

WHAT'S IN THAT WATER YOUR DRINKING?
(Can you say Toxic Tort)

City of Portland
v.
The Boeing Company

FACTS

The city of Portland owns and operates a large well field in East Multnomah County along the Columbia River and around Blue lake Park. Those wells are used primarily as emergency back-up wells and supplemental to the Bull Run Watershed which Portland uses as its primary water.

The emergency wells are located near property owned by Boeing Co. and Cascade Co, the Defendants. In the mid 1980's groundwater contamination (TCE) was discovered on the defendants property near the wells. TCE or Trichlorethylene is an industrial solvent used as a degreaser and is one of the more popular solvents of the 1980's. Approximately 38% of all major cities groundwater is said to be contaminated with TCE.

No contamination was found in the wells of the plaintiff, however, the existence of the contamination prevented the City of Portland from using the wells. With the use of the wells the City of Portland was forced to obtain alternative water supplies and impose water restrictions, which caused them substantial costs and loss of customers.

ISSUE

Did the City of Portland come to the nuisance? Was the City of Portland obligated to keep its wells off line to prevent further contamination or spreading of the "Plume"? What law should the City of Portland use to enforce its rights? What kind of relief can it get? Would the City be liable if it had used the wells and spread the Plume? Was the action for injunctive relief or money damages? What if the defendants didn't pollute the ground but it was already polluted when they bought the property? Who should pay then especially if the previous owners are dead or bankrupt? What about the per se nuisance? Is the old Hog law applicable here? Was the city contributory negligent? How does a public or private nuisance work here? Can private parties sue too? Of the 1 billion dollars invested in the wells can the city recoup these dollars? If the wells can be treated for 1 mil each who should pay?

HOLDING

What would you do? Answer the following questions that lead to the answer. Does the old Hog law hold? A: Yes. If yes is the defendant negligent Per Se? A: yes. Does the federal statute CERCLA govern here too? A: Yes. If CERCLA governs can the new owner be held liable? A: Yes. What is left? Damages? What would you award? What about punitive? What about injunctions?

WHAT HAPPENED AT TRIAL

Read the case. Hint the City of Portland used an old tort law still on the books to win this case. All the old English stuff that was thought to be obsolete comes in handy sometimes.

Street law Sem
Curt Maff
2-20-02

ARGUMENTS

CITY OF PORTLAND: In the late 1970's and early 1980's the City of Portland spent 1 billion dollars to develop an alternative water source for the City of Portland's customers. In 1985 the carcinogenic compound TCE was discovered in the ground water on the property of Boeing Co. and Cascade Co. and the two Companies are liable. The city was damaged as follows:

1. Spent \$3 million in monitoring costs
2. Incurred \$1.4 million in expenses in 1992 because the wells were off-line
3. It lost \$2.3 million in sales because the wells were off line.
4. It has since 1992 lost \$15 million in sales because of contamination.

THE BOEING COMPANY: The Defendants claim that the City of Portland should have known that they were building near an industrial site and in essence they came to the nuisance. Further can the Defendants claim that mismanagement on the City of Portland's part? Further the Defendants may claim that the City is liable for pumping in 1987 during a drought with knowledge of the "Plume" and consequently caused it to spread. That spread causing greater clean-up now at the cost of the Defendant.

THE JUDGES OPINION

The City of Portland did not come to a nuisance. The Defendants are liable for the clean up and damages incurred by the City of Portland. Comparative negligence does not act as bar to the City's nuisance claim. Damages to be determined by a fact finder at a later court date.

APPLICATION

1. This case hits very close to home. Discuss how the tort law can be applied to very specific circumstances to help benefit them.
2. How does it make them feel about the environment and what they are drinking? Do we have any environmentalists? People who think they should get involved?
3. Should the city be protecting the citizens? What was Boeing and Cascade thinking? Was the greed and \$ part of the real world?
4. Is there some effect of the contributory negligence argument?
5. Why could the other property owners not sue the Defendants? (look to the definitions and see if the others were pumping from wells)
6. Is there Federal legislation, i.e. CERCLA, and what is that "SUPER FUND" thing we hear about?
7. Should we even care? Can we take precautions?
8. What is the solution to the Defendants clean up? Did you know that TCE is easily dissipated into the air, and that that is what Boeing and Cascade are doing to abate the problem? What about the airborne particulates? Has it been studied? Are we heading into another plume or issue by our ignorant way of abating the current problem.

