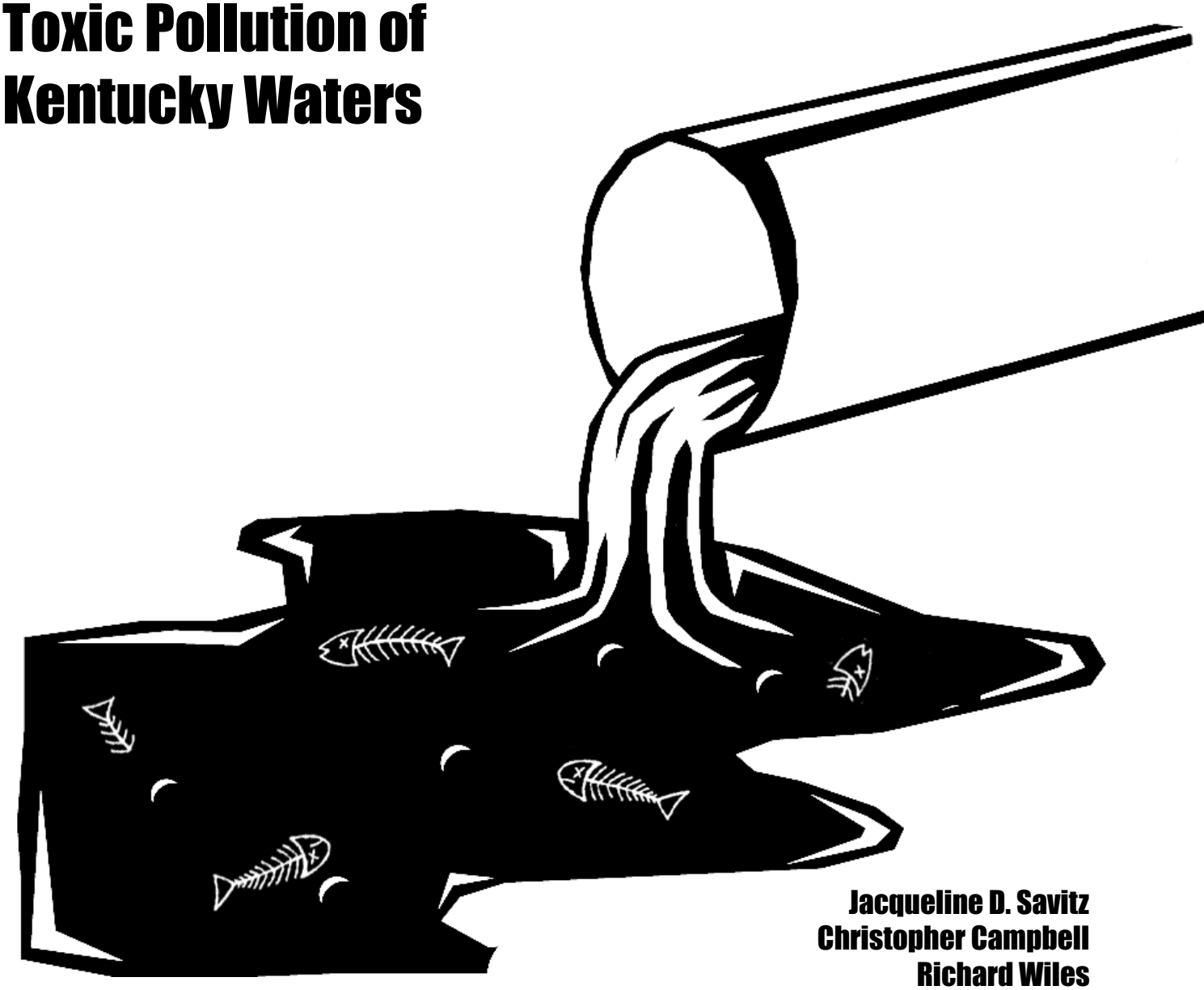
The State PIRGs

ENVIRONMENTAL WORKING GROUP™

Dishonorable Discharge

Toxic Pollution of Kentucky Waters



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Dishonorable Discharge

Toxic Pollution of Kentucky Waters

Executive Summary

Most Kentucky citizens would be surprised to learn that scores of businesses and facilities across the state *legally* dump tons of toxic chemicals into the state's rivers, streams, lakes, and bays. Many of these same polluters flush millions more pounds of toxic substances down the drain to sewage treatment plants that taxpayers pay to operate and maintain. None of the toxic chemicals sent to publicly financed sewage treatment systems are reported as pollution by the EPA, even though a great deal of the toxic load eventually finds its way to Kentucky streams and rivers.

The citizens of Kentucky have a right to know about any pollution of their water, air or land that may pose a risk to human health or the environment. The goal of *Dishonorable Discharge* is to inform the public about the massive level of toxic pollution of the waters in their state, and point out the need for more comprehensive reporting of toxic chemical use, transport, and pollution, in Kentucky and nationwide.

Factories and other industrial facilities dumped more than 2.7 million pounds of toxic substances directly into Kentucky's waters between 1990 and 1994, according to a new analysis of the federal Toxics Release Inventory (TRI) (Table 1). Kentucky ranked 31st among the states in toxic water pollution reported over those five years. Because of weaknesses and loopholes in federal pollution laws, most, if not all of these toxic discharges are perfectly legal.

As large as they are, these figures substantially underestimate toxic releases to waters and the environment because the TRI requires reporting of only about 340 of the 73,000 chemicals in commerce. The TRI also exempts certain industries from reporting, including utilities, sewage treatment plants, municipal incinerators, and manufacturing facilities with fewer than ten employees.

