroethane—a chronic toxin capable of causing cell mutations, birth defects, and reproductive damage—and 346,000 pounds of the suspected carcinogen methylene chloride. The two Tishcon Corporation plants in Westbury released a combined total of almost 400,000 pounds of chemicals. Several other plants, including Konica Imaging USA, Inc. in Glen Cove and Alsy Manufacturing in Hicksville, each released tens of thousands of pounds of chemicals.

In Suffolk County, the two facilities with the largest overall toxic releases were Poly-Pak Industries, Inc. in Melville (more than 340,000 pounds of 1,1,1-trichloroethane) and Additive Circuits in Aquebogue (more than 230,000 pounds of toxic chemicals, including almost 140,000 pounds of 1,1,1-trichloroethane). Several other facilities each

released tens of thousands of pounds of chemicals, including Grumman Aerospace Corporation's plant in Calverton (more than 77,000 pounds).

Several clusters of facilities were identified throughout Long Island, indicating that certain communities may face a disproportionate risk of exposure to toxic chemical releases. In Nassau County, clusters of facilities were identified in Plainview, New Cassel, Freeport, and the City of Glen Cove. In Suffolk County, clusters were identified along Route 110 in Melville and Farmingdale and in the industrial parks in Deer Park and Hauppauge. The potential additive and synergistic effects of the release of several toxic chemicals from facilities in close proximity to each other can multiply the health and environmental impacts from each individual chemical.

The 1990 Toxic Release Inventory data reveal that Long Island's biggest toxic dump is the air. Although several regulatory programs are designed to protect the public from toxic air emissions, the vast majority of chemicals reported released on Long Island—more than 4.1 million pounds, or 96 percent of the total—was released to the air. This amount included 1.7 million pounds of three suspected human carcinogens: methylene chloride, tetrachloroethylene, and trichloroethylene.

This finding demonstrates that federal, state, and local programs designed to regulate toxic air emissions fail to fully protect people and their environment from chemical exposures.

As of 1990, the federal air toxics program regulated only six toxic chemicals. While the Clean Air Act Amendments of 1990 expanded this list to 189 toxic chemicals, the amendments directed the U.S. Environmental Protection Agency (EPA) to phase in new regulations for this expanded list over the course of ten years.

Both EPA and New York State air toxics programs are designed primarily to limit the release of contaminants at the "end of the pipe," instead of also preventing the use or generation of toxic substances in the manufacturing process. Therefore, by sanctioning the chronic release of even small amounts of chemicals from numerous pollution sources, an enormous amount of these chemicals are allowed to be released into the environment. Also, the state's program does not address fugitive emissions, such as leaks or evaporation. Yet several Long Island facilities in 1990 each released tens of thousands of pounds of toxic chemicals to the air through fugitive sources.

State and local agencies responsible for inspecting, testing, and monitoring the scores of industrial sources of toxic air releases throughout Nassau and Suffolk counties also suffer from limited resources. In Nassau County, where the program is jointly administered by the state Department of Environmental Conservation (DEC) and the county Department of Health, the county's staff resources are too limited to conduct annual inspections of all permitted facilities. County officials generally are able to respond only to citizen complaints of odors or other air pollution concerns. In Suffolk County, the air toxics program is administered by DEC, which is similarly understaffed and underfunded. As a result, violations of air toxics regulations throughout Long Island can go unchecked, and myriad sources of air pollution can go unregulated.

While the amount of air toxics reported to TRI is substantial, the program underestimates the total amount of toxic chemicals released to the air. According to DEC, more than 560 facilities throughout Nassau and Suffolk counties possess air pollution permits covering at least one of the toxic chemicals included in the TRI program. Due to several loopholes and exemptions, not all of these facilities are required to report to TRI. Consequently, the 77 facilities on Long Island reporting to TRI in 1990 represent only a small subset—approximately 14 percent—of the total number of facilities which are regulated by the state to emit air toxics on Long Island.

Overall, the Toxic Release Inventory has compiled an unprecedented database of publicly available information. The inventory, however, is severely limited in several ways:

- Only manufacturers which use more than a threshold level of each toxic chemical are required to report the release of these chemicals. The TRI program does not cover small manufacturers or other pollution sources such as electric utilities, government facilities, garbage incinerators, hazardous waste generators, gas stations, and pesticide applicators. Some of these sources must report their chemical releases to other regulatory programs, but none of these programs are as comprehensive or publicly accessible as TRI.

- Not all known toxic chemicals are covered by TRI. Dozens of other chemicals covered by several federal regulatory programs are not included in TRI's reporting requirements.

- As of 1990 the TRI program did not address pollution prevention. This will be changed for the reports for 1991, because the federal Pollution Prevention Act of 1990 will require companies to report their waste reduction efforts. Nevertheless, the Pollution Prevention Act fails to require facilities to report the amounts of chemicals which are consumed in the production process, produced on-site as a manufacturing by-product, or incorporated into products. As a result, workers at facilities, communities near transportation routes to facilities, and consumers of products may still not know to which chemicals they are being exposed.

In addition to these inherent limitations, the TRI program has suffered from inadequate enforcement. According to the the U.S. Government Accounting Office, in 1988 more than one of every three facilities subject to TRI did not comply with the program. (More recent enforcement statistics have not yet been compiled.)

Several legislative proposals at the federal and state level could correct these deficiencies and dramatically enhance the TRI program. The federal Community Right-to-Know More Act (sponsored by Representative Gerry Sikorski (D-Minnesota), along with a similar bill sponsored by Senators Frank Lautenberg (D-New Jersey), and Dave Durenberger, R-Minnesota) would improve TRI in several ways. In particular, the bills would broaden the list of facilities required to report, and expand the number of chemicals on the list. Pollution prevention reporting requirements also would be strengthened. A similar state proposal would also provide direct enforcement authority to DEC.

Overall, government, industry, workers, and the public can substantially benefit by reducing the use of toxic chemicals and minimizing the release of these pollutants into the environment. According to DEC's Bureau of Pollution Prevention, for example "[m]any generators of hazardous waste now realize that the most cost effective approach to pollution prevention is through source reduction."[1]

The Bureau emphasizes that companies that reduce toxics can save money while protecting the environment by avoiding the increasing expense of more stringent regulations, tighter pollution controls, increased hazardous waste disposal requirements, and rising liability costs. Nontoxic compounds can be substituted for toxic substances in the production process, cleaning techniques which avoid the use of toxic solvents can be implemented, and the efficiency of a company's manufacturing process can be improved.

According to the TRI data, however, fewer than 15 facilities on Long Island in 1990 reported that they had undertaken any waste minimization efforts. Moreover, the federal government and most states, including New York, do not require companies to achieve specific levels of toxics use reduction. Beginning in 1991, a state law required companies to report what efforts they had undertaken to minimize waste generation, but the actual reduction of waste remains a voluntary decision left to each company to make. This regulatory emphasis on "waste minimization" also presupposes the generation of waste, and is not synonymous with source reduction, or the reduction in the use of toxic chemicals. New York State needs to establish a "Toxics Use Reduction" (TUR) program to reform its hazardous waste minimization efforts. In the absence of a mandatory statewide TUR program, however, Long Island's manufacturing industry should take the initiative to reduce their use of toxic chemicals.

In short, concerted and effective action must be taken by government, industry, workers, and the public to reduce toxic chemical use and curtail toxic chemical releases. It is the hope of the Toxics Project of the New York Public Interest Research Group, Inc. (NYPIRG) that civic, environmental, and labor groups and individuals throughout Nassau and Suffolk counties will use our findings to hold local industries accountable for reducing the amount of chemicals they release into the environment. Similarly, government officials must be held accountable for enforcing and improving the environmental rules and regulations designed to achieve this aim. We look forward to working with the community, public officials, workers and industry alike to protect the public's health and environment from preventable toxic chemical pollution.

The Toxic Release Inventory Program: An Overview

An accidental release of methyl isocyanate—a deadly toxic gas—in 1984 in Bhopal, India, killed thousands of people and injured hundreds of thousands more. By then, several states here in America had passed laws providing the public with the right to know what toxic chemical hazards were in their midst.[2] The Bhopal disaster, however, prompted a renewed effort across the country by a broad and diverse movement of civic, environmental, and labor groups, along with individual citizens and public officials, to call for a comprehensive "right-to-know" program at the federal level.

In response to this pressure, in 1986 Congress passed the Emergency Planning and Community Right-to-Know Act (EPCRA). This law required certain manufacturers to report to the government critical information regarding an array of hazardous chemicals which they store on-site or release into the environment.[3] The law was intended to provide citizens with details on the kinds and amounts of toxic chemicals being stored and released throughout the nation, and to improve the ability of government agencies to protect the public's health and environment from these releases.

Section 313 of EPCRA established the Toxic Release Inventory (TRI) program. Under this program, certain manufacturing facilities which use any of more than 300 toxic chemicals are required to report on an annual basis the quantities of those chemicals either released to the environment or transferred off-site. The U.S. Environmental Protection Agency (EPA) must then prepare an inventory of these reports each year, and make this inventory publicly available through a computerized, on-line database.

Appendix A provides an overview of the history of the TRI program, its limitations, the potential for its expansion, and several federal proposals designed to improve it. It also lists useful sources of additional information on TRI, along with the background documents used to implement the program.

The EPA describes TRI as "the first national database of information on toxic chemical releases and transfers by manufacturing facilities . . . ."[4] In 1987, the first year the program went into effect, it revealed that more than 7 billion pounds of toxic chemicals were released into the environment or transferred off-site for disposal or treatment across the United States by almost 20,000 manufacturing facilities.[5]

Section 313's reporting requirements apply to facilities which meet the following three conditions:

- they were involved in general manufacturing activities, as categorized by Standard Industrial Classification (SIC) codes 20 through 39 (Appendix B lists these categories);
- they employed the equivalent of 10 or more full-time workers; and
- they manufactured (including imported) or processed more than 25,000 pounds, or otherwise used more than 10,000 pounds, during the calendar year of one of 310 toxic chemicals or 20 toxic chemical categories identified by EPA.[6]

Each manufacturer must report its toxic release information to EPA and its respective state environmental agency by July 1 of the following year. In New York, this information is collected and compiled by the Division of Water of the state's Department of Environmental Conservation (DEC). The Division has streamlined its data collection and processing efforts and was able to publish the 1990 New York State data in September 1991. The EPA expects to publish nationwide data for 1990 in late May 1992.

The chemicals covered by the Toxic Release Inventory were first listed in 1986 in the EPCRA legislation. They were taken from two lists of toxic chemicals used by the states of Maryland and New Jersey in their community right-to-know programs.[7] Maryland's list included chemicals which were known or suspected carcinogens and were covered by other federal environmental programs. New Jersey's list also consisted of chemicals known to cause cancer and other health problems, and were used or imported into New Jersey in excess of 10,000 pounds per year.

In 1987, the TRI program required reporting for 329 chemicals and chemical categories. Since then, EPA has granted petitions from industry to delist several chemicals (such as titanium dioxide and sodium hydroxide), and has granted a petition filed by a national environmental group and three states to add several chlorofluorocarbons (CFCs) and halons (facilities will be required to report their release of these added chemicals beginning in calendar year 1991).[8]

The manufacturing industries required to comply with Section 313 must report the listed chemicals that they release to the environment off-site or release to the land on-site. They also must report the amounts of these chemicals contained in wastes that were transferred off-site for treatment or disposal. The federal regulations established pursuant to EPCRA define "release" to include:

> any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing . . . (including the abandonment or discarding of barrels, containers, and other closed receptacles) . . . .[9]

Therefore, each facility must report the annual amount of each chemical which is emitted to the air, discharged to sewage treatment plants, discharged directly to water, injected underground, landfilled or spread on land on-site, leaked on- or off-site, spilled or discharged into stormwater, or transferred off-site as a waste or contained in another waste. The reporting form prepared by EPA (Form R) enables facilities to report the amount released to air through point sources—such as smokestacks, pipes, or vents—and fugitive emissions—such as leaks, evaporation, or losses through ventilation.

Accidental discharges, spills, or leaks must be reported along with routine releases, although the TRI program does not require facilities to distinguish between routine and accidental releases. (This deficiency was corrected by the federal Pollution Prevention Act of 1990, which now requires each facility to differentiate between accidental and routine releases.[10]) Each release also must be reported even if it complies with its respective regulatory program (if one exists). In other words, a company may hold a permit to discharge 100 pounds per year of a certain chemical into the air, but still must report the amount it emitted even if it was less than 100 pounds.

For on-site treatment, each facility must report the kinds of methods used to treat the waste containing the listed chemicals. If the chemicals are contained in a waste that is transferred off-site, then each facility must report the location and kind of site that was used for disposal, treatment, or storage of this waste. Facilities do not have to report chemicals transferred off-site for "recycling," a term that creates a substantial loophole by allowing wastes to be incinerated in cement kilns and industrial burners.[11]

If a facility releases a chemical in an amount less than 1,000 pounds per year, EPA allows the facility to report a range of pounds released, either 1 to 10, 11 to 499, or 500 to 999 pounds per year.[12] If a facility manufactures or otherwise uses a listed chemical above the chemical's threshold amount but then does not release it into the environment, the facility must report the "release" as zero. In the tables prepared for this guide, such zero releases are indicated by a dash (" - ").