DEFINITIONS

Private Nuisance

Generally defined: as an invasion without trespass of another's interest in the private use and enjoyment of land.

Elements:

1. Must be an owner to claim private nuisance, i.e. my neighbor can't claim a nuisance for me.
2. Must show significant harm, not all harm is significant.
3. Don't forget the causal link. Δ actions caused π harm.

Public Nuisance

Generally defined: as an unreasonable interference with a right common to the general public.

Elements:

1. Whether the conduct involves a significant interference with the public health, safety, peace, comfort or convenience.
2. conduct can be proscribed by statute, ordinance, or administrative regulation.
3. Whether the conduct is continuing in nature or has produced a permanent or long lasting effect, and the actor knows or has reason to know that it has a significant effect upon the public.

Who can recover in a Public Nuisance suit?

1. An individual that must have suffered a harm of a kind different from that suffered by other members of the public.

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OSHA and the EPA
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leases are subject to annual community right-to-know reporting, and the chemical is listed as a *hazardous air pollutant* in the 1990 Clean Air Act.

Technical Information

Chemical formula: C_3H_4O

Molecular weight: 56

Immediately dangerous to life and health (IDLH) in air: 5 ppm

OSHA limit in workplace air: 0.1 ppm

Further Reading

PROCTOR, NICK H., HUGHES, JAMES P., and FISCHMAN, MICHAEL L. 1988. *Chemical Hazards of the Workplace*. 2d edition. Philadelphia: J. B. Lippincott Company.

Aflatoxins

Introduction

Cancer risks to people exposed to industrial chemicals are often compared to cancer risks posed by eating peanut butter. This is because peanuts are susceptible to contamination by a particular mold that produces a cancer-causing by-product known as aflatoxin. But peanuts are not the only food that can become contaminated with aflatoxin. Many other grains and nuts are also susceptible to this mold, including corn, wheat, rice, cottonseeds, barley, soybeans, Brazil nuts, and pistachios.

Exposure and Distribution

The molds that produce aflatoxin are most likely to grow in warm, humid climates such as in the southeastern United States. But the warm, moist conditions favoring aflatoxin-producing mold can also be created in the field when rain falls on crops, such as corn and wheat, that are left in the field to dry. Aflatoxin-producing mold can also grow on plants damaged by insects or drought. Little is known about why or under what conditions the aflatoxin by-product is produced by the mold. Making matters worse, it is sometimes difficult to see the mold that causes the contamination. Thus, all susceptible crops are subject to routine testing for aflatoxin in the United States. But it is impossible to detect all of it.

For many years it was thought that aflatoxin was produced only when nuts, oilseeds, and grain were improperly stored. In fact, the duration of storage is an important factor as well. The longer agricultural products are stored in bins, the greater the chance that environmental conditions favorable to aflatoxin production will be created. The stored nuts or seeds may be inadvertently dampened, or the storage bin may not allow them to dry quickly enough to arrest the growth of mold, thus allowing pockets of

mold growth to develop. In addition, bin hygiene on farms is often lax, allowing fresh grain to pick up mold spores from previously contaminated batches, thus perpetuating the problem.

Only recently was it recognized that food can become contaminated with aflatoxin-producing mold in the field. The mold grows on susceptible crops as the plants mature. Any stress to the growing plants, such as insect damage, drought, poor nutrition, or unseasonable temperatures, allows the mold to proliferate. It is well documented that aflatoxin is more common in poor quality cereals and nuts. While most of these low-grade products do not enter the human food market in the United States, they do enter the animal feed market, thereby contaminating animal products such as meat and milk with low levels of aflatoxin. People in developing nations are more likely to consume aflatoxin-contaminated food than are Americans. Not only are the storage facilities of poorer quality, but developing nations often ship their best quality grains and nuts abroad, leaving the indigenous population with a damaged product.