In addition, almost eleven (10.8) million pounds of toxic materials were flushed to sewage treatment plants in Kentucky from 1990 through 1994, 25th in the nation (Table 1.) EPA estimates that twenty-five percent of all discharges nationwide flow through sewage treatment plants untreated (EPA 1995). Applying this 25 percent estimate to Kentucky raises the total amount of toxics dumped to the state's waters to an estimated 5.4 million pounds (Table 1).

The Tennessee River received the greatest amount of toxic water pollution in Kentucky from 1990-1994, a total of 1,460,000 pounds, followed by the Big Sandy River, the Ohio River, and the Mississippi River (Table 2). The ten most polluted waterways in Kentucky received 2,650,000 pounds of toxic pollution between 1990 and 1994, 97.3% percent of the total in the State.

The top three facilities reporting the most toxic pollution of Kentucky's waters over this period were ISP Chemicals, Inc. in Calvert City, which dumped 1,310,000 pounds of toxic chemicals, followed by Ashland Petroleum Company, and Westvaco Corpora-

tion in the towns of Catlettsburg, and Wickliffe, respectively (Table 3). The toxic chemicals dumped in the greatest amounts were ammonia, a total of 1,590,000 pounds, followed by methanol, and chlorine (Table 4).

ISP Chemicals Inc. dumped the most carcinogens into Kentucky's waters, a total of 96,100 pounds, followed by Willamette Ind. Inc. and Ashland Petroleum Company (Table 8). The Tennessee River received the greatest amount of cancer-causing toxic chemicals in Kentucky, a total of 102,000 pounds, followed by the Ohio River and the Big Sandy River (Table 7).

AK Steel Corporation, West Works dumped the greatest amount of persistent toxic metals in Kentucky's waters, a total of 71,000 pounds, followed by Ashland Petroleum Company and Newport Steel Corporation (Table 8). The White Oak Creek Watershed received the greatest amount of persistent toxic metals, a total of 44,000 pounds, followed by the Ohio River and the Big Sandy River (Table 7).

AK Steel Corporation - West Works dumped the greatest amount of toxic chemicals that cause reproductive damage or birth defects into Kentucky's waters, a total of 71,000 pounds, followed by Reynolds Metals Company* and Sherwin-Williams Company* (Table 8). The White Oak Creek Watershed received the greatest amount of toxic chemicals that cause reproductive damage or birth defects, a total of 43,000 pounds, followed by the Ohio River and Little Paddy's Run (Table 7).

These discharges to Kentucky's waters include only those wastes released by companies physically located in Kentucky. Many waterways receive additional pollution from sources outside of the state. Information on toxic water pollution in other states can be found in EWG's state reports series, and in the national report, *Dishonorable Discharge*.

Recommendations

Americans have a right to know about any use, transport, or release of toxic substance in their communities that might pose a risk to human health or the environment. Required reporting under the TRI provides only a small portion of this information. Much more complete reporting is needed. Americans also have a right to know about toxic chemicals in the products they buy that may pose a risk to them and their children.

Full accounting of the use of toxic materials reveals many low cost opportunities for pollution prevention. In New Jersey, state officials estimate that every dollar spent on such materials accounting practices generates five to eight dollars in increased efficiency (GAO 1994). Without materials accounting industry will miss many opportunities for substantial low cost reductions in pollution, and the public and policy makers will be unable formulate strategies that most effectively reduce exposure to toxic substances in the environment and consumer products.

We recommend:

- Timely implementation of the EPA's proposed expansion of industries and facilities required to report toxic releases under the TRI.

- Expansion of TRI reporting requirements to include full materials accounting for any facility or industry that uses or releases a toxic substance that may pose a risk to human health and the environment.

*This facility reported no discharges in 1994, and may also have reported zero discharges for other years.

Dishonorable Discharge

Toxic pollution of rivers, lakes, streams, and bays is a serious problem in all 50 states. Twenty five years after the passage of the Clean Water Act, nearly forty (40) percent of America's rivers, lakes, and coastal waters remain unsafe for fishing, swimming or basic recreation (EPA 1996b). The pollution that fouls these waterways costs the state's economy millions of dollars in tourism, fishing, and development revenues that otherwise could be earned on or near these waters were they not so polluted (EPA 1996b).

Dishonorable Discharge Underestimates Toxic Pollution

The Toxics Release Inventory (TRI) provides a rough estimate of a small portion of the toxic chemicals that flow into America's waters. The toxic discharges reported in this study are based on TRI reported toxic releases to waterways and so-called "transfers" of toxics to publicly owned treatment works (POTWs) — the term of art that industry and the EPA use when an industrial facility dumps toxic chemicals into the local sewer.

The figures reported in *Dishonorable Discharge* dramatically underestimate the total amounts of toxic compounds that have been discharged, dumped, or made their way into rivers and lakes across the country over the past five years.

About 90[1] percent of all toxic discharges coming out of pipes into water (so-called point source discharges) are not reported to the TRI. This is because the TRI requires reporting on only about 343[2] of some 73,000 chemicals used in commerce, and because the TRI exempts many polluters (utilities, certain industries, and those with fewer than ten employees) from reporting requirements (EPA 1996).

About half of all toxics that pollute rivers come from surface runoff and air deposition, as opposed to pipes. Comprehensive accounting of this "nonpoint source" pollution is not available for all rivers on a national basis.

Taking all of the limitations of the existing information into account, Environmental Working Group believes that an accurate estimate of the total load of toxic pollution in many rivers and lakes over the past five years might be 20 times greater than the amounts reported here.