Since 1987, an optional reporting provision was included in the TRI program for facilities to identify the waste minimization efforts, if any, they had undertaken for the calendar year. Beginning in 1991, pursuant to the Pollution Prevention Act, facilities must report new information on source reduction (a form of pollution prevention) and also on recycling. Each facility must report this information on the forms it submits as of July 1, 1992. While the term "waste minimization" is used by the TRI program, it presupposes the generation of waste, and therefore is not a synonym for source reduction, or the reduction in the use of toxic chemicals.

The EPA is responsible for enforcing Section 313 of EPCRA. The agency can levy civil penalties of up to $25,000 per day for each violation (i.e., for each report for each chemical). Citizens can also bring suit to enforce the law if a company has failed to adequately file reports.

Long Island's Toxic Releases in 1990

This section presents the Toxic Release Inventory data for 1990 from 77 manufacturing facilities located throughout Nassau and Suffolk counties.

According to DEC in 1990, Nassau and Suffolk counties both ranked among New York State's top 20 counties for overall amounts of toxic chemicals reported released to the environment. Of the state's 62 counties, Nassau County ranked seventh and Suffolk County ranked thirteenth.[13] Overall, more than 73 million pounds of toxic chemicals were reported released in 1990 throughout New York State.[14]

Appendices C and D list the address and phone number for each facility that reported releasing toxic chemicals in 1990 for Nassau and Suffolk counties. These appendices also identify the Standard Industrial Classification (SIC) code for each facility, and provide a brief description of each facility's manufacturing process according to the federal Office of Management and Budget SIC Manual.[15] The "map codes" in these appendices correspond to the approximate locations of each facility on the maps presented in Figures 1, 2a, and 2b.

Five facilities on Long Island did not report any releases for any chemicals in 1990 and were not included in this guide. Other Long Island facilities reported releases for some chemicals and no releases for others. All chemicals for these facilities were listed in the tables below. However, those chemicals that were contained in waste for off-site transfer and not released to the local environment were not used in the calculation for overall releases. These chemicals are listed in the tables prepared for this guide, but no value is identified.

1. Toxic Chemicals and the Long Island Facilities Releasing Them

In 1990, 77 manufacturing facilities on Long Island reported releasing as much as 4.3 million pounds of 51 toxic chemicals into the environment.

Tables 1 through 4 identify these facilities and the chemicals they released, based on forms provided by DEC's Division of Water. Tables 1 and 4 also identify the amounts of each chemical reported released to each environmental medium (i.e., air, land, water, and "publicly owned treatment works," or POTW, a regulatory term denoting a sewage treatment plant). The chemicals are listed in the order they appear on DEC's forms for each facility. The amounts are presented in pounds per year.

Table 1 provides an alphabetical list of the 41 manufacturing facilities in Nassau County that reported toxic chemical releases in 1990 to the TRI program. In 1990, as much as 3.1 million pounds of toxic chemicals were reported released in Nassau County.

TABLE 1

Alphabetical list of the 41 manufacturing facilities in Nassau County that reported toxic chemical releases in 1990 to the Toxic Release Inventory, and the amounts of each chemical reported released into each environmental medium (in pounds)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
1) ADCHEM CORP.					
acetone	2,111 - 2,599	-	-	-	
2-butanone	5,600	-	-	-	
vinyl acetate	511 - 1,498	-	-	-	
toluene	18,200	-	-	-	
					26,422 - 27,897
2) ALSY MFG. INC.					
1,1,1-trichloroethane	96,236	-	-	-	
2-butanone	4,418	-	-	-	
					100,654
3) ALTANA INC.					
isopropanol	12,601 - 12,610	-	-	1,400	14,001 - 14,010
4) AMERICAN CASTING & MFG. CORP.					
lead	1 - 10	-	-	-	1-10
5) ARKWIN INDUSTRIES					
1,1,1-trichloroethane	18,706	-	-	-	18,706
6) ARROW CHEMICAL CORP.					
1,1,1-trichloroethane	11 - 499	-	-	-	11-499
7) CELLU-CRAFT INC.					
methanol	26,421	-	-	-	
2-butanone	15,436	-	-	-	
					41,857
8) COLUMBIA CEMENT CO. INC.					
2-butanone	4,018 - 4,517	-	-	-	
1,2-butylene oxide	12 - 509	-	-	-	
toluene	511 - 1,498	-	-	-	
diethylene ether	22 - 998	-	-	-	
acetone	4,401 - 4,889	-	-	-	
1,1,1-trichloroethane	11,954	-	-	-	
methylene chloride	2,026 - 2,514	-	-	-	
sec-butyl alcohol	22 - 998	-	-	-	
zinc compounds	2 - 20	-	-	-	
					22,968 - 27,897
9) CONTEMPORARY PACKAGING CORP.					
methanol	9,776	-	-	-	9,776
10) E-Z-EM INC. (Magnolia Ave.)					
barium compounds	11 - 499	-	-	44,600	44,611-45,099
11) E-Z-EM INC. (Main St.)					
barium compounds	11 - 499	-	-	-	11 - 499
12) FIAT PRODUCTS					
acetone	15,400	-	-	-	15,400
13) FOSROC INC.					
ethylbenzene	860	-	-	-	
styrene	46	-	-	-	
toluene	6,800	-	-	-	
xylene	1,980	-	-	-	
					9,686
14) GENERAL INSTRUMENT CORP.					
sulfuric acid	2 - 20	-	-	-	2 - 20
15) GRUMMAN AEROSPACE CORP.					
methanol	11 - 499	-	-	-	
1,1,1-trichloroethane	97,158	-	-	-	
methylene chloride	48,030	-	-	-	
freon 113	153,888 - 154,376	-	-	-	
hydrofluoric acid	11 - 499	-	-	-	
nitric acid	1,233	-	-	-	
chromium compounds	11 - 499	-	-	8	

TABLE 1 (cont'd.)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
29) NOSTRO MFG. CORP.					
1,1,1-trichloroethane	30,602	-	-	-	30,602
30) PALL CORP.					
freon 113	16,519	-	-	-	
hydrochloric acid	11 - 499	-	-	27,000	
					43,530 - 44,018
31) PALL EAST HILLS MFG. CORP.					
methylene chloride	2 - 20	-	-	-	
tert-butyl alcohol	22 - 998	-	-	16,931	
freon 113	23,480 - 23,968	-	-	-	
hydrochloric acid	11 - 499	-	-	-	
					40,446 - 42,416
32) PASS & SEYMOR					
tetrachloroethylene	41,339	-	-	-	41,339
33) PHOTOCIRCUITS CORP.					
formaldehyde	2 - 20	-	-	730	
1,1,1-trichloroethane	355,000	-	-	590	
methylene chloride	346,000	-	-	80	
lead	-	-	-	250	
nitric acid	-	-	-	-	
chlorine	22 - 998	-	-	-	
glycols	44,000 - 44,499	-	-	-	
copper compounds	-	-	-	-	
copper	-	-	-	1,300	
hydrochloric acid	22 - 998	-	-	-	
ammonia	1,000 - 1,998	-	-	36,800	
sulfuric acid	-	-	-	-	
lead compounds	-	-	-	-	
nickel compounds	-	-	-	500	
					786,296 - 789,763
34) ROMAC ELECTRONICS INC.					
trichloroethylene	3,176	-	-	-	3,176
35) RUCO POLYMER CORP.					
2-butanone	282	-	-	-	
phthalic anhydride	10	-	-	-	
styrene	883	-	-	-	
methylenebis phenylisocyanate (off-site)	-	-	-	-	
ethylene glycol	14	-	-	-	
toluene	122	-	-	-	
toluene diisocyanate (off-site)	-	-	-	-	
					1,311
36) TISHCON CORP. (State St.)					
methanol	56,891	-	-	-	
1,1,1-trichloroethane	15,701	-	-	-	
methylene chloride	190,971	-	-	-	
					263,563
37) TISHCON CORP. (New York Ave.)					
1,1,1-trichloroethane	136,000	-	-	-	136,000
38) UNISYS CORP.					
freon 113	4,404	-	-	-	4,404
39) UTILITY MFG. CO. INC.					
2 - butanone	11 - 499	-	-	-	
sulfuric acid	11 - 499	-	-	-	
					22 - 998
40) VAN SON HOLLAND INK CORP. OF AMER.					
diethylphthalate (off-site)	-	-	-	-	
barium compounds (off-site)	-	-	-	-	-
41) ZOE CHEMICAL CO. INC.					
methanol	11 - 499	-	-	11 - 499	
1,1,1-trichloroethane	11 - 499	-	-	11 - 499	

TABLE 1 (cont'd.)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
15) GRUMMAN (cont'd.)					
2-butanone	76,990	-	-	-	
trichloroethylene	217,875	-	-	-	
toluene	10,000	-	-	-	
tetrachloroethylene	522,500	-	-	-	
					1,127,715 - 1,129,667
16) JOHNSON & HOFFMAN					
trichloroethylene	13,500	-	-	11-499	
tetrachloroethylene	10,000	-	-	1-10	
					23,512-24,009
17) KLEARTONE INC.					
methanol	1,663	-	-	-	1,663
18) KNICKERBOCKER PARTITIONS					
n-butyl alcohol	15,994	-	-	-	15,994
19) KONICA IMAGING USA INC.					
formaldehyde	896 - 1,384	-	-	130	
methanol	109,000	-	-	11 - 499	
hydroquinone	12 - 509	-	-	76	
silver compounds	2 - 20	34	-	32	
					110,193 - 111,684
20) KORDET COLOR CORP.					
hydroquinone	3,440	-	-	-	3,440
21) LEA RONAL INC. (Albany Ave.)					
methanol	5,965	-	-	11 - 499	
phosphoric acid	22 - 998	-	-	-	
glycols	22 - 998	-	-	11 - 499	
copper compounds	-	-	-	1 - 10	
lead compounds	2 - 20	-	-	-	
					6,034 - 8,989
22) LEA RONAL INC. (Buffalo Ave.)					
hydrochloric acid	5	-	-	-	
sulfuric acid	-	-	-	-	
cyanide compounds	-	-	-	1	
glycols	22 - 998	-	-	-	
silver compounds	-	-	-	-	
					28 - 1,004
23) LIMCO MFG. CORP.					
2-butanone	17,955	-	-	-	
sulfuric acid	-	-	-	14,700	
					32,655
24) LORAL FAIRCHILD SYSTEMS					
1,1,1-trichloroethane	13,242	-	-	-	13,242
25) METCO INC. (Hicksville)					
aluminum	1,700	-	-	-	
nickel	5,100	-	-	-	
chromium	1,400	-	-	-	
cobalt	1,180	-	-	-	
					9,380
26) MILL-MAX MFG. CORP.					
methanol	11,308	-	-	-	
freon 113	38,689	-	-	-	
lead	-	-	-	2	
copper	-	-	-	7	
sulfuric acid	65	-	-	-	
					50,071
27) MIROFLECTOR CO. INC.					
trichloroethylene	28,222	-	-	-	28,222
28) MULTIWIRE/EED (Kollmorgen)					
sulfuric acid (off-site)					
copper compounds	5	-	-	216	221

TABLE 3

Alphabetical list of the 36 manufacturing facilities in Suffolk County that reported toxic chemical releases in 1990 to the Toxic Release Inventory, and the amounts of each chemical reported released into each environmental medium (in pounds)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
1) A&M MANUFACTURING CO. INC.					
trichloroethylene	68,273	-	-	-	68,273
2) ADCHEM INDUSTRIES INC.					
2-butanone	1,600 - 2,099	-	-	-	
vinyl acetate	511 - 1,498	-	-	-	
toluene	5,800 - 6,299	-	-	-	
xylene	511 - 1,498	-	-	-	
					8,422 - 11,394
3) ADDITIVE CIRCUITS (AMP-AKZO CORP.)					
formaldehyde	2 - 20	1 - 10	-	-	
1,1,1-trichloroethane	139,700	-	-	-	
methylene chloride	77,110	-	-	-	
lead	2 - 20	3	-	-	
sulfuric acid	84				
glycols	10,726	2,800	-	-	
copper compounds	2 - 20	107	-	-	
					230,537 - 230,600
4) AEROSPACE AVIONICS INC.					
freon 113	45,687	-	-	-	45,687
5) AIL SYSTEMS INC.					
freon 113	34,653	-	-	-	34,653
6) ALTANA INC.					
propylene oxide	511 - 1,498	-	-	500 - 999	1,011 - 2,497
7) AMERICAN ACRYLIC CORP.					
methyl methacrylate	13,500	-	-	-	
styrene	1,800	-	-	-	
					15,300
8) AMERICAN TECHNICAL CERAMICS					
freon 113	6,482	-	-	-	6,482
9) B.B.&S. TREATED LUMBER CORP.					
copper compounds (off-site)	-	-	-	-	-
10) EDWIN B. STIMPSON CO. INC.					
sulfuric acid	2 - 20	-	-	-	
copper compounds	2 - 20	-	1 - 10	-	
					5 - 50
11) ESD-LONG ISLAND (formerly SEDCO SYSTEMS)					
freon 113	19,800	-	-	-	19,800
12) GASSER & SONS INC.					
trichloroethylene	20,600	-	-	-	20,600
13) GRINNELL LITHOGRAPHIC CO. INC.					
acetone	1,001 - 1,010	-	-	1 - 10	
					1,002 - 1,020
14) GRUMMAN AEROSPACE CORP. (Reserve Plant)					
1,1,1-trichloroethane	16,685	-	-	-	
methylene chloride	20,370	-	-	-	
2-butanone	40,046	-	-	-	
					77,101
15) GRUMMAN AEROSPACE CORP. (Plants 43 & 44)					
freon 113	28,700	-	-	-	28,700
16) GULL ELECTRONIC SYSTEMS (Engineers Rd.)					
freon 113	14,300	-	-	-	14,300
17) GULL ELECTRONIC SYSTEMS (Marcus Blvd.)					
freon 113	15,000	-	-	-	15,000
18) HALBRO CONTROL INDUSTRIES INC.					
glycols	15	-	-	-	15

TABLE 1 (cont'd.)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
di-n-butyl phthalate	11 - 499	-	-	11 - 499	
ammonia	11 - 499	-	-	11 - 499	
glycols	11 - 499	-	-	11 - 499	
					110 - 4,990

Nassau County Sub-totals

	from:		to:
Air:	**2,931,787**	**-**	**2,954,933**
Water:			**34**
Land:			**-**
POTW:	**145,454**	**-**	**149,856**
TOTAL:	**3,077,275**	**-**	**3,104,831**

The two facilities with the largest overall toxic releases in Nassau County were Grumman Aerospace Corporation in Bethpage (more than 1.1 million pounds of toxic chemicals) and Photocircuits Corporation in Glen Cove (more than 780,000 pounds). The two Tishcon Corporation plants in Westbury released a combined total of almost 400,000 pounds of chemicals. The Konica Imaging USA, Inc. facility in Glen Cove and the Alsy Manufacturing facility in Hicksville each released more than 100,000 pounds of chemicals. Several other plants in Nassau County each released tens of thousands of pounds of chemicals.