Animal feed contaminated with aflatoxin can be a problem. Cottonseed meal, a product often contaminated with high levels of aflatoxin, is banned for use as animal feed to protect both the animals and consumers from aflatoxin. (Cottonseed oil rarely contains any aflatoxin because the toxin sticks to the hulls of the seed.) Milk commonly becomes contaminated with aflatoxin. Powdered nonfat milk can contain eight times more aflatoxin than the original liquid product because the aflatoxin sticks to the milk proteins. Measurable levels of aflatoxin can be detected in some baby foods that incorporate dry milk to boost the protein content of the product. Fortunately, pasteurization, sterilization, and spray dry processing techniques can substantially reduce aflatoxin contamination of dried milk. Meat products are less of a problem than milk because little aflatoxin is carried over into animal flesh. In general,

an animal with detectable aflatoxin in the meat would be obviously sick and unsuitable for market. Pig liver and kidney tissues are exceptions to this rule. Chicken meat can also become contaminated with detectable levels of aflatoxin when the bird shows only mild ill effects (mouth sores and damaged kidneys and liver).

Health Effects

Aflatoxin has been called the most potent natural carcinogen known. It is a demonstrated dangerous carcinogen for several species of animals, including mice, fish, rats, marmosets, ducks, tree shrews, and monkeys. Cancers are found in these animals mainly in the liver, colon, and kidneys following ingestion of aflatoxin-contaminated food. Studies using rats indicate that males are more susceptible to cancer as a result of aflatoxin exposure. Nutrient imbalances also seem to predispose animals to cancer following aflatoxin ingestion.

Aflatoxin seems to cause liver cancer in people as well. Studies in East Africa found convincing correlations between aflatoxin ingestion and liver cancer. *Epidemiological* evidence indicates that men are more sensitive than women to aflatoxin exposure. Many scientists believe that a poor diet and previous liver disease can make people more susceptible to liver cancer resulting from aflatoxin exposure. Since malnutrition and hepatitis are common ailments among the East African people studied, it is likely that these people are more sensitive to liver cancer as a result of eating food contaminated with aflatoxin than the average American is. Nevertheless, the data were convincing enough to the FDA and EPA that these agencies have developed strict regulations to control levels in food and animal feed sold in the United States.

Aflatoxin can also cause acute poisoning. Severe liver disease has been seen in people who consume highly contaminated food. Children around the world exhibit symptoms similar to Ryes syndrome (fever, vomiting,

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drome (fever, vomiting,

coma, and convulsions) following ingestion
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Protection and Prevention

Do not eat moldy food, particularly food sus-
ceptible to aflatoxin-producing molds, such
as corn, peanuts, Brazil nuts, pistachio nuts,
wheat, and rice. Peanut butter often contains
aflatoxin, but the level of aflatoxin allowed
in commercially prepared brands is strictly
regulated. Be extra cautious about unroasted
peanuts, particularly those sold unshelled or
in bulk that are then roasted and ground into
peanut butter on the premises. Peanuts and
other nuts should be roasted before shipping
and storage. Roasting helps to dry nuts, in-
hibiting the formation of mold.

People who handle bulk plant commod-
ities such as grain, ground nut meal, oil
seeds, and animal feeds, are at special risk
for aflatoxin poisoning. Air concentrations of
aflatoxin in such settings can reach levels
high enough to cause measurable health prob-
lems. People who work in such environments
should make sure that the workroom is well
ventilated at all times.

Regulatory Status

The FDA strictly regulates the amount of
aflatoxin allowed in food and animal feeds
sold in the United States.

Further Reading

DENNING, D. W. 1987. Aflatoxin and Human
Disease. *Adverse Drug Reaction and Acute
Poisoning Review* 6(4):175-209.

Alachlor

Trade Name

Lasso

Introduction

Each year about 85 million pounds of alachlor
are sprayed onto U.S. croplands, making it
the single most widely used pesticide in the
country. Alachlor is a selective *herbicide* used
to control annual grasses and certain broad-
leaved weeds. Although it is registered for use
on 25 crops, about 98% of the total is ac-
counted for by corn and soybeans. The re-
maining 1 or 2 million pounds are used on a
variety of other crops including cotton, pea-
nuts, beans, sunflowers, peas, and sugarcane.
Since its registration in 1969, alachlor has
been used liberally and is thus widely distrib-
uted and may pose risks to the public as a
result of contaminated water and uptake by
food plants.