Hiding Toxics in the Sewer

The EPA does not include so-called "transfers" of toxic chemicals to sewer systems as an official "release" of a toxic chemical into the environment (EPA 1996). At the same time, the EPA estimates that 25 percent of all toxic chemicals transferred to sewers from industrial facilities pass through treatment and into the waterways that receive wastewater (EPA 1995).

Transfers of toxic chemicals to publicly owned treatment works (POTWs) — otherwise known as sewage treatment plants — were four times greater in 1994 than the amount of toxic chemicals released directly to water that are reported in the entire TRI that year. To estimate the total amounts of toxic substances dumped into Kentucky's waters, we used EPA's assumption that 25 percent of all toxic chemicals transferred to POTWs pass-through untreated[3]. Table 1 presents the EWG estimate of toxic chemicals assumed to be discharged by the POTWs in Kentucky. Estimates of toxic discharges from POTWs to specific rivers and bodies of water could not be accurately estimated because the sewage treatment plants are not required to report to the TRI.

Assuming a 25 percent flow-through does not permit discharge estimates for individual toxic chemicals that flow through the sewer system into waterways. In reality some chemicals flow through POTW's untouched, while others are removed and held in the sludge, broken down in treatment, or allowed to evaporate into the ambient air as toxic pollutants.

How Toxic is Toxic?

Some 340 substances were required to be reported to the EPA for the years analyzed in this report. According to the EPA:

"For a chemical or chemical category to remain on or be added to the TRI list, it must be known to cause or reasonably be anticipated to cause one of the following:

- Significant adverse acute health effects at concentration levels that are reasonably likely to exist beyond facility boundaries as a result of continuous, or frequently recurring releases;

- In humans — cancer; teratogenic effects; or serious irreversible reproductive dysfunction, neurologic disorders, heritable genetic mutations, or other chronic health effects;

- A significant adverse effect on the environment because of its toxicity, its toxicity and persistence in the environment, or its toxicity and tendency to bioaccumulate in the environment of sufficient seriousness to warrant reporting under EPCRA section 313" (EPA 1996).

For most of the TRI chemicals, federal regulators and scientists have a disturbingly incomplete understanding of the long term toxic effects on the environment or human health. The vast majority of compounds reported in the TRI are not fully studied, even though they have triggered one of the above criteria.

Toxic discharges and runoff to water are a serious and largely unaddressed environmental and human health problem. Most, if not all of the pollution reported in Dishonorable Discharge is legal. Current pollution control laws like the Clean Water Act (CWA), the Resource Conservation and Recovery Act (RCRA), and the Toxic Substances Control Act (TSCA) do little to move the nation towards reducing the toxic pollution cited in this report. In effect, these laws issue pollution licenses or exemptions from regulations.

One of the more glaring exemptions may be the so-called "domestic sewage exclusion" under RCRA, whereby toxic contaminants sent to sewage treatment plants escape otherwise applicable federal hazardous waste regulations. This accounts for the huge amounts of toxic chemicals that were dumped down the drain by American industry and end up in the nation's rivers and streams. Another major source of toxic pollution of waters is agricultural pesticides. The runoff of pesticides from agricultural fields is not regulated under any federal law, and is not tabulated by the TRI nor included in this report. About 1.1 billion pounds[4] of pesticides were used in the United States in 1993 alone (Aspelin 1994).

Dishonorable Discharge is based on data collected by the U.S. Environmental Protection Agency's Toxics Release Inventory (TRI) for the reporting years 1990 through 1994, which includes the most recent data available. It includes the releases of only 343 chemicals from about 27,000 manufacturing facilities. The limitations of these data have been described above.

Analyzing Discharges by Body of Water

Discharges from TRI facilities were assigned to a given waterway based on the "receiving stream" reported to the EPA. Most waterways reported as "tributary" streams were included with their respective rivers in this report when it was possible to link them. For purposes of this analysis, toxic release data for major rivers themselves are tabulated separately, not summed as part of larger watersheds. For example, a "Tributary to the Mississippi River" was counted as Mississippi River, while the Missouri River was not, even though it eventually joins the Mississippi just above St. Louis. Small streams receiving large quantity discharges (such as Gravelly Run in Virginia and Clear Creek in Colorado) were reported individually, just as they are recorded in the TRI. State-level reports only include discharges to a given river from facilities that are physically located in this state, not discharges from facilities located in other states upstream.

Reporting Toxics Dumped Down the Drain

Enormous quantities of toxic chemicals are discharged to waterways via sewer systems. These so-called "transfers" of toxic chemicals to publicly owned treatment works (POTWs) totaled more than 250 million pounds in 1994, compared to 66 million pounds of direct discharges to waters reported in that same year. While the EPA does not count these transfers as environmental releases in the TRI, the Agency estimates that an average of 25 percent of these transfers flow through sewer systems into receiving waters (EPA 1995).

To better illustrate the amount of toxic chemicals that actually make it into the nation's waters each year, we assumed that on average 25 percent of the toxic chemicals transferred to POTWs (a.k.a. sewers) by a reporting facility, ultimately pass through the sewage treatment plant untreated and in most cases are discharged to receiving waters.

Toxic chemical releases through POTWs were estimated statewide, but were not attributed to specific rivers at the state level due to the difficulty of verifying the receiving waters. Environmental Working Group will attempt to identify receiving waters more precisely future reports. All other analyses including facility discharges and top chemicals reflect direct discharges only, and not POTW release estimations.