Table 2 lists the top 10 facilities in Nassau County releasing the largest overall amount of toxic chemicals.

TABLE 2
Top 10 manufacturing facilities in Nassau County in 1990 reporting the largest overall toxic chemical releases (in pounds)

COMPANY	TOTAL
1) GRUMMAN AEROSPACE CORP.	1,127,715 - 1,129,667
2) PHOTOCIRCUITS CORP.	786,296 - 789,763
3) TISHCON CORP. (State St.)	263,563
4) TISHCON CORP. (New York Ave.)	136,000
5) KONICA IMAGING USA INC.	110,193 - 111,684
6) ALSY MFG. INC.	100,654
7) MILL-MAX MFG. CORP.	50,071
8) E-Z-EM INC. (Magnolia Ave.)	44,611 - 45,099
9) PALL CORP.	43,530 - 44,018
10) PALL EAST HILLS MFG. CORP.	40,446 - 42,416
TOTAL:	**2,703,079 - 2,712,935**

Table 3 provides an alphabetical list of the 36 facilities in Suffolk County that reported toxic chemical releases in 1990 to the TRI program. In 1990, as much as 1.2 million pounds of toxic chemicals were reported released in Suffolk County.

TABLE 3 (cont'd.)

Suffolk County Sub-totals	from:		to:
Air:	1,194,686	-	1,205,663
Water:	4,282	-	4,318
Land:	23	-	32
POTW:	529	-	1,046
TOTAL:	1,199,520	-	1,211,059

The two facilities with the largest overall toxic releases in Suffolk County were Poly-Pak Industries, Inc. in Melville (more than 340,000 pounds of toxic chemicals) and Additive Circuits in Aquebogue (more than 230,000 pounds of toxic chemicals). Several other facilities each released tens of thousands of pounds of chemicals, including Grumman Aerospace Corporation's plant in Calverton (which released more than 77,000 pounds of toxic chemicals).

Table 4 lists the top 10 facilities in Suffolk County releasing the largest overall amount of toxic chemicals.

TABLE 4
Top 10 manufacturing facilities in Suffolk County in 1990 reporting the largest amounts of toxic chemical releases (pounds)

COMPANY	TOTAL
1) POLY-PAK INDUSTRIES INC.	341,442 - 341,941
2) ADDITIVE CIRCUITS (AMP - AKZO CORP.)	230,537 - 230,600
3) PALL RAI INC.	77,286 - 80,234
4) GRUMMAN AEROSPACE CORP. (Reserve Plant)	77,101
5) A&M MANUFACTURING CO. INC.	68,273
6) LIBERTY INDUSTRIAL FINISHING CORP.	66,894
7) AEROSPACE AVIONICS INC.	45,687
8) JAMECO INDUSTRIES	38,400
9) AIL SYSTEMS INC.	34,653
10) NATIONAL METAL COATING CORP.	31,612
TOTAL:	1,011,885 - 1,015,395

A broad array of chemicals was released in both counties. Some of the pollutants, including chromium, formaldehyde, methylene chloride, nickel, tetrachloroethylene and trichloroethylene, are known or suspected human cancer-causing chemicals.[16] Others, such as 2-butanone (methyl ethyl ketone), toluene, 1,1,1-trichloroethane, and xylene, are capable of causing birth defects or genetic changes (cell mutations).[17]

Appendices E and F list the overall amounts of each chemical reported released to the air, land, water, and POTWs in both counties. Appendix G summarizes the health and environmental effects associated with the top 20 chemicals reported released in 1990 throughout Long Island.

The top 10 chemicals which were released in the largest amounts in each county in 1990 accounted for more than 90 percent of the reported releases. Tables 5 and 6

TABLE 3 (cont'd.)

COMPANY/chemical	Air	Water	Land	POTW	TOTAL
19) ILC DATA DEVICE CORP.					
freon 113	5,000	-	-	-	5,000
20) JAMECO INDUSTRIES					
trichloroethylene	38,400	-	-	-	
nickel (off-site)	-	-	-	-	
copper (off-site)	-	-	-	-	
					38,400
21) LARIBEE WIRE CO. (CORONA INSULATED WIRE)					
copper	2 - 20	-	-	6	
lead compounds	2 - 20	-	-	17	
					27 - 63
22) LIBERTY INDUSTRIAL FINISHING CORP.					
1,1,1-trichloroethane	66,894	-	-	-	
aluminum oxide (off-site)	-	-	-	-	
					66,894
23) LUMEX					
1,1,1-trichloroethane	22,948	-	-	-	22,948
24) NAPCO SECURITY SYSTEMS					
freon 113	13,000	-	-	-	13,000
25) NATIONAL METAL COATING CORP.					
toluene	31,590	-	22	-	31,612
26) PALL RAI INC.					
methylene chloride	69,400 - 69,899	-	-	-	
tert-butyl alcohol	22 - 998	1 - 10	-	-	
acrylic acid	22 - 998	-	-	-	
toluene	7,841 - 8,329	-	-	-	
					77,286 - 80,234
27) POLYMER PLASTICS CORP.					
xylene	99	-	-	-	99
28) POLY-PAK INDUSTRIES INC.					
1,1,1-trichloroethane	341,442 - 341,941	-	-	-	341,442 - 341,941
29) POLY SCIENTIFIC R&D CORP.					
methanol	1 - 10	1 - 10	-	-	
xylene	1 - 10	1 - 10	-	-	
					4 - 40
30) RAGEN DATA SYSTEMS					
freon 113	3,769	-	-	-	3,769
31) RHG ELECTRONICS LABORATORY INC.					
freon 113	8,800	-	-	-	8,800
32) RITE OFF INC.					
1,1,1-trichloroethane	1,412	-	-	-	
methylene chloride	11 - 499	-	-	-	
freon 113	11 - 499	-	-	-	
tetrachloroethylene	500 - 999	-	-	-	
					1,934 - 3,409
33) SOUNDCOAT CO. INC.					
barium compounds (off-site)	-	-	-	-	-
34) STANDARD MICROSYSTEMS CORP.					
sulfuric acid	11 - 499	1,368	-	-	1,379 - 1,867
35) STRAHL & PITSCH INC.					
phosphoric acid	-	-		1 - 10	
manganese compounds	-	-		4	
					5 - 14
36) UNEXCELLED CASTINGS CORP.					
aluminum	11 - 499	-	-	-	
copper	11 - 499	-	-	-	
zinc	11 - 499	-	-	-	
					33 - 1,497

summarize the amounts of each of these chemicals reported released in Nassau and Suffolk counties, respectively.

TABLE 5
Top 10 toxic chemicals reported released in 1990 in Nassau County
(in pounds; an asterisk after a chemical indicates that it is a suspected human carcinogen)

Chemical	Air	Water	Land	POTW	TOTAL
1) 1,1,1-trichloroethane	774,621 - 775,597	-	-	601 - 1,089	775,222 - 776,686
2) Methylene chloride*	587,029 - 587,535	-	-	80	587,109 - 587,615
3) Tetrachloroethylene*	573,839	-	-	1 - 10	573,840 - 573,849
4) Trichloroethylene*	262,773	-	-	11 - 499	262,784 - 263,272
5) Freon 113	236,980 - 237,956	-	-	-	236,980 - 237,956
6) Methanol	221,046 - 222,022	-	-	33 - 1,497	221,079 - 223,519
7) 2-butanone	124,710 - 125,697	-	-	-	124,710 - 125,697
8) Glycols	44,055 - 46,994	-	-	22 - 998	44,077 - 47,992
9) Barium compounds	22 - 998	-	-	44,600	44,622 - 45,598
10) Ammonia	1,011 - 2,497	-	-	36,811 - 37,299	37,822 - 39,796

Sub-totals

	from:		to:
Air:	**2,826,086**	**-**	**2,835,908**
Water:			**-**
Land:			**-**
POTW:	**82,159**	**-**	**86,072**
TOTAL:	**2,908,245**	**-**	**2,921,980**

TABLE 6
Top 10 toxic chemicals reported released in 1990 in Suffolk County
(in pounds; an asterisk after a chemical indicates that it is a suspected human carcinogen)

Chemical	Air	Water	Land	POTW	TOTAL
1) 1,1,1-trichloroethane	589,081 - 589,580	-	-	-	589,081 - 589,580
2) Freon 113	195,202 - 195,690	-	-	-	195,202 - 195,690
3) Methylene chloride*	166,891 - 167,878	-	-	-	166,891 - 167,878
4) Trichloroethylene*	127,273	-	-	-	127,273
5) Toluene	45,231 - 46,218	-	22	-	45,253 - 46,240
6) 2-butanone	41,646 - 42,145	-	-	-	41,646 - 42,145
7) Glycols	10,741	2,800	-	-	13,541
8) Methyl methacrylate	13,500	-	-	-	13,500
9) Propylene oxide*	511 - 1,498	-	-	500 - 999	1,011 - 2,497
10) Sulfuric acid	97 - 603	1,368	-	-	1,465 - 1,971

Sub-totals

	from:		to:
Air:	**1,190,173**	**-**	**1,195,126**
Water:			**4,168**
Land:			**22**
POTW:	**500**	**-**	**999**
TOTAL:	**1,194,863**	**-**	**1,200,315**

2. The Air We Breathe: Long Island's Biggest Toxic Dump

The U.S. EPA and New York State DEC have established programs to regulate the release of toxic chemicals into the air. In 1990, however, these programs sanctioned the release of a staggering amount of air toxics on Long Island.

In fact, the vast majority of chemicals reported released on Long Island—more than 4.1 million pounds, or 96 percent of the total—was emitted to the air. Moreover, the federal and state programs allowed the release of as much as 1.7 million pounds of the following suspected human carcinogens to Long Island's air: methylene chloride, tetrachloroethylene, and trichloroethylene.

One facility alone—Grumman Aerospace Corporation's plant in Bethpage—released a total of more than one million pounds of toxic chemicals, almost all of which was released to the air. Several companies in both counties each reported releasing several hundred thousand pounds of toxins into the air.

Grumman's plant in Bethpage also was ranked by DEC as releasing the ninth largest amount of chemicals released to the air via point sources (e.g., smokestacks) in 1990 on a statewide basis. This rank was based on the release of more than 522,000 pounds of the suspected carcinogen tetrachloroethylene, representing an increase of 23 percent in Grumman's release of this chemical from 1989 to 1990.[18] Also according to DEC, Photocircuits Corp. in Glen Cove had the 16th and 18th largest stack emissions in 1990 throughout the state. This printed circuit board manufacturer released 345,000 pounds of 1,1,1-trichloroethane (an increase of 17 percent from 1989), and 336,000 pounds of dichloromethane—a synonym for methylene chloride (a decrease of two percent from 1989).[19] In Suffolk County according to DEC, Poly-Pak Industries in Melville had the 17th largest stack emissions in 1990 statewide. This commercial printing facility released more than 340,000 pounds of 1,1,1-trichloroethane.[20]

The 1990 results of the TRI program indicate that federal and state air toxics programs are sorely limited in several ways. As of 1990, EPA regulated only six toxic chemicals released to the air. The Clean Air Act Amendments of 1990 increased this list to 189 toxic air pollutants, but the timeline established in the Amendments does not require EPA to promulgate regulations for all of these pollutants until the year 2000.[21]

In addition, New York State's air regulations are designed primarily to limit the hourly release of toxic chemicals from point sources to what appear to be low levels. But the 1990 TRI data reveal that the cumulative release of a small amount of many chemicals from a large number of sources can result in a large volume release on an annual basis. In addition, the state's program does not regulate fugitive air emissions.[22] In 1990, however, several Long Island facilities each released thousands of pounds (in some cases, tens of thousands of pounds) of toxic chemicals to the air through fugitive sources.