Physical and Chemical Properties

Alachlor is a cream-colored or white solid
that dissolves readily in acetone, benzene, and
ethanol, but dissolves only slightly in water.
It resists breakdown by *ultraviolet radiation*,
but reacts with water under strongly acidic or
alkaline conditions.

Exposure and Distribution

The primary pathway of human exposure to
alachlor is thought to be direct contact, as oc-
curs during mixing and applying. The 650,000
private farmers who apply roughly 70% of
the 85 million pounds used in the United
States are directly or potentially exposed to
alachlor. Another 89,000 commercial appli-
cators are exposed on the job to the pesticide.
At present, the level of exposure to alachlor
as a result of ingestion of contaminated foods
is unknown. Only 10% of the residues of ala-
chlor are detectable because the routine meth-
ods employed by the FDA only detect certain
breakdown products. Because the detection

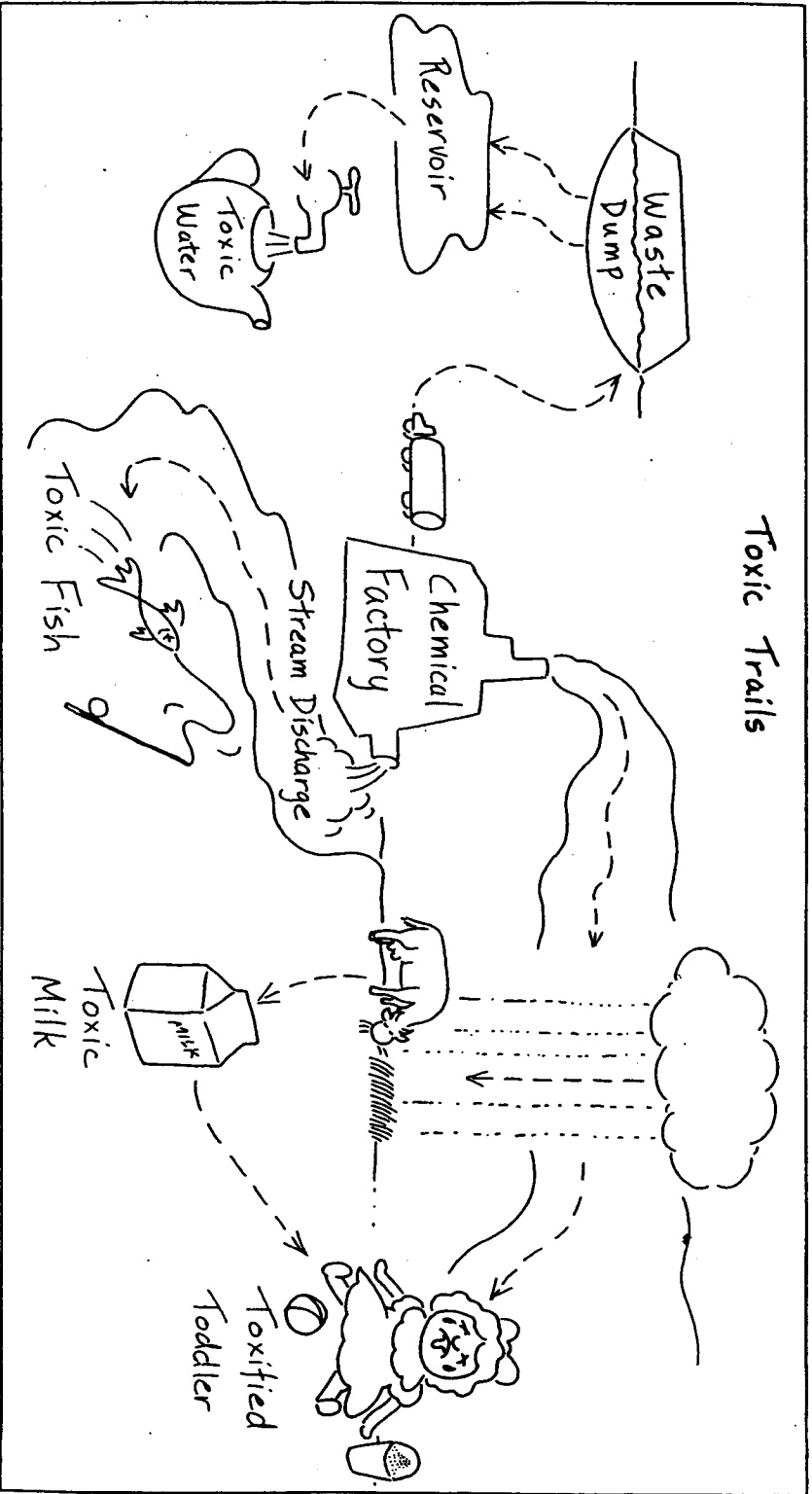


Figure 7 Some of the important pathways by which toxics can reach our bodies.