Total discharges of persistent toxic metals, known or possible carcinogens, and chemicals known to cause reproductive effects, were calculated for specific rivers

based on information characterizing the toxic properties of these substances previously published by the EPA, the State of California, and the State of New Jersey, as well as other toxicological literature (Environmental Protection Agency, 1996; California Code of Regulations; New Jersey Department of Health; and Dixon, 1986). EPA's inclusion of known, probable, and possible carcinogens is based on determinations made by the Occupational Safety and Health Administration (OSHA), the National Toxicology Program (NTP), and the International Agency for Research on Cancer (IARC) (EPA 1996). Lists of chemicals included are found in the Appendix.

Notes

[1]Estimate based on EPA report (National Sediment Contaminant Point Source Inventory: Analysis of Release Data for 1992. Final Draft.) (EPA, 1995) where data from TRI were compared to the Permit Compliance System (PCS) Database and found to represent only about 9%, at most, of discharges reported in PCS. Estimates from the GAO indicate that PCS regulates only 23% of all toxic water pollution (GAO, 1994).

[2]The exact number of chemicals required varies with the year. In 1994, 343 chemicals were reported. EPA has recently expanded the inventory to include about 650. These data, to be reported for 1995, will be available in 1997.

[3]EPA uses this factor since it is unlikely to greatly overestimate or underestimate the exact treatment efficiency (EPA 1995). This number will vary for any specific chemical; however it estimates pass through for chemicals as a whole, and is not applied to specific chemicals in this report.

[4]This value refers to pesticide active ingredients. The total volume of pesticide products, including so-called inert ingredients is far higher.

Appendix

Carcinogens

1,1,2,2-Tetrachloroethane
1,1-Dimethylhydrazine (UDMH) (alar trans. prod.)
1,2-Dibromo-3-chloropropane (DBCP)
1,3-Butadiene
1,3-Dichloropropylene
1,3-Propane sultone
1,4-Dioxane
1-Amino-2-methylanthraquinone
1-Naphthylamine
2,4,6-Trichlorophenol
2,4-Diaminoanisole
2,4-Diaminoanisole sulfate
2,4-Diaminotoluene
2,4-Dinitrotoluene
2-Acetylaminofluorene
2-Aminoanthraquinone
2-Methylaziridine (Propyleneimine)
2-Naphthylamine
2-Nitropropane
3,3'-Dichlorobenzidine
3,3'-Dimethoxybenzidine (ortho-Dianisidine)
3,3'-Dimethylbenzidine
4,4'-Diaminodiphenyl ether (4,4'-Oxydianiline)
4,4'-Methylene bis(2-chloroaniline)
4,4'-Methylene bis(N,N-dimethyl) benzenamine
4,4'-Methylenedianiline
4,4'-Thiodianiline
4-Aminobiphenyl (4-aminodiphenyl)
4-Dimethylaminoazobenzene
4-Nitrobiphenyl
5-Nitro-o-anisidine
Acetaldehyde
Acetamide
Acrylamide
Acrylonitrile
Allyl chloride
Aniline
Arsenic
Arsenic compounds
Asbestos
Auramine
Benzene
Benzidine [and its salts]
Benzotrichloride
Benzyl chloride
Beryllium and beryllium compounds
Beryllium compounds
beta-Propiolactone
Bis (2-chloroethyl) ether
Bis(chloromethyl) ether
Bromodichloromethane
Bromoform
Cadmium
Cadmium compounds
Captan
Carbon tetrachloride
Chlordane
Chloroethane (Ethyl chloride)
Chloroform
Chloromethyl methyl ether
Chlorophenols
Chlorothalonil
Chromium
Cupferron
D&C Red No. 19
DDVP (Dichlorvos)
Di -(2-ethylhexyl)phthalate
Dichloromethane (Methylene chloride)
Diepoxybutane
Diethyl sulfate
Dimethyl sulfate
Dimethylcarbamoyl chloride
Direct Black 38
Direct Blue 6
Direct Brown 95
Epichlorohydrin
Ethyl acrylate
Ethylene dibromide
Ethylene dichloride (1,2-Dichloroethane)
Ethylene oxide
Ethylene thiourea (EBDC trans prod.)
Ethyleneimine
Formaldehyde
Hexachlorobenzene
Hexachloroethane
Hexamethylphosphoramide
Hydrazine
Hydrazine sulfate
Hydrazobenzene (1,2-Diphenylhydrazine)
Isosafrole
Lead
Lead compounds
Lindane
Methyl iodide
Michler's ketone
Mustard Gas
N-Nitroso-N-ethylurea
N-Nitroso-N-methylurea
N-Nitrosodi-n-butylamine
N-Nitrosodi-n-propylamine
N-Nitrosodiethylamine
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosomethylvinylamine
N-Nitrosomorpholine
N-Nitrosonornicotine
N-Nitrosopiperidine
Nickel
Nickel compounds
Nitrilotriacetic acid
Nitrofen
Nitrogen mustard (Mechlorethamine)
ortho-Anisidine
ortho-Anisidine hydrochloride
ortho-Toluidine
ortho-Toluidine hydrochloride
p-Aminoazobenzene
p-Cresidine
p-Dichlorobenzene
p-Nitrosodiphenylamine
Pentachlorophenol
Polybrominated biphenyls
Polychlorinated biphenyls
Propylene oxide
Saccharin
Safrole
Styrene
Styrene oxide
Tetrachloroethylene (Perchloroethylene)
Thioacetamide
Thiourea
Toluene-2,4-diisocyanate
Toluene-2,6-diisocyanate
Toxaphene (Polychorinated camphenes)
Trichloroethylene
Tris(2,3-dibromopropyl)phosphate
Urethane (Ethyl carbamate)
Vinyl bromide
Vinyl chloride
Vinyl trichloride (1,1,2-Trichloroethane)