In Nassau County, the state's air toxics program is jointly administered by DEC and the county Department of Health. The Health Department's limited resources prevent the program's staff from conducting annual inspections of all permitted facilities in the county.[23] In fact, the staff generally are able to respond only to citizen complaints of odors or other air pollution concerns. As a result, myriad violations of air toxics

regulations and permits can go unchecked, and dozens of facilities which release toxic air pollutants throughout the county can go unregulated.

In Suffolk County, the air toxics program is administered by DEC, which is similarly understaffed and underfunded.[24] As a result, many air pollution problems in that county are also neglected.

3. Locating the Releases on Long Island

Figures 1, 2a, and 2b identify the approximate locations of the 41 facilities in Nassau County and the 36 facilities in Suffolk County which reported in 1990 to TRI. The numbers denoting the approximate location of each facility correspond with the map codes listed in Appendices C and D.

In Nassau County, clusters of facilities were identified in Plainview, New Cassel, Freeport, and the City of Glen Cove. In Suffolk County, several clusters of facilities were identified along Route 110 in Melville and Farmingdale and in the industrial parks in Deer Park and Hauppauge. Otherwise, facilities were distributed throughout both counties (although no facilities reported in 1990 to TRI in the City of Long Beach and the towns of Brookhaven, East Hampton, Shelter Island, and Southold).

These clusters indicate that certain communities on Long Island may face a disproportionate risk of exposure to toxic chemicals. The potential additive and synergistic effects of the release of several toxic chemicals from facilities in close proximity to each other can multiply the health and environmental impacts from each individual pollutant.

4. Missed Opportunities to Reduce Toxic Chemical Use and Prevent Toxic Releases

Industry officials throughout the nation have begun to realize that they can save tens, and sometimes hundreds, of thousands of dollars each year at each of their facilities by curtailing the use of toxic chemicals. In New York, DEC's Division of Hazardous Substances Regulation reports that as of July 1990, "eight companies have detailed 11 processes that have reduced or eliminated waste and organic solvents," including trichloroethylene, methyl chloride, acetone, and isopropyl alcohol.[25] Each of these chemicals are listed as toxic under the TRI program.

These companies are able to save money and protect the environment by substituting nontoxic compounds for toxic materials, reducing their generation of hazardous waste by improving the efficiency of their operations, and using improved waste treatment techniques or technologies. According to the 1990 TRI data for Long Island, however, only 14 facilities reported that they had undertaken any such efforts.

In 1990, the New York State legislature adopted a hazardous waste reduction law requiring waste generators to prepare plans to reduce their hazardous wastes.[26] These plans must be submitted to DEC and updated every two years. Hazardous waste generators are required, among other things, to demonstrate how much waste has been used and reduced, what reduction techniques and technologies are used by the company, and what benefits have accrued due to the company's waste reduction program.

FIGURE 1

Map of manufacturing facilities in Nassau County reporting toxic chemical releases in 1990 (locations are approximate)

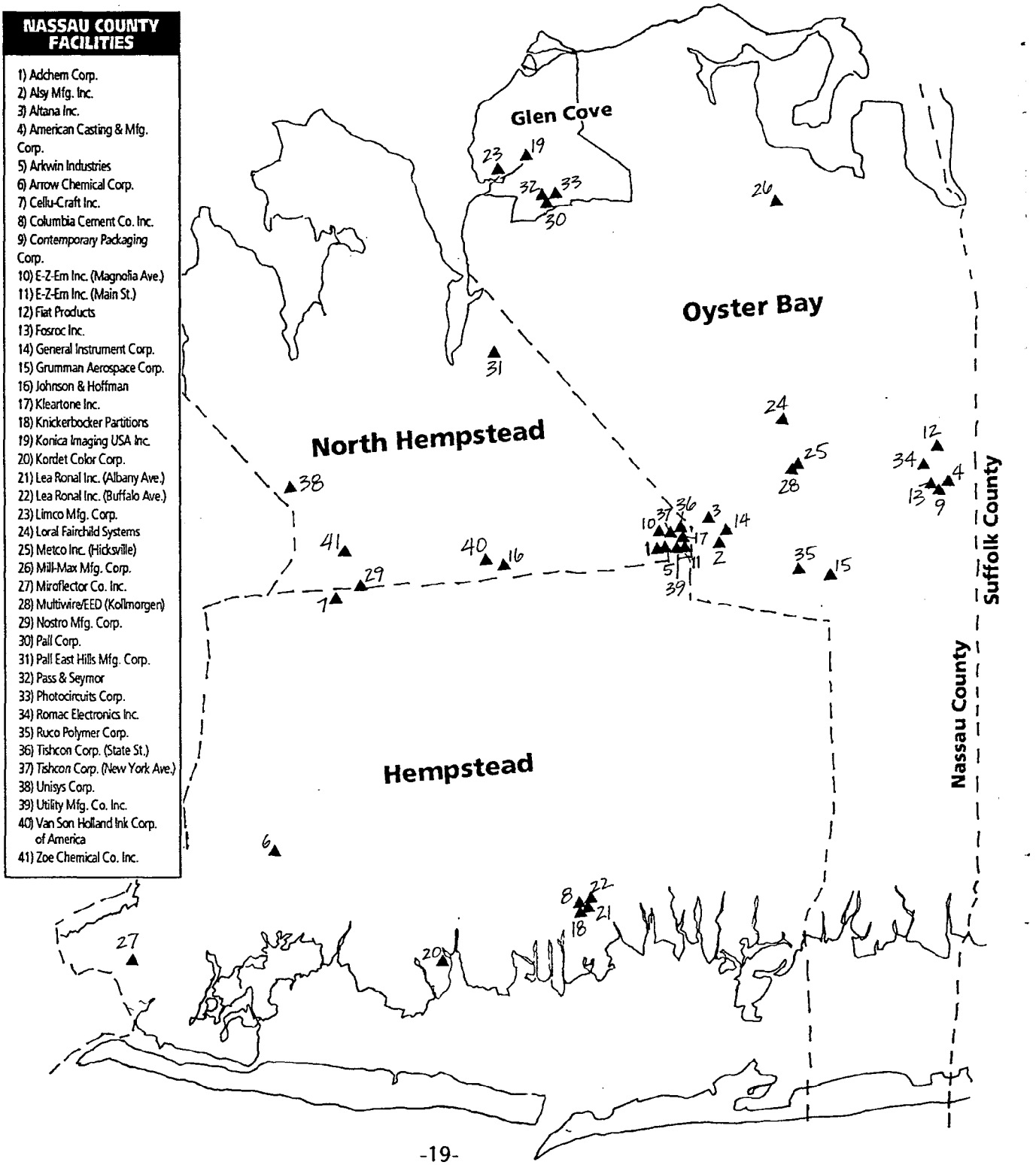


FIGURE 2a

Map of manufacturing facilities in Suffolk County (in the towns of Babylon, Huntington, Islip, and Smithtown) reporting toxic chemical releases in 1990 (locations are approximate)

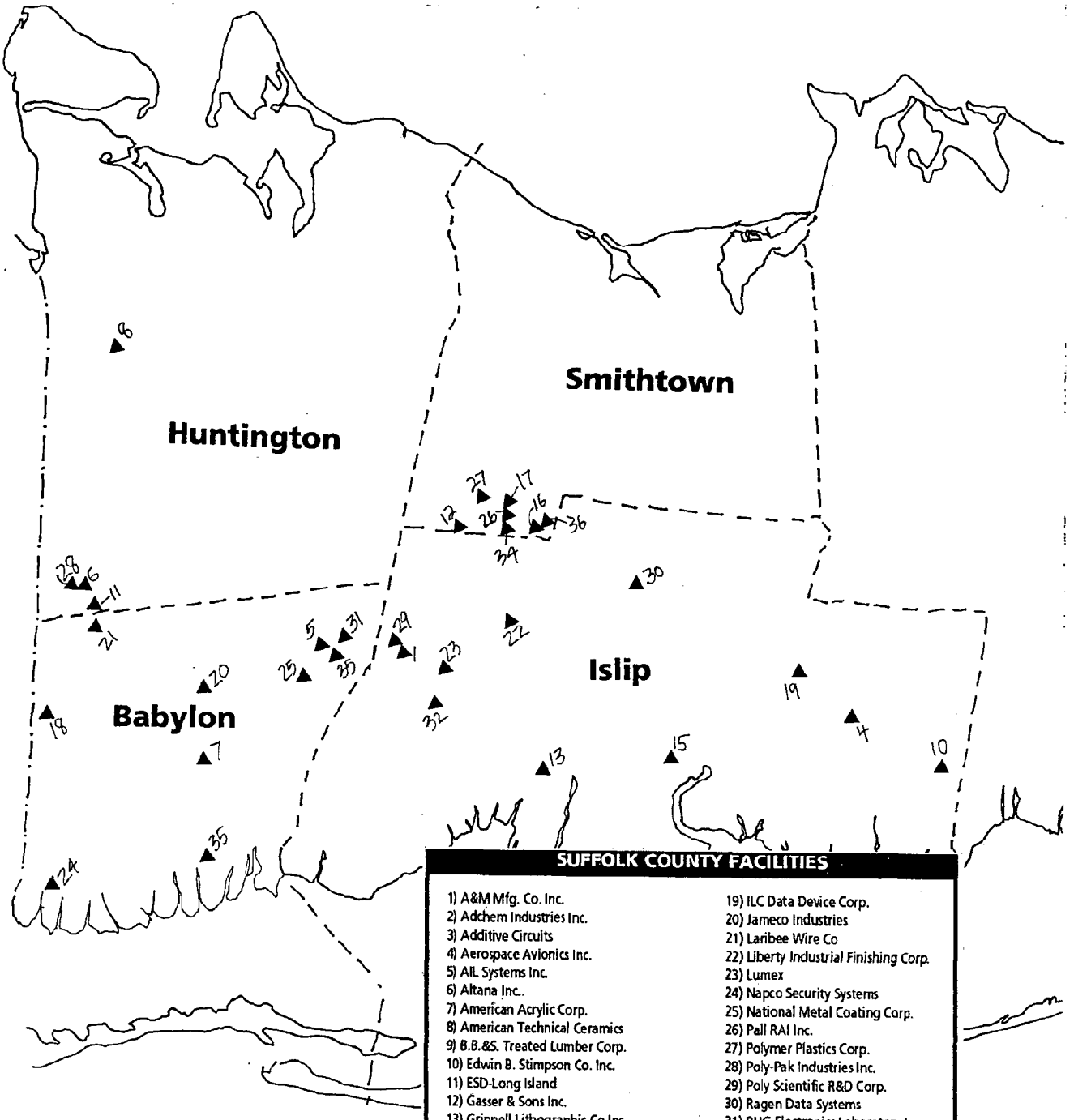
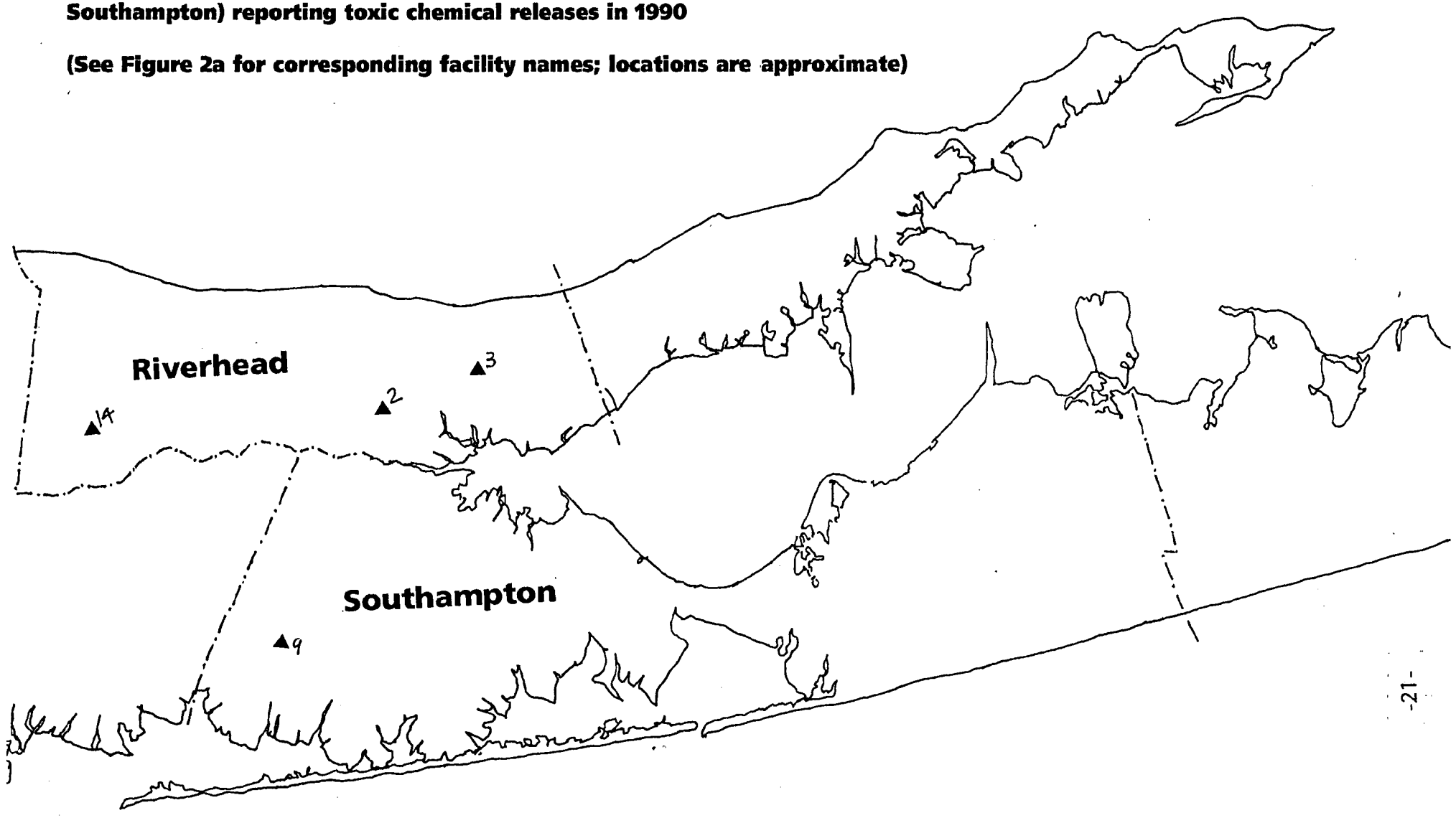


