

# Earth Watch

## Worldwide Environment Notes

### Camouflaged Sewage Plant

FREEHOLD, N.J.

A MINIATURIZED, automated sewage treatment plant concealed within the shell of a typical suburban house is under construction here by Levitt & Sons. Designed to serve a community of 127 homes in a new Levitt real estate development, the reputedly noiseless, odorless, pollution-free facility will treat a minimum of 50,000 gallons of waste water per day. Standing on a one-quarter-acre building lot instead of the six or more acres usually occupied by a plant of similar capacity, the Levitt facility will look from the outside exactly like the \$30,000-\$40,000, two bedroom houses in the surrounding neighborhood.

In a departure from the conventional treatment of sewage—which is biological in nature—the Levitt system, designed by AWT Systems, Inc., of Wilmington, Delaware, depends on a chemical-physical process. Self-cleaning wedgewire screens will remove impurities. Residual solids will be induced to coagulate around magnetic iron oxide particles. A magnetic filter then will separate out the solids, forming a sludge that will be burned at about 1,500 degrees Fahrenheit, leaving about ten pounds of inert sterile ash per day. The waste water that passes by the magnetic coagulators and filters will be purified by passage through activated carbon. Impurities sequestered by the carbon will be removed periodically by the incinerator.

Spokesmen for AWT Systems say their treatment process removes 98 to 99 per cent of all suspended solids and more than 95 per cent of dissolved organic materials and phosphates, producing water that is of near-drinking quality.

The Environmental Protection Agency is paying \$250,000 of the estimated \$750,000 cost of the plant in return for an opportunity to evaluate the facility's performance. It is EPA's hope that the Levitt plant may prove to be a practical way of handling the sewage disposal needs of small housing developments that are too far away from existing municipal sewage systems to be hooked into those systems and that, because of population density or soil conditions, cannot use septic tanks.

If the Levitt plant meets expectations, duplicates of it might open up land to housing development in many parts of the country where stringent water pollution controls now preclude such construction.

### Shoot Film, Not Guns

NEW YORK.

AS A MATTER of corporate policy, Pan American World Airways no longer will sponsor safari tours that have as their object the killing of animals classified by the World Wildlife Fund as "endangered species."

Among the species so designated are the jaguar, cheetah, leopard, tiger, crocodile, and rhinoceros. They have

been the targets of past Pan Am safaris to South America, Asia, and Africa.

The airline estimates its annual revenue from those tours at "several hundreds of thousands of dollars." It plans to recoup the loss by promoting photographic safaris to the same areas to track the same animals.

Safaris to kill animals not on the endangered list will go on.

Iberia Airlines has agreed to discontinue its package tours to Paraguay to kill jaguars. Other airlines that run tours to kill endangered species are continuing the practice.

The World Wildlife Fund is trying to persuade all airlines to help protect animals. The fund has appealed to the International Air Transport Association to take a firm stand on the issue and "establish a code that would prohibit its members from being a party to travel schemes in conflict with the precepts of wildlife conservation."

### Cashing In on Trash

DEARBORN, MICH.

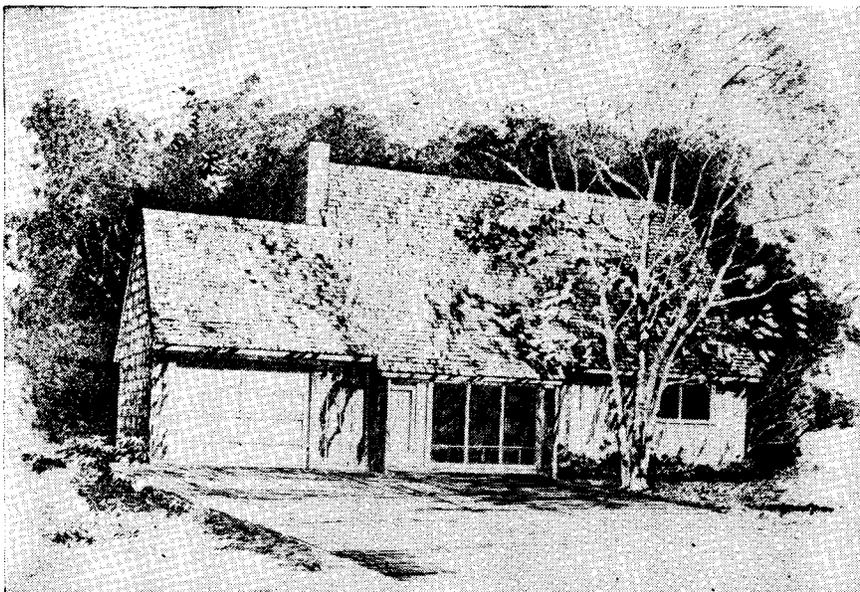
FORD MOTOR COMPANY in the course of its production activities accumulates between 350,000 and 400,000 tons of used corrugated cardboard boxes and containers a year. The boxes are used for shipping parts to and from plants. Getting rid of the used containers is a problem. Traditionally, boxes have been burned in closed incinerators and the residue used for sanitary landfill. Recently Union Camp Corporation of Wayne, New Jersey, a major producer of unbleached, or kraft, paper and corrugated board, agreed to purchase from Ford about 100,000 tons of used cardboard boxes a year over a period of five years for an undisclosed sum. The balance of the used Ford boxes will be disposed of in the usual way.