Persistent Toxic Metals

Antimony & Antimony Compounds
Arsenic & Arsenic Compounds
Barium & Barium Compounds
Beryllium & Beryllium Compounds
Cadmium & Cadmium Compounds
Chromium & Chromium Compounds
Cobalt & Cobalt Compounds
Copper & Copper Compounds
Lead & Lead Compounds
Manganese & Manganese Compounds
Mercury & Mercury Compounds
Nickel & Nickel Compounds
Selenium & Selenium Compound
Silver & Silver Compounds
Thallium & Thallium Compounds
Zinc & Zinc Compounds

Chemicals that Affect Reproduction

1,2-Dibromo-3-chloropropane
Cadmium
Carbon disulfide
Diethylhexyl phthalate
o-Dinitrobenzene
m-Dinitrobenzene
p-Dinitrobenzene
Ethylene glycol monoethyl ether
Ethylene glycol monomethyl ether
Ethylene oxide
Hexamethylphosphoramide
Lead
Styrene
Toulene
Trichloroethylene
Xylene(mixed isomers)
o-xylene
m-xylene
p-xylene
Di-n-butyl phthalate
Glycol ethers
Mercury Compounds
Mercury
Benzene
Aluminum
Arsenic
Nickel
Lindane
Vinyl Chloride

Source: Environmental Working Group. Compiled from California Proposition 65, EPA's TRI Public Data Release, New Jersey Department of Health, Hazardous Substances Fact Sheets, and Toxic Responses of the Reproductive System (Dixon 1986).

References

Aspelin, A.L. 1994. Pesticides Industry Sales and Usage: 1992 and 1993 Market Estimates. EPA, Washington, DC.

California Code of Regulations, Title 22. Chapter 3. Safe Drinking Water and Toxic Enforcement Act of 1986. Social Security, S 12000, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity.

Dixon, R. L. 1986. Toxic Responses of the Reproductive System. In: Casarett and Doull's Toxicology: The Basic Science of Poisons, Third Edition. C.D. Klaassen, M.O. Amdur, and J. Doull, Eds. Macmillan Publishing Company, New York. pp. 432-477.

Environmental Protection Agency. 1995. National Sediment Contaminant Point Source Inventory: Analysis of Release Data for 1992. Final Draft, March 22, 1995.

Environmental Protection Agency. 1995b. National Water Quality Inventory: 1994 Report to Congress. EPA841-R-95-005. 497pp.

Environmental Protection Agency. 1996. 1994 Toxics Release Inventory, Public Data Release. Office of Pollution Prevention and Toxics. EPA 745-R-96-002.

Environmental Protection Agency. 1996b. Liquid Assets: A Summertime Perspective on the Importance of Clean Water to the Nation's Economy. 800-R-96-002.

Federal Register Notice, (June 27, 1996) 40 CFR Part 372. Addition of Facilities in Certain Industry Sectors; Toxic Chemical Release Reporting; Community Right-to-Know; Proposed Rule. pp.33588-33618.

New Jersey Department of Health. Right to Know Program. Hazardous Substances Fact Sheets.

Office of Technology Assessment, 1989. Statement before the Subcommittee on Superfund, Ocean and Water Protection, Committee on Environment and Public Works, United States Senate, May 10, 1989. (As cited in Federal Register Notice, (June 27, 1996) 40 CFR Part 372. Addition of Facilities in Certain Industry Sectors; Toxic Chemical Release Reporting; Community Right-to-Know; Proposed Rule. pp.33588-33618.)

United States Department of the Interior, Fish and Wildlife Service and U.S. Department of Commerce, Bureau of the Census. 1993. 1991 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. U.S. Government Printing Office, Washington, DC.

United States Government Accounting Office. 1991. EPA's Toxics Release Inventory is Useful but Can Be Improved. GAO/RCED-91-121. 89pp.

United States Government Accounting Office. 1994. Poor quality assurance and limited pollutant coverage undermine EPA's Control of Toxic Substances. GAO/PEMD-94-9. 87pp.

ENVIRONMENTAL WORKING GROUP™

Dishonorable Discharge

Kentucky

Toxic pollution of Kentucky waters (1990-1994)

Table 1. Total reported toxic pollution of Kentucky waters (1990-1994).

Direct Water Discharges	2,727,935 Pounds
Estimated Sewer Discharges‡	2,688,386 Pounds
Total Discharges to Waters	**5,416,321 Pounds**

Table 2. Kentucky waters receiving the greatest amounts of toxic pollution (1990-1994).

River or Water Body	Toxic chemical release to waterbody (pounds)
Tennessee River	1,459,177
Big Sandy River	346,373
Ohio River	316,538
Mississippi River	299,450
White Oak Creek Watershed	95,250
Barren River	79,548
Hancock Creek	16,116
Austin Creek	15,037
Unnamed Tributary To Town Stream	13,000
Hood Creek	12,715

Table 3. Polluters reporting the greatest amounts of toxic chemicals discharged to Kentucky waters (1990-1994).

Facility	City	Toxic chemical release to waters (pounds)
ISP Chemicals Inc.	Calvert City	1,307,825
Ashland Petroleum Co.	Catlettsburg	345,437
Westvaco Corp.	Wickliffe	299,450
AK Steel Corp. - West Works	Ashland	156,895
Bowling Green Municipal Utils.	Bowling Green	79,543
Elf Atochem N.A. Inc.	Calvert City	78,551
Willamette Ind. Inc.	Hawesville	75,590
Dow Corning Corp.	Carrollton	70,770
AK Steel Corp. - Coke Plant	Ashland	68,355
Air Prods. & Chemicals Inc.	Calvert City	57,817

Table 4. Toxic chemicals discharged in the greatest amounts to Kentucky waters (1990-1994).