Figure 13 The petrochemical industry: from raw materials to finished products.

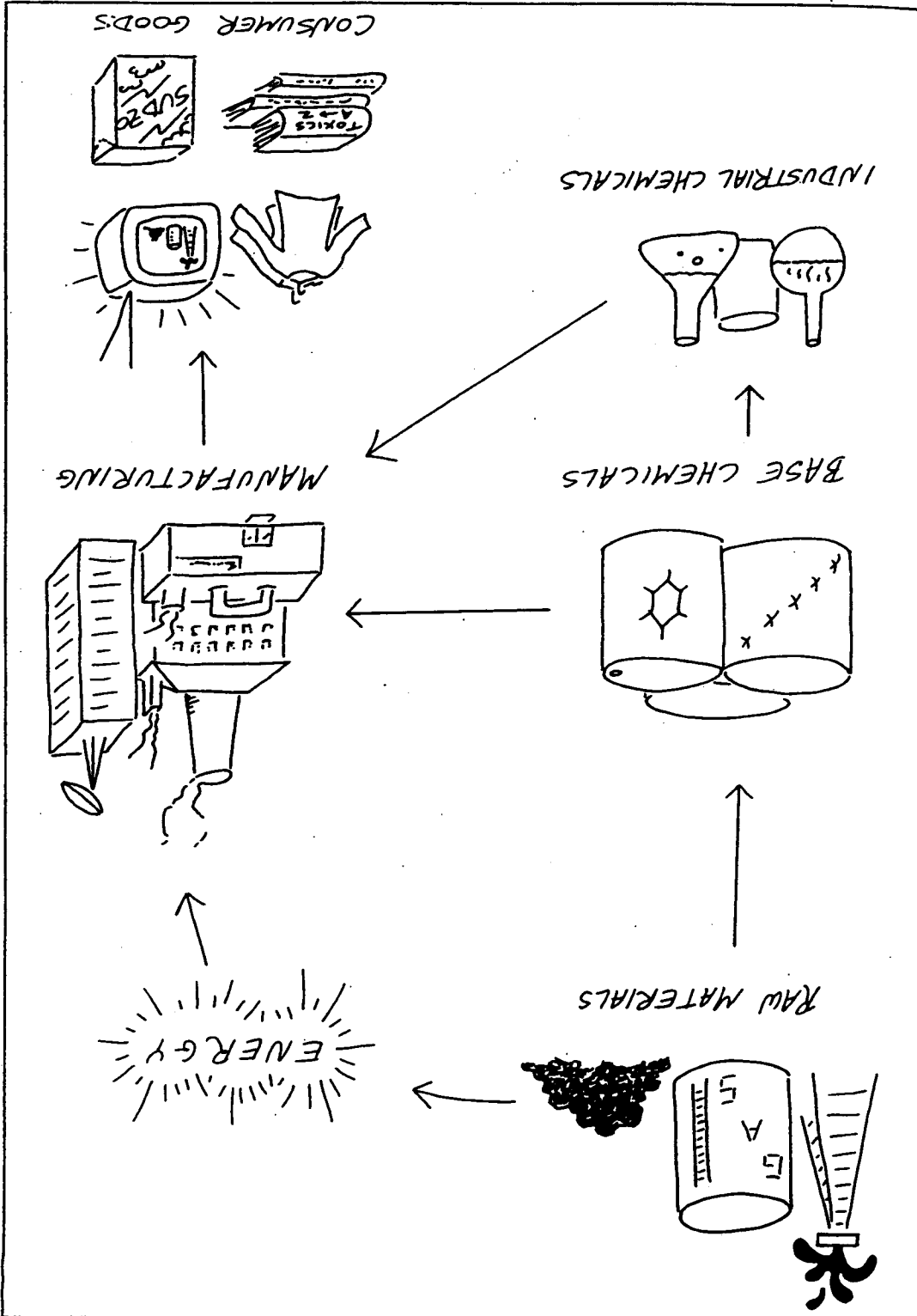
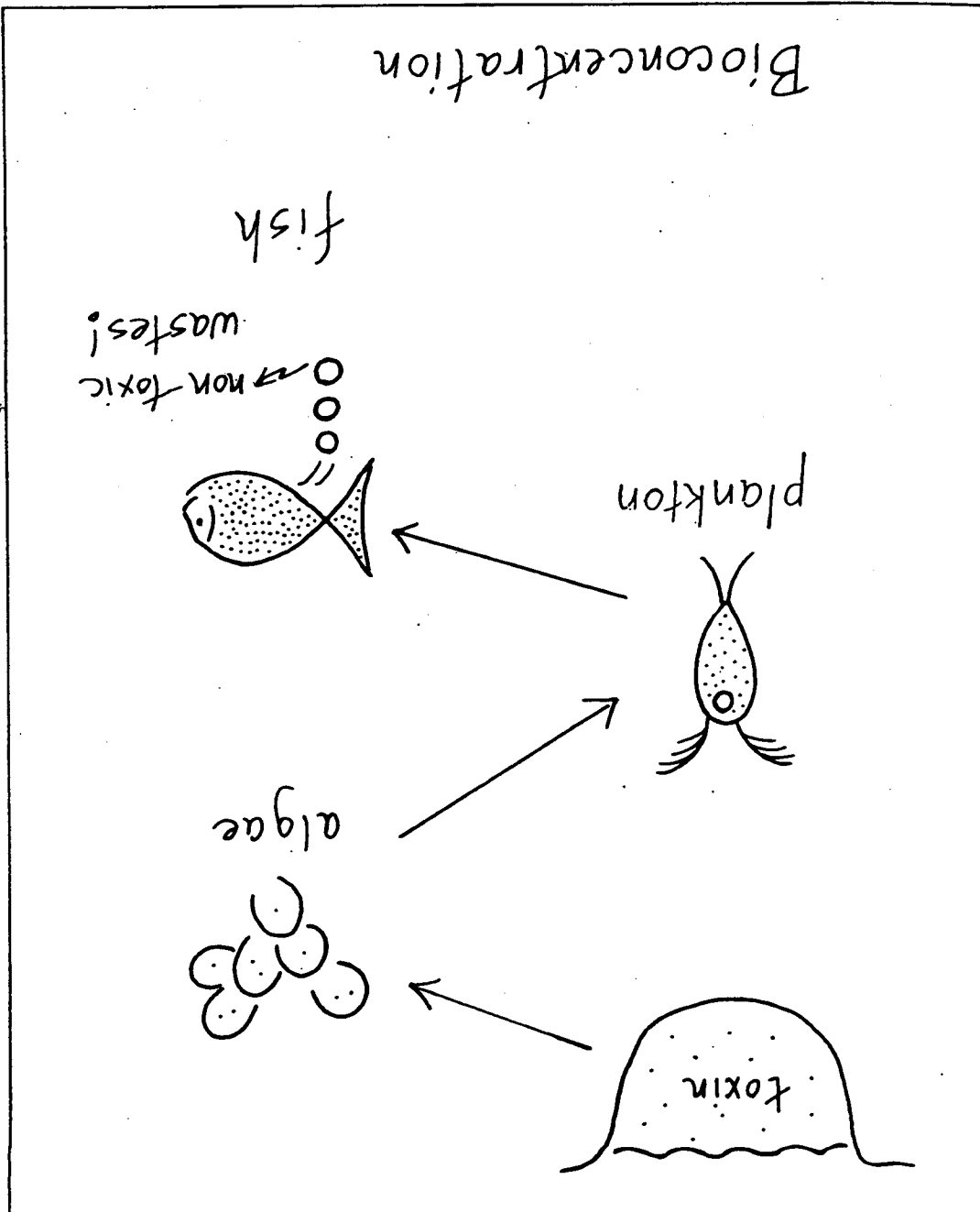


Figure 8 In this food chain, a toxic substance becomes increasingly bioconcentrated as it passes from the water to algae to plankton and finally to fish. Bioconcentration occurs if the toxic substance is preferentially retained in the organism rather than excreted. If people eat the toxified fish, the substance may concentrate still further in them.