FIGURE 2b

Map of manufacturing facilities in Suffolk County (in the towns of Riverhead and Southampton) reporting toxic chemical releases in 1990

(See Figure 2a for corresponding facility names; locations are approximate)



New York State's waste reduction law, however, is fundamentally flawed in several ways. It does not require individual companies or industries as a whole to achieve any specific levels of waste reduction, it contains no requirements to achieve reductions in the use of toxic chemicals during the production process, and it fails to provide DEC with explicit enforcement power to ensure that a company's waste reduction plan will be implemented. Therefore, while DEC's educational and technical assistance efforts to persuade companies to reduce waste have been helpful, they may not achieve more than small-scale reductions unless state officials establish a mandatory program destined to achieve substantial statewide reductions in the use and release of toxic chemicals.[27]

One facility on Long Island which has reduced its use of toxic chemicals is Additive Circuits in Aquebogue.[28] The DEC's Bureau of Pollution Prevention reported that, in 1988, this company changed its process for coating electronic circuit boards, resulting in the reuse of up to 99 percent of the copper it had purchased, at a savings of more than $100,000. The company also altered its treatment of a chemical used in the coating process (ethylene diamine tetracetic acid) in order to reuse it, saving $125,000 per year. In 1991, DEC reported that Additive Circuits arranged with a service to recover 90 percent of the solvent 1,1,1-trichloroethane which previously had been disposed of off-site. This saved Additive Circuits $22,000.

As of 1990, however, Additive Circuits had still released tens of thousand of pounds of several other toxic chemicals into the environment, including the suspected carcinogen methylene chloride (see Table 3). Unless DEC is able to require industries to reduce the use and release of toxic chemicals, especially cancer-causing substances, the public's health and environment can still be put at risk.

What the TRI Program Doesn't Look For, It Won't Find

The federal Toxic Release Inventory has provided a wealth of information regarding toxic chemical releases from manufacturing facilities here on Long Island and throughout New York State and the nation. The TRI program, however, is inherently limited in several ways; the most serious limitations are described below.

1. The TRI program only requires manufacturers to report the release of toxic chemicals.

- Facilities such as electric utilities, government facilities at all levels (such as the Brookhaven National Laboratory, colleges and universities, and local government laboratories), airports, gas stations and other sites which store oil and petroleum in bulk, dry cleaners, and photo-processors all are exempt from reporting to TRI their releases of toxic chemicals.

- Some of these companies—such as gas stations, dry cleaners, and photo-processors—also may not be required to report because they are small businesses or use only small quantities of chemicals and therefore fall below TRI's reporting thresholds.

- Air releases account for the largest category of toxic releases on Long Island and throughout the nation. Yet DEC reports that more than 560 facilities throughout Nassau and Suffolk counties possess air pollution permits which allow them to release at least one of the toxic chemicals covered by the TRI program.[29] Consequently, the 77 facilities on Long Island in 1990 reporting to TRI represent only a small subset—approximately 14 percent—of the total number of facilities which are regulated by the state to emit air toxics on Long Island.

2. Several additional sources of toxic pollution are not covered by TRI. These include:

- garbage and hazardous waste incinerators (in 1990, the garbage incinerator in Niagara County operated by Occidental Chemical Corp. voluntarily reported its toxic releases, and was ranked second in New York State for point source air emissions; it emitted more than 4.5 million pounds of hydrochloric acid[30]);
- urban, non-industrial stormwater runoff (typically contaminated with an array of toxic chemicals);
- solid and hazardous waste landfills or other dumpsites (which can leach hazardous contaminants into the environment);
- non-industrial oil and hazardous material spills; and
- pesticides on farms, golf courses, parks, and residential areas.

Other government programs record and track information regarding some of these sources, but these regulatory programs are limited, incompatible with TRI, and less accessible to the public.

3. Hazardous wastes are not necessarily included in TRI's reporting requirements.

• A company may have transferred 10 pounds of a chemical to off-site disposal, but if the chemical was included in 1,000 pounds of sludge—potentially making the sludge a hazardous waste—TRI does not require the full 1,000 pounds of sludge to be reported, only the 10 pounds of the specific chemical.

• In 1990, the 77 facilities on Long Island which reported to TRI indicated they had generated as much as 785,000 pounds of chemicals which were contained in wastes and transferred off-site. Also in 1990, however, 140 hazardous waste generators on Long Island reported the generation of almost 54 million pounds of waste—more than 68 times the amount of toxic chemicals reported to TRI as contained in wastes.[31] More than 100 of these hazardous waste generators in 1990 did not file reports with the TRI program.[32]

4. Not all known toxic chemicals are covered by TRI.

• Many chemicals which are considered toxic or hazardous pursuant to other federal and state programs—such as Superfund and the federal Clean Water and Clean Air Acts—are not included in the list of more than 300 chemicals covered in 1990 by TRI.

• According to the U.S. Government Accounting Office (GAO), 41 of 129 chemicals which are known or suspected human carcinogens are not included in the program, 32 of the 126 toxic chemicals regulated by the Clean Water Act are not included, and 16 of 189 hazardous air pollutants now regulated by the Clean Air Act also are omitted.[33]

• New York State has developed guidelines for the release of approximately 460 toxic chemicals into the air. These are identified in DEC's "Air Guide-1: Guidelines for the Control of Toxic Ambient Air Contaminants."[34] Overall, however, DEC staff estimates that as many as 3,000 different toxic chemicals are regulated pursuant to Air Guide-1.[35] Most of the chemicals in this larger list are not explicitly identified in Air Guide-1, but are specific to certain manufacturing processes which are used and released by only one facility or company. Nonetheless, many of these pollutants are not covered by TRI.

5. TRI does not require facilities to measure the actual releases of its chemicals.

• Facilities are allowed to estimate or calculate the released amounts based on generally accepted formulas.[36] These estimates, however, may under- or overestimate the actual releases of toxic chemicals.

6. Facilities are not required to separately report accidental releases, or peak releases, of chemicals.

• The TRI program requires each facility to report the annual amount of toxic chemicals it releases.[37] Therefore, one-time releases due to accidents or equipment maintenance are simply lumped together in the annual amount. These releases can

be large, and may present acute environmental and health threats. The current TRI program, however, requires no separate reporting for them. The Pollution Prevention Act of 1990 requires facilities to report separately any "one-time" or accidental releases of chemicals. This information will first be made available on the reports from 1991.

7. TRI's reporting requirements for calendar year 1990 did not address pollution prevention.

- The TRI program requires companies to report the amounts of chemicals which are released off-site or disposed of on-site. No reporting is required, however, for chemicals which are used in the production process, incorporated into products, produced on-site, or recycled or otherwise treated on-site.

- The reduced use of toxic chemicals at each of these steps can reduce the risk to the community when toxic chemicals are delivered to the facility, protect workers from on-site chemical exposures, and save money for the facility by reducing the costs of disposal or treatment of hazardous wastes. Under TRI, however, each facility's on-site use of toxic chemicals is a virtual black box, preventing the public and government regulators from obtaining information which can be used to press for reductions in the use of specific chemicals, the substitution of nontoxic materials, and the alteration of manufacturing processes.

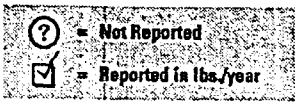
- Some of these limitations have been addressed through passage of the federal Pollution Prevention Act of 1990. In particular, the Act requires that facilities provide data on chemicals which are generated as waste prior to recycling, treatment, or disposal, recycled on-site, or treated on-site. This information will be required for facilities that must report their 1991 data to EPA and the states by July 1, 1992. Nevertheless, the Act still fails to require facilities to report the amounts of chemicals which are consumed in the production process, produced on-site as a manufacturing by-product, or incorporated into products.

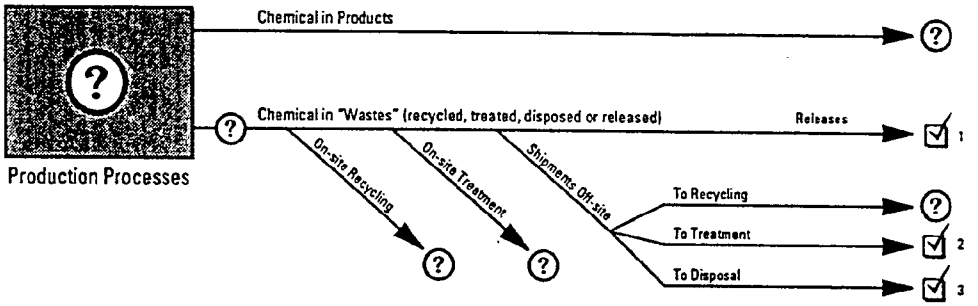
- Figure 3 portrays and summarizes the differences among the reporting requirements of the original TRI program, the Pollution Prevention Act of 1990, and the proposed Community Right-to-Know More Act.

In addition to these inherent limitations, the TRI program has suffered from inadequate enforcement. In 1988 (the latest year for which enforcement statistics have been published), the U.S. GAO estimated that nationwide, at least 35 percent of facilities required to report failed to do so—an increase from 34 percent in 1987.[38] In other words, more than one of every three facilities subject to TRI did not report for that year. One reason for this high noncompliance rate is EPCRA's failure to provide EPA with the authority to conduct on-site facility inspections.[39] The federal agency was given the authority to fine companies for violating the law, but has no explicit authority to inspect facilities for compliance.

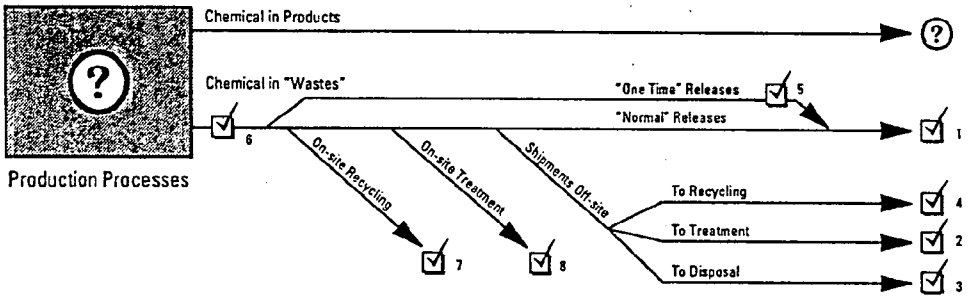
FIGURE 3

A. Toxics Release Inventory (EPCRA, 1986)

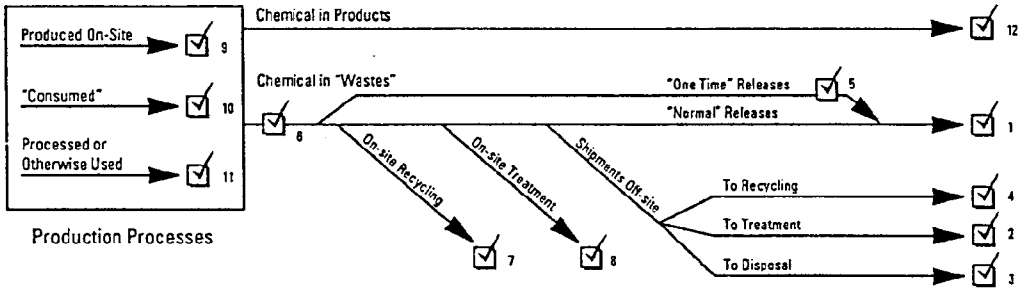




B. Pollution Prevention Act (1990)



C. Community Right-to-Know More Act (proposed)



Pollution Data Reported Under Federal Law

	Toxics Release Inventory (1986)	Pollution Prevention Act (1990)	Right-to-Know More Act (proposed)
Release data	1) Released (to air, land, water, etc.) 2) Shipped off-site for treatment 3) Shipped off-site for disposal	4) Shipped off-site for recycling 5) Released "one-time" (accidental, remedial or other abnormal release)	
Waste stream data		6) Generated as waste prior to recycling, treatment or disposal 7) Recycled on-site (amount successfully recycled) 8) Treated on-site (with estimates of efficiency)	
Toxics use data*			9) Produced on-site (as product or by-product) 10) Consumed in production processes 11) Processed or otherwise used 12) Incorporated into products

This simplified diagram illustrates major "measuring points" that are reported in pounds per year. Other reported information (i.e. facility identification, activity codes, amount stored, etc.) is not represented.