Chemical	Toxic chemical release to waters (pounds)
Ammonia	1,586,225
Methanol	384,990
Chlorine	136,293
Formaldehyde	93,299
Aluminum (fume or dust)	83,518
Manganese compounds	62,817
Ethylene glycol	49,781
Chloroform	38,740
Zinc compounds	25,481
Acetone	20,296

Table 5. Polluters reporting the greatest amounts of toxic chemicals discharged to Kentucky sewage treatment facilities (1990-1994).

Facility	City	Toxic chemical release to sewers (pounds)
Rohm & Haas Kentucky Inc.	Louisville	1,547,092
PCI Inc.	Wurtland	964,300
AK Steel Corp. - Coke Plant	Ashland	938,618
Ford Motor Co.	Louisville	885,238
Zeon Chemicals Inc.	Louisville	555,873
Rhone-Poulenc Inc.	Louisville	470,363
Du Pont	Louisville	449,508
General Electric Co.	Lexington	447,100
Akzo Nobel Resins	Louisville	364,934
Monfort Inc.	Louisville	304,546

‡ Total discharges of toxic chemicals to sewer systems in Kentucky was 10,753,547 in 1990-94. EPA estimates that 25% of all toxic discharges to sewers pass through sewage treatment plants to receiving waters (EPA 1995).

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

Kentucky

Toxic pollution of Kentucky waters (1990-1994).
Carcinogens, persistent toxic metals, and reproductive toxins

Table 6. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged into Kentucky waters (1990-1994).**

Carcinogens	171,720 Pounds
Persistent Toxic Metals	154,560 Pounds
Reproductive Toxins	107,077 Pounds
Total (see note)	**400,749 Pounds**

Note: The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 6 may be larger than the total because a chemical may be in one or more categories, i.e. a chemical may be both a carcinogen and a reproductive toxin. Chemicals were counted only once for the total in Table 6.

Table 7. Kentucky waters receiving the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** (1990-1994).**

Waters receiving the greatest amounts of carcinogenic chemicals in Kentucky (1990-1994).**

River or Water Body	Carcinogens** released to waters (lbs.)
Tennessee River	101,809
Ohio River	41,048
Big Sandy River	9,546
Lanes Run	3,250
Mississippi River	3,100

Waters receiving the greatest amounts of persistent toxic metals in Kentucky (1990-1994).

River or Water Body	Persistent toxic metals released to waters (lbs.)
White Oak Creek Watershed	43,565
Ohio River	39,676
Big Sandy River	13,446
Tennessee River	11,397
Licking River	8,073

Waters receiving the greatest amounts of reproductive toxins in Kentucky (1990-1994).**

River or Water Body	Reproductive toxins** released to waters (lbs.)
White Oak Creek Watershed	42,700
Ohio River	27,125
Little Paddy's Run	10,299
Hood Creek	6,100
Taylors Fork	4,633

Table 8. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Kentucky waters (1990-1994).**

Top dischargers of carcinogenic chemicals to Kentucky waters (1990-1994).**

Facility	City	Carcinogens** released to waters (lbs.)
ISP Chemicals Inc.	Calvert City	96,125
Willamette Ind. Inc.	Hawesville	33,250
Ashland Petroleum Co.	Catlettsburg	9,134
Toyota Motor Mfg. USA Inc.	Georgetown	5,750
Westvaco Corp.	Wickliffe	3,100

Top dischargers of persistent toxic metals to Kentucky waters (1990-1994).

Facility	City	Persistent toxic metals released to waters (lbs.)
AK Steel Corp. - West Works	Ashland	71,275
Ashland Petroleum Co.	Catlettsburg	12,843
Newport Steel Corp.	Wilder	8,073
Toyota Motor Mfg. USA Inc.	Georgetown	7,750
Westvaco Corp.	Wickliffe	7,000

Top dischargers of reproductive toxins to Kentucky waters (1990-1994).**

Facility	City	Reproductive toxins** released to waters (lbs.)
AK Steel Corp. - West Works	Ashland	70,905
Reynolds Metals Co.*	Louisville	10,299
Sherwin-Williams Co.*	Richmond	4,633
AK Steel Corp. - Coke Plant	Ashland	3,750
Newport Steel Corp.	Wilder	3,554

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

The Tennessee River in Kentucky

Total toxic pollution reported (1990-1994): 1,459,177 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Tennessee River in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
ISP Chemicals Inc.	Calvert City	1,307,825
Elf Atochem N.A. Inc.	Calvert City	78,551
Air Prods. & Chemicals Inc.	Calvert City	57,817
BF Goodrich	Calvert City	11,202
SKW Metals & Alloys Inc.	Calvert City	2,362
North Star Steel Kentucky	Calvert City	1,420

Table 2. Toxic chemicals discharged in the greatest amounts to the Tennessee River in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	1,236,668
Formaldehyde	93,292
Ethylene glycol	46,410
Methanol	26,950
Hydrogen fluoride	13,150
Hydrochloric acid	10,580
Chloroform	3,290
Trichlorofluoromethane (CFC-11	3,080
Antimony compounds	3,000
Nickel	2,788

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Tennessee River in Kentucky (1990-1994).**

Carcinogens	101,809 Pounds
Persistent Toxic Metals	11,397 Pounds
Reproductive Toxins	3,461 Pounds
Total‡	**110,342 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Tennessee River in Kentucky (1990-1994).**

Top dischargers of carcinogens to the Tennessee River in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
ISP Chemicals Inc.	Calvert City	96,125
BF Goodrich	Calvert City	1,963
Elf Atochem N.A. Inc.	Calvert City	1,909
Air Prods. & Chemicals Inc.	Calvert City	1,467
North Star Steel Kentucky	Calvert City	270