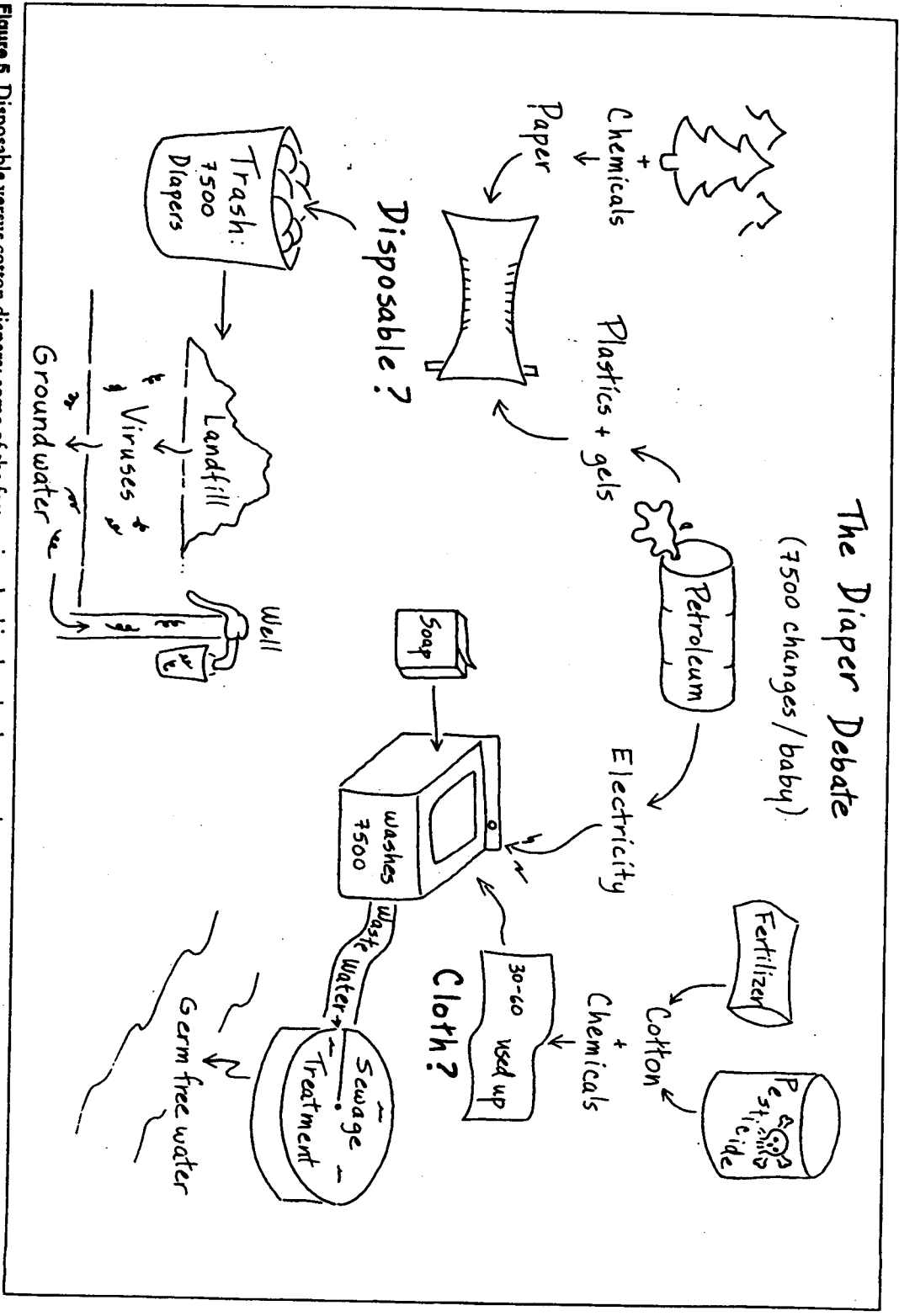


Figure 5 Disposable versus cotton diapers: some of the factors involved in choosing between these two types.

Figure 3 Sources of air pollution in the home.