* Including process level data, reported per unit of product, for production processes, waste stream and product output.

Contributors to this analysis: David W. Allen, Center for Pollution Prevention; Hillel Gray, National Environmental Law Center, and; Carolyn Hartmann, U.S. Public Interest Research Group. Diagrams by Rich Puchalsky, Unison Institute/OMB Watch. For more info.: Paul Orum, 202/546-9707.

Conclusions and Recommendations

Although the Toxic Release Inventory program is limited, it has achieved its goals of estimating and focusing attention on the scope and magnitude of industrial toxic pollution threats facing the nation. On Long Island for 1990, TRI data show that a staggering amount of toxic chemicals was released to the local environment. Manufacturing facilities both large and small contributed to these releases, emitting both minimal and substantial quantities of chemicals. All of the chemicals are considered toxic by the U.S. EPA, some are known or suspected carcinogens, and others are capable of causing birth defects or other chronic health effects. The vast majority of releases—more than 4.1 million pounds—were discharged to the air, despite federal, state, and local programs designed to regulate air toxics.

The following recommendations are designed to substantially improve the TRI program and ensure that it will be used as effectively as possible to spur government and industry to drastically reduce the release of toxic chemicals to the environment:

1. Congress should take action this session to pass the Community Right-to-Know More Act (H.R. 2880). This bill, introduced by Representative Gerry Sikorski (D-Minnesota), would expand the TRI program to include more chemicals and more facilities, and would require industries to report the toxic chemicals they use and produce, as well as release. A similar bill—the Right to Know More Act of 1991 (S. 2123)—has been introduced by Senators Frank Lautenberg (D-New Jersey) and Dave Durenberger (R-Minnesota).

2. The New York State Legislature should pass the Multi-Media Toxic Chemical Release Inventory Act (A.3845/S.8099). This bill would expand the TRI program for New York State by, among other things, requiring facilities in New York to report to DEC twice-a-year, provide exact measurements of toxic releases and exact locations of emission points, identify accidental releases, and enable the DEC to conduct site investigations to determine facility compliance.

3. The state legislature or Department of Environmental Conservation should require industries to phase out the use of toxic chemicals, including the elimination of known or suspected cancer-causing chemicals. This effort should be modeled on "Toxics Use Reduction" (TUR) legislation passed in other states such as Massachusetts, Oregon, Indiana, and Illinois. It would be designed to prevent pollution at the source, thereby alleviating the need to minimize waste and regulate the release of chemicals into the environment.

4. In the absence of a statewide toxics use reduction program, Long Island's manufacturing industry should take the initiative to reduce the use of toxic chemicals, thereby saving money while protecting the environment. All manufacturers on Long Island should follow the lead of the few companies who have reduced their costs by using fewer toxic substances in their production processes, and nontoxic chemicals in their treatment and cleaning procedures.

5. The state legislature, the Nassau County Board of Supervisors, and the Suffolk County Legislature, should enact citizen enforcement laws to enable private citizens to bring civil actions against polluters. This proposal would allow citizens to supplement the enforcement efforts of local and state agencies to bring polluters into compliance with environmental laws and regulations. Given the large number of industrial sources of toxic chemical releases to the environment, coupled with dwindling budgets, this assistance is critical to help protect the public's health and environment.

References

[1] New York State Department of Environmental Conservation (NYS DEC; 1991). "Pollution Prevention Bulletin." Spring 1991. p. 4.

[2] Orum, P. (1992). Working Group on Community Right-To-Know. Personal communication. April 27, 1992.

[3] The Act was passed as part of revisions to the federal Superfund in 1986, and is known as "Title III" of the Superfund Amendments and Reauthorization Act of 1986 (SARA). It consists of four main sections: emergency planning, emergency release notification, community right-to-know reporting requirements, and toxic chemical release inventory reporting.

[4] U.S. Environmental Protection Agency (1991). Toxics in the Community: National and Local Perspectives. EPA 560/4-01-014. September 1991. p. 13.

[5] *Ibid.* p. 26

[6] For calendar year 1987, the reporting threshold was the manufacture or processing of more than 75,000 pounds. In 1988, the threshold was reduced to 50,000 pounds. In 1989 and subsequent years, it was reduced to 25,000. Also in 1987, the TRI program covered 329 chemicals and chemical categories. Since then, several chemicals have been added and some have been delisted. The number for 1990 was 310 chemicals and 20 chemical categories.

[7] U.S. General Accounting Office (1991). Toxic Chemicals: EPA's Toxic Release Inventory is Useful but Can Be Improved. GAO/RCED-91-121. Washington, DC. June 1991. p. 29.

[8] Working Group on Community Right-To-Know (1992). "Working Notes on Community Right-To-Know." January-February 1992.

[9] 40 CFR § 372.3.

[10] Public Law 101-508. 42 USC § 13101, *et seq.*

[11] Working Group on Community Right-To-Know (1991). "Working Notes on Community Right-To-Know." February-March 1991.

[12] US EPA (1991). Toxic Chemical Release Inventory Reporting Package for 1990. EPA 560/4-91-001. p. 24.

[13] NYS DEC (1991). New York State 1990 Toxic Release Inventory (TRI) Review. September 1991. pp. 6-7.

[14] *Ibid.* p. iv.

[15] Executive Office of the President, Office of Management and Budget (1987). Standard Industrial Classification Manual.

[16] See the following sources for information on carcinogenicity and other health information: 1) Sixth Annual Report on Carcinogens (1991; U.S. Department of Health and Human Services National Toxicology Program). 2) "Hazardous Substance Fact Sheets" prepared by the New Jersey Department of Health Right to Know Program; distributed by the US EPA Office of Toxic Substances. 3) Toxicological Profiles prepared U.S. Department of Health and Human Services Agency for Toxic Substances and Disease Registry. 4) SARA Section 313 Toxicity Matrix Reference Database, prepared for the U.S. Environmental Protection Agency Office of Toxic Substances by ICF Inc.

[17] *Ibid.*

[18] NYS DEC (1991). *op cit.* p. 19.

[19] *Ibid.*

[20] *Ibid.*

[21] US EPA (1990). "The Clean Air Act Amendments of 1990: Summary Materials." USEPA Office of Air and Radiation. November 15, 1990.

[22] Majewski, R. (1992). NYS DEC Division of Air Resources, Bureau of Technical Services. Albany, NY. Personal communication. February 28, 1992.

[23] Hodgeman, C. (1992). Nassau County Department of Health. Mineola, NY. Personal communication. March 11, 1992.

[24] Birr, C. (1992). NYS DEC Division of Air, Region 1. Stony Brook, NY. Personal communication. March 23, 1992.

[25] NYS DEC (1990). "Pollution Prevention Bulletin." Division of Hazardous Substances Regulation. Albany, NY. Fall 1990.
[26] Chapter 831, Laws of 1990.
[27] NYS DEC is currently drafting regulations—6 NYCRR Part 378—designed to require facilities which release large amounts of toxic chemicals to the air or water, and which generate hazardous waste, to submit reports detailing their efforts to reduce releases and waste.
[28] NYS DEC (1990/1991). "Success Story Fact Sheet." Number 11, November 1990; and Number 12, March 1991.
[29] Majewski, R. (1992). NYS DEC. Personal communication. March 26, 1992.
[30] NYS DEC (1991). *op cit.*
[31] NYS DEC (1991). 1990 Annual Report: Generation and Disposal of Hazardous Waste in New York State (Appendices). Division of Hazardous Substances Regulation. Albany, NY. November 1991.
[32] *Ibid.*
[33] U.S. General Accounting Office (1991). *op cit.* pp. 29-30.
[34] NYS DEC (1991). "Draft New York State Air Guide-1: Guidelines for the Control of Toxic Ambient Air Contaminants." Division of Air Resources. Albany, NY. 1991 Edition.
[35] Majewski, R. (1992). March 28, 1992. *op cit.*
[36] US EPA (1991). *op cit.*
[37] *Ibid.*
[38] U.S. General Accounting Office (1991). *op cit.* p. 50.
[39] *Ibid.* p. 55.

APPENDICES A - G

E-Z-EM INC. 117 MAGNOLIA AVE. WESTBURY, NY 11590 333-8230	**SIC code:** 3295 **SIC description:** Minerals, ground or treated	Map code #10
E-Z-EM INC. 717 MAIN ST. WESTBURY, NY 11590 333-8230	**SIC code:** 3295 **SIC description:** Minerals, ground or treated	Map code #11
FIAT PRODUCTS 1 MICHAEL CT. PLAINVIEW, NY 11803 349-7002	**SIC code:** 3431 **SIC description:** Metal sanitary ware	Map code #12
FOSROC INC. 55 SKYLINE DR. PLAINVIEW, NY 11803 935-9100	**SIC code:** 3272 **SIC description:** Concrete products	Map code #13
GENERAL INSTRUMENT CORP. 600 W. JOHN ST. HICKSVILLE, NY 11802 933-3100	**SIC code:** 3674 **SIC description:** Semiconductors and related devices	Map code #14
GRUMMAN AEROSPACE CORP. B08-30 STUART AVE. BETHPAGE, NY 11714 575-2385	**SIC code:** 3721 **SIC description:** Aircraft	Map code #15
JOHNSON & HOFFMAN 40 VOICE RD. CARLE PLACE, NY 11514 742-3333	**SIC code:** 3469 **SIC description:** Metal stampings	Map code #16
KLEARTONE INC. 695 SUMMA AVE. WESTBURY, NY 11590 334-1400	**SIC code:** 2671 **SIC description:** Paper coated & laminated, packaging	Map code #17
KNICKERBOCKER PARTITIONS 193 HANSE AVE. FREEPORT, NY 11520 718-531-8400	**SIC code:** 2542 **SIC description:** Partitions and fixtures, except wood	Map code #18
KONICA IMAGING USA INC. 71 CHARLES ST. GLEN COVE, NY 11542 674-2500	**SIC code:** 3861 **SIC description:** Photographic equipment and supplies	Map code #19

APPENDIX C

Nassau County manufacturing facilities (in TRI), SIC codes, and descriptions
(Area codes are 516 unless otherwise noted.)

ADCHEM CORP. 625 MAIN ST. WESTBURY, NY 11590 333-3843	**SIC code:** 2672 **SIC description:** Paper coated and laminated	**Map code #1**
ALSY MANUFACTURING INC. 270 DUFFY AVE. HICKSVILLE, NY 11801 412-758-0707	**SIC code:** 3645 **SIC description:** Residential lighting fixtures	**Map code #2**
ALTANA INC. 55 CANTIAGUE ROCK RD. HICKSVILLE, NY 11801 454-7677	**SIC code:** 2830 **SIC description:** Drugs	**Map code #3**
AMERICAN CASTING & MFG. CORP. 51 COMMERCIAL ST. PLAINVIEW, NY 11803 349-7010	**SIC code:** 3499 **SIC description:** Fabricated metal products	**Map code #4**
ARKWIN INDUSTRIES 686 MAIN ST. WESTBURY, NY 11590 333-2640	**SIC code:** 3728 **SIC description:** Aircraft parts and equipment	**Map code #5**
ARROW CHEMICAL CORP. 151 HORTON AVE. LYNBROOK, NY 11563 593-1434	**SIC code:** 2842 **SIC description:** Polishes and sanitation goods	**Map code #6**
CELLU-CRAFT INC. 1403 4TH AVE. NEW HYDE PARK, NY 11040 775-8000	**SIC code:** 2671 **SIC description:** Paper coated & laminated, packaging	**Map code #7**
COLUMBIA CEMENT CO. INC. 159 HANSE AVE. FREEPORT, NY 11520 623-6000	**SIC code:** 2891 **SIC description:** Adhesives and sealants	**Map code #8**
CONTEMPORARY PACKAGING CORP. 75 COMMERCIAL ST. PLAINVIEW, NY 11803 349-1616	**SIC code:** 2751 **SIC description:** Commercial printing	**Map code #9**

APPENDIX B

List of general Standard Industrial Classifications for manufacturers ("XX" indicates additional subclassifications within each category)[1]

SIC Code	Description
20XX	Food & Kindred Products
21XX	Tobacco Products
22XX	Textile Mill Products
23XX	Apparel & Other Finished Products made from fabrics and similar materials
24XX	Lumber & Wood Products, except furniture
25XX	Furniture & Fixtures
26XX	Paper & Allied Products
27XX	Printing, Publishing, & Allied Products
28XX	Chemicals & Allied Products
29XX	Petroleum Refining and Related Industries
30XX	Rubber & Misc. Plastic Products
31XX	Leather & Leather Products
32XX	Stone, Clay, Glass, & Concrete Products
33XX	Primary Metal Industries
34XX	Fabricated Metal Products, except machinery and transportation equipment
35XX	Industrial & Commercial Machinery & Computer Equipment
36XX	Electronic & Other Electrical Equipment & Components, except computer equipment
37XX	Transportation Equipment
38XX	Measuring, Analyzing, & Controlling Instruments; photographic, medical & optic goods; watches & clocks
39XX	Miscellaneous Manufacturing Industries

[1] Source: Standard Industrial Classification Manual. Executive Office of the President, Office of Management and Budget. 1987.