Top dischargers of persistent toxic metals to the Tennessee River in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
ISP Chemicals Inc.	Calvert City	4,478
Elf Atochem N.A. Inc.	Calvert City	3,000
SKW Metals & Alloys Inc.	Calvert City	2,362
North Star Steel Kentucky	Calvert City	1,420
BF Goodrich	Calvert City	137

Top dischargers of reproductive toxins to the Tennessee River in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
ISP Chemicals Inc.	Calvert City	2,890
BF Goodrich	Calvert City	571

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

The Big Sandy River in Kentucky

Total toxic pollution reported (1990-1994): 346,373 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Big Sandy River in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Ashland Petroleum Co.	Catlettsburg	345,270
Inco Alloys Intl. Inc.	Burnaugh	603
Calgon Carbon Corp.*	Catlettsburg	250
East Kentucky Beverage Co.*	Pikeville	250

Table 2. Toxic chemicals discharged in the greatest amounts to the Big Sandy River in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	246,406
Methanol	21,962
Methyl ethyl ketone	13,654
Zinc compounds	12,443
tert-Butyl alcohol	10,824
Methyl tert-butyl ether	8,901
Ethylene	7,639
1,3-Butadiene	7,619
Propylene	7,609
1,2,4-Trimethylbenzene	1,488

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Big Sandy River in Kentucky (1990-1994).**

Carcinogens	9,546 Pounds
Persistent Toxic Metals	13,446 Pounds
Reproductive Toxins	3,085 Pounds
Total‡	**24,311 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Big Sandy River in Kentucky (1990-1994).**

Top dischargers of carcinogens to the Big Sandy River in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Ashland Petroleum Co.	Catlettsburg	9,122
Inco Alloys Intl. Inc.	Burnaugh	424

Top dischargers of persistent toxic metals to the Big Sandy River in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Ashland Petroleum Co.	Catlettsburg	12,843
Inco Alloys Intl. Inc.	Burnaugh	603

Top dischargers of reproductive toxins to the Big Sandy River in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
Ashland Petroleum Co.	Catlettsburg	3,085

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

The Ohio River in Kentucky

Total toxic pollution reported (1990-1994): 316,538 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Ohio River in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Willamette Ind. Inc.	Hawesville	75,590
Dow Corning Corp.	Carrollton	70,770
AK Steel Corp. - Coke Plant	Ashland	68,355
AK Steel Corp. - West Works	Ashland	48,930
U.S. TVA Shawnee Fossil Plant	West Paducah	21,000
Green River Steel Corp.	Owensboro	7,026
Elf Atochem N.A. Inc.	Carrollton	6,365
Inland Container Corp.	Maysville	4,750
Borden	Louisville	2,770
Hampshire Chemical Corp.	Owensboro	

Table 2. Toxic chemicals discharged in the greatest amounts to the Ohio River in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	75,955
Methanol	66,728
Chloroform	32,600
Chlorine	25,895
Aluminum (fume or dust)	22,105
Manganese compounds	20,715
Acetone	14,400
Phenol	7,235
Catechol	6,500
Antimony	6,348

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Ohio River in Kentucky (1990-1994).**

Carcinogens	41,048 Pounds
Persistent Toxic Metals	39,676 Pounds
Reproductive Toxins	27,125 Pounds
Total‡	**102,413 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Ohio River in Kentucky (1990-1994).**

Top dischargers of carcinogens to the Ohio River in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Willamette Ind. Inc.	Hawesville	33,250
Olin Corp.*	Brandenburg	1,493
AK Steel Corp. - Coke Plant	Ashland	1,250
AVI Microfoam Inc.	Wurtland	1,250
Green River Steel Corp.	Owensboro	1,250

Top dischargers of persistent toxic metals to the Ohio River in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
AK Steel Corp. - West Works	Ashland	22,450
Elf Atochem N.A. Inc.	Carrollton	6,328
Green River Steel Corp.	Owensboro	4,276
Borden	Louisville	2,255
Dow Corning Corp.	Carrollton	1,679

Top dischargers of reproductive toxins to the Ohio River in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
AK Steel Corp. - West Works	Ashland	22,105
AK Steel Corp. - Coke Plant	Ashland	3,750
North American Stainless	Ghent	755
Olin Corp.*	Brandenburg	329
American Synthetic Rubber*	Louisville	127

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

The Mississippi River in Kentucky

Total toxic pollution reported (1990-1994): 299,450 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Mississippi River in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Westvaco Corp.	Wickliffe	299,450

Table 2. Toxic chemicals discharged in the greatest amounts to the Mississippi River in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Methanol	269,100
Ammonia	10,410
Zinc compounds	7,000
Acetone	4,700
Phenol	4,050
Chloroform	2,850
Catechol	940
Acetaldehyde	250
Cresol (mixed isomers)	150

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Mississippi River in Kentucky (1990-1994).**

Carcinogens	3,100 Pounds
Persistent Toxic Metals	7,000 Pounds
Reproductive Toxins	0 Pounds
Total‡	**10,100 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Mississippi River in Kentucky (1990-1994).**

Top dischargers of carcinogens to the Mississippi River in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
Westvaco Corp.	Wickliffe	3,100

Top dischargers of persistent toxic metals to the Mississippi River in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
Westvaco Corp.	Wickliffe	7,000

Top dischargers of reproductive toxins to the Mississippi River in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

White Oak Creek Watershed in Kentucky

Total toxic pollution reported (1990-1994): 95,250 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to White Oak Creek Watershed in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
AK Steel Corp. - West Works	Ashland	95,250

Table 2. Toxic chemicals discharged in the greatest amounts to White Oak Creek Watershed in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Aluminum (fume or dust)	42,700
Manganese compounds	35,150
Chlorine	8,400
Chromium compounds	3,615
Zinc (fume or dust)	2,550
Nickel compounds	1,250
Copper compounds	1,000
Hydrochloric acid	325
Methanol	250

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to White Oak Creek Watershed in Kentucky (1990-1994).**

Carcinogens	1,250 Pounds
Persistent Toxic Metals	43,565 Pounds
Reproductive Toxins	42,700 Pounds
Total‡	**86,265 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to White Oak Creek Watershed in Kentucky (1990-1994).**

Top dischargers of carcinogens to White Oak Creek Watershed in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)
AK Steel Corp. - West Works	Ashland	1,250

Top dischargers of persistent toxic metals to White Oak Creek Watershed in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
AK Steel Corp. - West Works	Ashland	43,565

Top dischargers of reproductive toxins to White Oak Creek Watershed in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
AK Steel Corp. - West Works	Ashland	42,700

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

The Barren River in Kentucky

Total toxic pollution reported (1990-1994): 79,548 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to the Barren River in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Bowling Green Municipal Utils.	Bowling Green	79,543

Table 2. Toxic chemicals discharged in the greatest amounts to the Barren River in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Chlorine	79,543

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Barren River in Kentucky (1990-1994).**

Carcinogens	5 Pounds
Persistent Toxic Metals	5 Pounds
Reproductive Toxins	5 Pounds
Total‡	**5 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to the Barren River in Kentucky (1990-1994).**

Top dischargers of carcinogens to the Barren River in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to the Barren River in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to the Barren River in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

Hancock Creek in Kentucky

Total toxic pollution reported (1990-1994): 16,116 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Hancock Creek in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Rockwell Intl. Corp.*	Winchester	16,116

Table 2. Toxic chemicals discharged in the greatest amounts to Hancock Creek in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Diethanolamine	16,116

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Hancock Creek in Kentucky (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**0 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Hancock Creek in Kentucky (1990-1994).**

Top dischargers of carcinogens to Hancock Creek in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to Hancock Creek in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to Hancock Creek in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

Austin Creek in Kentucky

Total toxic pollution reported (1990-1994): 15,037 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Austin Creek in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
Logan Aluminum Inc.*	Russellville	15,037

Table 2. Toxic chemicals discharged in the greatest amounts to Austin Creek in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Ammonia	15,000

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Austin Creek in Kentucky (1990-1994).**

Carcinogens	4 Pounds
Persistent Toxic Metals	27 Pounds
Reproductive Toxins	0 Pounds
Total‡	**27 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Austin Creek in Kentucky (1990-1994).**

Top dischargers of carcinogens to Austin Creek in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to Austin Creek in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to Austin Creek in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

An Unnamed Tributary To Town Stream in Kentucky

Total toxic pollution reported (1990-1994): 13,000 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
U.S. Bureau Of Prisons	Lexington	13,000

Table 2. Toxic chemicals discharged in the greatest amounts to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Chlorine	13,000

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).**

Carcinogens	0 Pounds
Persistent Toxic Metals	0 Pounds
Reproductive Toxins	0 Pounds
Total‡	**0 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).**

Top dischargers of carcinogens to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)

Top dischargers of reproductive toxins to an Unnamed Tributary To Town Stream in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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Dishonorable Discharge

Hood Creek in Kentucky

Total toxic pollution reported (1990-1994): 12,715 Pounds

Table 1. Polluters discharging the greatest amounts of toxic chemicals to Hood Creek in Kentucky (1990-1994).

Facility	City	Toxic chemical release to water (pounds)
AK Steel Corp. - West Works	Ashland	12,715

Table 2. Toxic chemicals discharged in the greatest amounts to Hood Creek in Kentucky (1990-1994).

Chemical	Toxic chemical release to waterbody (pounds)
Aluminum (fume or dust)	6,100
Manganese compounds	4,660
Chlorine	1,350
Chromium compounds	325
Copper compounds	250

‡ The sum of carcinogens, persistent toxic metals, and reproductive toxins listed in Table 3 may be larger than the total because a chemical may be in one or more categories. Chemicals were counted only once for the total in Table 3.

* This polluter did not report any discharges to water in 1994. See Table 9 for year to year pollution figures.

** Carcinogens and reproductive toxins defined by the State of California Proposition 65, EPA's TRI Public Data Release and other literature. See full report for references.

Table 3. Total carcinogens, persistent toxic metals, and reproductive toxins** discharged to Hood Creek in Kentucky (1990-1994).**

Carcinogens	20 Pounds
Persistent Toxic Metals	5,260 Pounds
Reproductive Toxins	6,100 Pounds
Total‡	**11,360 Pounds**

Table 4. Polluters reporting the greatest amounts of carcinogens, persistent toxic metals, and reproductive toxins** discharged to Hood Creek in Kentucky (1990-1994).**

Top dischargers of carcinogens to Hood Creek in Kentucky (1990-1994).**

Facility	City	Carcinogens** released to water (lbs)

Top dischargers of persistent toxic metals to Hood Creek in Kentucky (1990-1994).

Facility	City	Persistent toxic metals released to water (lbs)
AK Steel Corp. - West Works	Ashland	5,260

Top dischargers of reproductive toxins to Hood Creek in Kentucky (1990-1994).**

Facility	City	Reproductive toxins** released to water (lbs)
AK Steel Corp. - West Works	Ashland	6,100

Source: Environmental Working Group. Compiled from U.S. Environmental Protection Agency, Toxics Release Inventory 1990-1994.

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