APPENDIX A

NEW YORK PUBLIC INTEREST RESEARCH GROUP, INC.
10 Oakwood Road Huntington, NY 11743 516-673-5536 Fax 516-673-5539
OFFICES IN: ALBANY, BINGHAMTON, BUFFALO, CORTLAND, LONG ISLAND, NEW PALTZ, NEW YORK CITY, PURCHASE & SYRACUSE

The Toxics Release Inventory

Federal right to know reporting for industrial toxic releases and transfers

A Landmark Law:

This fact sheet provides basic information about Toxics Release Inventory (TRI) provisions of the Emergency Planning and Community Right to Know Act of 1986 (EPCRA or SARA Title III).

Background:

Federal right-to-know grew out of a broad and diverse grass roots movement, the lack of cohesive information on facilities' toxic waste generation, and the December 1984 Bhopal tragedy. Chemical companies and the U.S. EPA fought against public reporting as the U.S. Congress hotly debated right-to-know. Portions of TRI passed by only a one-vote margin (212-211) on Dec. 10, 1985.

Since final passage in 1986, TRI has sparked extensive interest from the public, legislators, the press, regulators, and industry. The TRI database is now widely recognized as a valuable source of environmental data. Armed for the first time with equal access to information, citizens are leading a nationwide movement to prevent toxic pollution and enforce environmental laws.

The Toxics Release Inventory:

The law requires large manufacturers to report publicly their environmental releases and off-site transfers of some 330 toxic chemicals in wastes. The releases are reported for each environmental "medium" (air, land, water, etc.). EPA must make this information public in a computerized "Toxics Release Inventory" (TRI), the first publicly accessible, on-line computer database ever mandated by federal law.

Limitations:

- Many common toxic chemicals are not on the right to know list;
- Non-manufacturers, small firms and federal facilities are exempt;
- Annual reporting does not reveal peak release rates;
- Facilities ordinarily calculate, rather than measure, releases;
- Wastes transferred off-site for "recycling" may not be reported;
- Non-compliance is roughly one in three covered facilities;
- TRI data alone are insufficient to track pollution prevention;
- Chemicals in products (as opposed to wastes) are not reported;
- As much as 95% of all toxic emissions are not covered by the law.

Expanding TRI:

In 1990, Congress passed the Pollution Prevention Act, which adds new data elements on source reduction and recycling to TRI, starting with the 1991 calendar year (reports are due July 1, 1992). The pollution prevention picture is nonetheless incomplete without chemical use and production data.

The Right to Know More:

In June 1991, the U.S. General Accounting Office reported that up to 95% of all chemical emissions may escape reporting under current law. In July 1991, Congressman Sikorski (D-MN) introduced the "Community Right to Know More Act of 1991" (HR 2880). In outline, this bill:

- ✔ expands the list of right to know chemicals;
- ✔ broadens the scope of covered facilities;
- ✔ initiates reporting on toxic chemical use and production;
- ✔ improves current waste stream reporting requirements;
- ✔ requires facilities to explore ways to cut their use of toxic chemicals voluntarily.

In Nov. 1991, Senators Lautenberg (D-NJ) and Durenberger (R-MN) introduced a similar bill, the "Right to Know More Act of 1991" (S 2123).

Other Provisions:

EPCRA has important provisions besides TRI. You can find out what hazardous chemicals local businesses are using and storing in your community, and you can participate in local emergency planning to prevent chemical accidents. For more information, contact your State Emergency Response Commission (or similar name), your Local Emergency Planning Committee or informed citizens groups.

Useful Phone Numbers:

✆ **EPA's Toxics Release Inventory User Support Service** (TRI-US) — helps citizens locate and access TRI data: (202) 260-1531 8:00-4:30 EST, M-F (Fax: 202-260-4659)

✆ **The Working Group on Community Right-to-Know** — a network for environmental groups: (202) 546-9707

✆ **Right-to-Know Computer Network** (RTK NET) — access to TRI and other environmental data: (202) 234-8494

✆ **On-line Computer Database** (TOXNET) — account information: (301) 496-1131 Cost: $25-35 per hour. Be sure to get: 1) a Quick Reference Guide, 2) a TRI Demo Disk.

Useful Documents:

☛ To obtain documents call EPA's **EPCRA Hotline**: (800) 535-0202 or (703) 920-9877 8:30-7:30 EST, M-F

☛ **Common Synonyms** — helps citizens identify TRI chemicals under various common names.

☛ **Roadmaps Toxicity Matrix** — helps citizens obtain quick reference toxicity information for TRI chemicals.

☛ **New Jersey Hazardous Substance Fact Sheets** (also on disk) — provide more detailed toxicity information. Call 609-984-2202 (NJ Dept of Health). Costs apply.

☛ **TRI Reporting Package for [Year]** — covers Form R, chemicals, SIC codes, reporting codes, Q & A, etc.

PALL CORP. 30 SEA CLIFF AVE. GLEN COVE, NY 11542 671-4000	**SIC code:** 3569 **SIC description:** General industrial machinery	**Map code #30**
PALL EAST HILLS MFG. CORP. 2200 NORTHERN BLVD. EAST HILLS, NY 11548 671-4000	**SIC code:** 3569 **SIC description:** General industrial machinery	**Map code #31**
PASS & SEYMOR 45 SEA CLIFF AVE. GLEN COVE, NY 11542 671-7000	**SIC code:** 3643 **SIC description:** Current-carrying wire devices	**Map code #32**
PHOTOCIRCUITS CORP. 31 SEA CLIFF AVE. GLEN COVE, NY 11542 674-1000	**SIC code:** 3471 **SIC description:** Plating and polishing	**Map code #33**
ROMAC ELECTRONICS INC. 155 EAST AMES CT. PLAINVIEW, NY 11803 727-8445	**SIC code:** 3469 **SIC description:** Metal stampings	**Map code #34**
RUCO POLYMER CORP. NEW SOUTH RD. HICKSVILLE, NY 11802 931-8104	**SIC code:** 2821 **SIC description:** Plastics materials and resins	**Map code #35**
TISHCON CORP. 125 STATE ST. WESTBURY, NY 11590 333-3050	**SIC code:** 2834 **SIC description:** Pharmaceutical preparations	**Map code #36**
TISHCON CORP. 30 NEW YORK AVE. WESTBURY, NY 11590 333-3020	**SIC code:** 2834 **SIC description:** Pharmaceutical preparations	**Map code #37**
UNISYS CORP. MARCUS AVE. GREAT NECK, NY 11020 574-1404	**SIC code:** 3497 **SIC description:** Metal foil and leaf	**Map code #38**
UTILITY MFG. CO. INC. 700 MAIN ST. WESTBURY, NY 11590 997-6300	**SIC code:** 2899 **SIC description:** Chemical preparations	**Map code #39**

KORDET COLOR CORP. 15 NEIL CT. OCEANSIDE, NY 11572 766-4111	**SIC code:** 2752 **SIC description:** Commercial printing, lithographic	**Map code #20**
LEA RONAL INC. 272 BUFFALO AVE. FREEPORT, NY 11520 868-8800	**SIC code:** 2815 **SIC description:** Industrial organic chemicals	**Map code #21**
LEA RONAL INC. 151 ALBANY AVE. FREEPORT, NY 11520 868-8800	**SIC code:** 2815 **SIC description:** Industrial organic chemicals	**Map code #22**
LIMCO MANUFACTURING CORP. GARVIES PT. RD. GLEN COVE, NY 11542 671-7400	**SIC code:** 3728 **SIC description:** Aircraft parts and equipment	**Map code #23**
LORAL FAIRCHILD SYSTEMS 300 ROBBINS LANE SYOSSET, NY 11791 349-2587	**SIC code:** 3861 **SIC description:** Photographic equipment and supplies	**Map code #24**
METCO INC. 220 MILLER PL. HICKSVILLE, NY 11801 334-1300	**SIC code:** 3399 **SIC description:** Primary metal products	**Map code #25**
MILL-MAX MANUFACTURING CORP. 190 PINE HOLLOW RD. OYSTER BAY, NY 11771 922-6000	**SIC code:** 3678 **SIC description:** Electronic connectors	**Map code #26**
MIROFLECTOR CO. INC. 40 BAYVIEW AVE. INWOOD, NY 11696 371-1111	**SIC code:** 3646 **SIC description:** Commercial lighting fixtures	**Map code #27**
MULTIWIRE/EED (DIVISION KOLLMORGEN) 250 MILLER PL. HICKSVILLE, NY 11802 993-8300	**SIC code:** 3679 **SIC description:** Electronic components	**Map code #28**
NOSTRO MFG. CORP. 50 NASSAU TERMINAL R NEW HYDE PARK, NY 11040 488-3000	**SIC code:** 2512 **SIC description:** Upholstered household furniture	**Map code #29**

APPENDIX D

Suffolk County manufacturing facilities (in TRI), SIC codes, and descriptions
(Area codes are 516 unless otherwise noted.)

A&M MANUFACTURING CO. INC. 275 FELDMAN CT. BAY SHORE, NY 11706 718-531-8400	**SIC code:** 3479 **SIC description:** Metal coating and allied services	Map code #1
ADCHEM INDUSTRIES INC. 1852 OLD COUNTRY RD. RIVERHEAD, NY 11901 727-6000	**SIC code:** 2672 **SIC description:** Paper coated and laminated	Map code #2
ADDITIVE CIRCUITS (AMP-AKZO CORP.) WEST LANE AQUEBOGUE, NY 11931 722-4100	**SIC code:** 3679 **SIC description:** Electronic components	Map code #3
AEROSPACE AVIONICS INC. 1000 JOHNSON AVE. BOHEMIA, NY 11716 467-5500	**SIC code:** 3811 **SIC description:** Search and navigation equipment	Map code #4
AIL SYSTEMS INC. (SUB. EATON CORP.) COMMACK RD. DEER PARK, NY 11729 595-3160	**SIC code:** 3812 **SIC description:** Search and navigation equipment	Map code #5
ALTANA INC. 60 BAYLIS RD. MELVILLE, NY 11747 454-7677	**SIC code:** 2834 **SIC description:** Pharmaceuticals preparations	Map code #6
AMERICAN ACRYLIC CORP. 404 SHEFFIELD AVE. WEST BABYLON, NY 11704 422-2200	**SIC code:** 3083 **SIC description:** Laminated plastics plate & sheet	Map code #7
AMERICAN TECHNICAL CERAMICS 15 STEPAR PLACE HUNTINGTON STATION, NY 11746 547-5700	**SIC code:** 3675 **SIC description:** Electronic capacitators	Map code #8

VAN SON HOLLAND INK CORP. OF AMERICA 92 UNION ST. MINEOLA, NY 11501 508-580-2610	**SIC code:** 2893 **SIC description:** Printing ink	**Map code #40**
ZOE CHEMICAL CO. INC. 1801 FALMOUTH AVE. NEW HYDE PARK, NY 11040 354-1043	**SIC code:** 2842 **SIC description:** Polishes and sanitation goods	**Map code #41**

HALBRO CONTROL INDUSTRIES INC.
2090 ROUTE 110
FARMINGDALE, NY 11735
293-8100

SIC code: 2842
SIC description:
Polishes and sanitation goods

Map code #18

ILC DATA DEVICE CORP.
105 WILBER PLACE
BOHEMIA, NY 11716
567-5600

SIC code: 3674
SIC description:
Semiconductors and related devices

Map code #19

JAMECO INDUSTRIES
248 WYANDANCH AVE.
WYANDANCH, NY 11798
643-5300

SIC code: 3432
SIC description:
Plumbing fixture fittings and trim

Map code #20

LARIBEE WIRE CO.
(CORONA INSULATED WIRE)
101 CENTRAL AVE.
FARMINGDALE, NY 11735
401-722-8600

SIC code: 3357
SIC description:
Nonferrous wiredrawing & insulating

Map code #21

LIBERTY INDUSTRIAL FINISHING CORP.
550 SUFFOLK AVE.
BRENTWOOD, NY 11717
273-4488

SIC code: 3471
SIC description:
Plating and polishing

Map code #22

LUMEX
(Div. LUMEX Inc.)
100 SPENCE ST.
BAY SHORE, NY 11706
273-2200

SIC code: 3841
SIC description:
Surgical and medical instruments

Map code #23

NAPCO SECURITY SYSTEMS
333 BAYVIEW AVE.
AMITYVILLE, NY 11701
842-9400

SIC code: 5063
SIC description:
Electrical apparatus and equipment

Map code #24

NATIONAL METAL COATING CORP.
367 BAY SHORE RD.
DEER PARK, NY 11729
586-5555

SIC code: 3470
SIC description:
Metal services

Map code #25

PALL RAI INC.
225 MARCUS BLVD.
HAUPPAUGE, NY 11788
273-0911

SIC code: 3079
SIC description:
Rubber and miscellaneous plastic products

Map code #26

B.B.&S. TREATED LUMBER CORP.
SPEONK-RIVERHEAD RD.
SPEONK, NY 11972
325-0110

SIC code: no code on form
SIC description:

Map code #9

EDWIN B. STIMPSON CO. INC.
900 SYLVAN AVE.
BAYPORT, NY 11705
472-2000

SIC code: 3469
SIC description:
Metal stampings

Map code #10

ESD-LONG ISLAND
(formerly SEDCO SYSTEMS)
65 MARCUS DR.
MELVILLE, NY 11747
617-860-2415

SIC code: 3699
SIC description:
Electrical equipment & supplies

Map code #11

GASSER & SONS INC.
4400 MORELAND RD.
COMMACK, NY 11725
543-6600

SIC code: 3469
SIC description:
Metal stampings

Map code #12

GRINNELL LITHOGRAPHIC CO. INC.
265 MOFFIT BLVD.
ISLIP, NY 11751
581-3300

SIC code: 2752
SIC description:
Commercial printing, lithographic

Map code #13

GRUMMAN AEROSPACE CORP.
(RESERVE PLT. DOD)
SWAN POND ROAD
CALVERTON, NY 11933
575-2385

SIC code: 3721
SIC description:
Aircraft

Map code #14

GRUMMAN AEROSPACE CORP.
(PLANTS 43 & 44)
SUNRISE HIGHWAY
GREAT RIVER, NY 11739
575-2385

SIC code: 3479
SIC description:
Metal coating and allied services

Map code #15

GULL ELECTRONIC SYSTEMS
55 ENGINEERS ROAD
SMITHTOWN, NY 11787
231-3737

SIC code: 3728
SIC description:
Aircraft parts and equipment

Map code #16

GULL ELECTRONIC SYSTEMS
300 MARCUS BLVD.
SMITHTOWN, NY 11787
231-3737

SIC code: 3728
SIC description:
Aircraft parts and equipment

Map code #17

APPENDIX E

Alphabetical list of the 46 toxic chemicals reported released in 1990 in Nassau County, and the amounts of each chemical reported released into each environmental medium (in pounds; a dash " - " indicates zero amount reported by the facility).

Chemical	Air	Water	Land	POTW	TOTAL
Acetone	21,912 - 22,888	-	-	-	21,912 - 22,888
Aluminum	1,700	-	-	-	1,700
Ammonia	1,011 - 2,497	-	-	36,811 - 37,299	37,822 - 39,796
Barium compounds	22 - 998	-	-	44,600	44,622 - 45,598
2 - butanone (methyl ethyl ketone)	124,710 - 125,697	-	-	-	124,710 - 125,697
n-Butyl alcohol	15,994	-	-	-	15,994
sec-Butyl alcohol	22 - 998	-	-	-	22 - 998
tert-Butyl alcohol	22 - 998	-	-	16,931	16,953 - 17,929
1,2 - butylene oxide	12 - 509	-	-	-	12 - 509
Chromium	1,400	-	-	-	1,400
Chromium compounds	11 - 499	-	-	8	19 - 507
Chlorine	22 - 998	-	-	-	22 - 998
Cobalt	1,180	-	-	-	1,180
Copper	-	-	-	1,307	1,307
Copper compounds	5	-	-	217 - 226	222 - 231
Cyanide compounds	-	-	-	1	1
Diethylene ether	22 - 998	-	-	-	22 - 998
Di - *n* - butyl phthalate	11 - 499	-	-	11 - 499	22 - 998
Ethylbenzene	860	-	-	-	860
Ethylene glycol	14	-	-	-	14
Formaldehyde	898 - 1,404	-	-	860	1,758 - 2,264
Freon 113	236,980 - 237,956	-	-	-	236,990 - 237,996
Glycols	44,055 - 46,994	-	-	22 - 998	44,077 - 47,992
Hydrochloric acid	49 - 2,001	-	-	27,000	27,049 - 28,901
Hydrofluoric acid	11 - 499	-	-	-	11 - 499
Hydroquinone	3,452 - 3,949	-	-	76	3,528 - 4,025
Isopropanol	12,601 - 12,610	-	-	1,400	14,001 - 14,010
Lead	1 - 10	-	-	252	253 - 262
Lead compounds	2 - 20	-	-	-	2 - 20
Methanol	221,046 - 222,022	-	-	33 - 1,497	221,079 - 223,519
Methylene chloride	587,029 - 587,535	-	-	80	587,109 - 587,615
Nickel	5,100	-	-	-	5,100
Nickel compounds	-	-	-	500	500
Nitric acid	1,233	-	-	-	1,233
Phosphoric acid	22 - 998	-	-	-	22 - 998
Phthalic acid	10	-	-	-	10
Silver compound	2 - 20	34	-	32	68 - 86
Styrene	929	-	-	-	929
Sulfuric acid	78 - 584	-	-	14,700	14,778 - 15,284
Tetrachloroethylene	573,839	-	-	1 - 10	573,840 - 573,849
Toluene	35,633 - 36,620	-	-	-	35,633 - 36,620
1,1,1 - trichloroethane	774,621 - 775,597	-	-	601 - 1,089	775,222 - 776,686
Trichloroethylene	262,773	-	-	11 - 499	262,784 - 263,272
Vinyl acetate	511 - 1,498	-	-	-	511 - 1,498
Xylene	1,980	-	-	-	1,980
Zinc compounds	2 - 20	-	-	-	2 - 20

Nassau County sub-totals

	from:		to:
Air:	**2,931,787**	**-**	**2,954,933**
Water:			**34**
Land:			**-**
POTW:	**145,454**	**-**	**149,864**
TOTAL:	**3,077,275**	**-**	**3,104,831**

POLYMER PLASTICS CORP.
65 DAVIDS DRIVE
HAUPPAUGE, NY 11788
231-1300

SIC code: 2851
SIC description:
Paints and allied products

Map code #27

POLY-PAK INDUSTRIES INC.
125 SPAGNOLI ROAD
MELVILLE, NY 11747
293-6767

SIC code: 2751
SIC description:
Commercial printing

Map code #28

POLY SCIENTIFIC R&D CORP.
70 CLEVELAND AVE.
BAYSHORE, NY 11706
586-0400

SIC code: 2860
SIC description:
Industrial organic chemicals

Map code #29

RAGEN DATA SYSTEMS
3 OVAL DRIVE
CENTRAL ISLIP, NY 11722
234-3800

SIC code: 3728
SIC description:
Aircraft parts and equipment

Map code #30

RHG ELECTRONICS LABORATORY INC.
161 E. INDUSTRY CT.
DEER PARK, NY 11729
242-1100

SIC code: 3662
SIC description:
Communications equipment

Map code #31

RITE OFF INC.
1545 5TH INDUSTRY CT.
BAY SHORE, NY 11706
665-6868

SIC code: 2842
SIC description:
Polishes and sanitation goods

Map code #32

SOUNDCOAT CO. INC.
ONE BURT DR.
DEER PARK, NY 11729
242-2200

SIC code: 3086
SIC description:
Plastics foam products

Map code #33

STANDARD MICROSYSTEMS CORP.
35 MARCUS BLVD.
HAUPPAUGE, NY 11787
273-3100

SIC code: 3674
SIC description:
Semiconductors and related devices

Map code #34

STRAHL & PITSCH INC.
230 GREAT EAST NECK RD.
WEST BABYLON, NY 11704
587-9000

SIC code: 5199
SIC description:
Nondurable goods

Map code #35

UNEXCELLED CASTINGS CORP.
663-671 OLD WILLETS
HAUPPAUGE, NY 11788
234-7270

SIC code: 3361
SIC description:
Nonferrous foundries (castings)

Map code #36

APPENDIX G

Health and environmental effects of the top 20 toxic chemicals reported released in 1990 throughout Long Island*

RANK	CHEMICAL	CAR	MUT	DEV	REP	NEU	ACU	CHR	ENV	PER	OZD
1	1, 1, 1-trichloroethane		▲	▲	▲			▲	▲	▲	▲
2	Methylene chloride	▲						▲		▲	
3	Tetrachloroethylene	▲		▲	▲	▲		▲	▲	▲	
4	Trichloroethylene	▲		▲	▲	▲		▲		▲	
5	Freon 113										▲
6	Methanol					▲					
7	2-butanone			▲	▲	▲		▲		▲	
8	Glycols			▲	▲			▲			
9	Toluene		▲	▲	▲				▲		
10	Barium compounds			▲				▲			
11	Ammonia						▲	▲			
12	Hydrochloric acid						▲	▲			
13	Acetone							▲	▲	▲	
14	tert-Butyl alcohol							▲			
15	Sulfuric acid						▲	▲	▲		
16	n-Butyl alcohol							▲			
17	Isopropanol	▲				▲		▲			
18	Methyl methacrylate			▲	▲			▲			
19	Nickel	▲		▲	▲		▲	▲			
20	Hydroquinone						▲	▲	▲		

* See next page for explanation of abbreviations.

APPENDIX F

Alphabetical list of the 27 toxic chemicals reported released in 1990 in Suffolk County, and the amounts of each chemical reported released into each environmental medium (in pounds; a dash " - " indicates zero amount reported by the facility).

Chemical	Air	Water	Land	POTW	TOTAL
Acetone	1,001 - 1,010	-	-	1 - 10	1,002 - 1,020
Acrylic acid	22 - 998	-	-	-	22 - 998
Aluminum	11 - 499	-	-	-	11 - 499
2-butanone (methyl ethyl ketone)	41,646 - 42,145	-	-	-	41,646 - 42,145
tert-Butyl alcohol	22 - 998	1 - 10	-	-	23 - 1,008
Copper	13 - 519	-	-	6	19 - 525
Copper compounds	4 - 40	107	1 - 10	-	112 - 157
Formaldehyde	2 - 20	1 - 10	-	-	3 - 30
Freon 113	195,202 - 195,690	-	-	-	195,202 - 195,690
Glycols	10,741	2,800	-	-	13,541
Lead	2 - 20	3	-	-	5 - 23
Lead compounds	2 - 20	-	-	17	19 - 37
Manganese compounds	-	-	-	4	4
Methanol	1 - 10	1 - 10	-	-	2 - 20
Methylene chloride	166,891 - 167,878	-	-	-	166,891 - 167,878
Methyl methacrylate	13,500	-	-	-	13,500
Phosphoric acid	-	-	-	1 - 10	1 - 10
Propylene oxide	511 - 1,498	-	-	500 - 999	1,011 - 2,497
Styrene	1,800	-	-	-	1,800
Sulfuric acid	97 - 603	1,368	-	-	1,465 - 1,971
Tetrachloroethylene	500 - 999	-	-	-	500 - 999
Toluene	45,231 - 46,218	-	22	-	45,253 - 46,240
1,1,1-trichloroethane	589,081 - 589,580	-	-	-	589,081 - 589,580
Trichloroethylene	127,273	-	-	-	127,273
Vinyl acetate	511 - 1,498	-	-	-	511 - 1,498
Xylene	611 - 1,607	1 - 10	-	-	612 - 1,617
Zinc	11 - 499	-	-	-	11 - 499

Suffolk County sub-totals

	from:		to:
Air:	**1,194,686**	**-**	**1,205,663**
Water:	**4,282**	**-**	**4,318**
Land:	**23**	**-**	**32**
POTW:	**529**	**-**	**1,046**
TOTAL:	**1,199,520**	**-**	**1,211,059**

Appendix G presents data from a preliminary search of known health and environmental effects assembled by EPA consultants, along with information from the New Jersey Department of Health Right to Know Program "Hazardous Substance Fact Sheets."[1] The information does not assess the severity of the effect, the appropriateness of the study method, or the presence of conflicting test results.

The following key identifies the codes used in the appendix:[2]

CAR **Carcinogen:** includes chemicals known or suspected of causing cancer in humans or laboratory animals.

MUT **Mutagen:** chemicals which have the potential to produce changes in genetic material that can be passed on to the next generation.

DEV **Developmental Toxin:** chemicals which can cause birth defects, miscarriages, growth retardation, mental retardation, or learning disorders.

REP **Reproductive Toxin:** chemicals which can damage the ability to reproduce.

NEU **Neurotoxin:** chemicals which can cause adverse effects on the nervous system, including the brain, spinal chord, and nerves.

ACU **Acute Toxin:** chemicals which can cause serious health effects of death from short-term exposure.

CHR **Chronic Toxin:** includes chemicals which can cause adverse health effects (other than cancer) from long-term exposure, such as liver, lung, or kidney damage.

ENV **Environmental Toxin:** chemicals which can cause serious adverse effects on the environment, including wildlife or vegetation.

PER **Persistent Chemical:** substances that tend to remain in the soil or water because they do not readily break down.

OZD **Ozone Depleter:** chemicals that are capable of breaking down the stratospheric ozone layer, allowing increased ultra-violet radiation to reach the earth.

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[1] EPA source: SARA Section 313 Toxicity Matrix Reference Database, prepared for the U.S. Environmental Protection Agency Office of Toxic Substances by ICF Inc.

[2] These descriptions, along with the format of the chart, were provided by the Working Group on Community Right-To-Know.