Union Camp, which also purchases used corrugated cartons from textile mills, bottling companies, supermarket chains, retail stores, and a carpet manufacturer, will process the Ford containers in two recycling mills: one at Monroe, Michigan; the other at Montgomery, Alabama. There Union Camp turns out a new generation of corrugated boxes, liner board for containers, returnable beer cases, filing boxes, and sturdy, painted, cardboard living room furniture. One man's windshield carton may become another man's love seat.

### Environment Reports Available

SPRINGFIELD, VA.

UNDER the provisions of the National Environmental Policy Act of 1969, any agency of the federal government proposing legislation or planning to undertake an action "significantly affecting the quality of the human en-



—John Sierks for ITT Levitt & Sons

Sketch of sewage plant to serve 127 homes in Freehold, New Jersey.

vironment" must file an impact statement with the President's Council on Environmental Quality. Copies of those statements are now available to the public from a single government source—the National Technical Information Service of the Department of Commerce, at Springfield, Virginia.

Summaries of environmental statements published in bulletin form every two weeks can be subscribed to for \$5 a year.

Complete texts of original impact statements are available for \$3 each if the documents do not run beyond 300 pages. Statements that run past 300 pages (a rare occurrence) cost \$6. Comments on the original statements by various government agencies and final versions arrived at as a result of the comments are available at the same price.

### Bicyclists Get a Break

SALEM, ORE.

FROM THIS MONTH on, at least 1 per cent of all Oregon state highway funds must be reserved for the construction of bicycle trails and footpaths. A "bicycle bill" signed into law this summer by Governor Tom McCall directs that such trails "be established wherever a highway, road, or street is being constructed, reconstructed, or relocated."

The amount of money involved under the new bill could be as much as \$2.6-million a year—\$1.3-million from state highway funds and a matching amount in federal funds. Governor McCall says he was informed by Undersecretary James M. Beggs of the U.S. Department of Transportation that the matching principle governing expenditure of federal highway building money in Oregon can be applied to construction of bicycle trails.

The Oregon state highway commission already has proposed a route for the first combined bicycle-footpath. It is a seven-mile stretch of abandoned railroad right-of-way running along the Willamette River through the Portland metropolitan area.

Bills to permit the use of federal Highway Trust funds in creating bicycle lanes and parking facilities throughout the country have been introduced in Congress by Representative Edward Koch of New York and Senator Alan Cranston of California.

### No Dumping Place at Sea

ROTTERDAM.

AN INTERNATIONAL incident was recently avoided when a ship assigned by a Dutch company to dump 600 tons of chemical wastes in the sea returned to port with its cargo still aboard.

The Akzo Chemical & Salt Company, one of Holland's largest chemical and



—Wide World

### Protection for Seals

OSLO.

THE Norwegian and Canadian governments have signed a treaty covering sealing operations in the northwest Atlantic. The agreement provides for protection of seal stocks and for regulations to ensure humane methods of catching the pups.

Under the pact, a joint Norwegian-Canadian commission will be established to do scientific research on seal-

ing and conservation, and to make and enforce proposals governing conduct of the annual seal hunt.

Norwegian sealing vessels have been active for many years in Canadian waters in the Gulf of St. Lawrence and along the southeast coast of Labrador and the northeast coast of Newfoundland. Sealing is the main source of income in some areas of both countries.

The treaty will go into effect as soon as it is ratified by the Norwegian and Canadian Parliaments.

plastics firms, had chartered a tanker, the *Stella Maris*, to dump a cargo of chlorinated aliphatic hydrocarbons in the Atlantic midway between Iceland and Ireland.

Dumping in the North Sea and the North Atlantic has been a standard operating procedure of many countries for many years. Akzo therefore routinely informed the Dutch government of its intentions and the Dutch government, as a matter of courtesy, informed the Norwegian government.

But times have changed. Concerned that the *Stella Maris* might drop her cargo in the North Sea and thereby pollute their territorial waters and damage valuable fishing grounds, the Norwegian, Danish, and Swedish governments protested to the Netherlands. These actions were swiftly followed by objections from the governments of Great Britain, Ireland, and Iceland. Stalked by Irish minesweepers and unable to refuel at foreign ports in the North Atlantic, the *Stella Maris* returned to Rotterdam.

Akzo says the chemicals will be off-loaded and stored in a sealed tank pending completion of a \$3-million incinerator that already had been under construction.

The *Stella Maris* episode points up the need for some sort of international agreement covering dumping in regional and international waters. Such a convention has been drafted by a preparatory committee for signing at the 1972 U.N. Conference on the Human Environment in Stockholm.

### River Cleanup

FREDERICTON, NEW BRUNSWICK.

A THREE-YEAR project to devise a comprehensive water management plan to clean up the Canadian portion of the Saint John River Basin is under way. Funded at \$750,000, the project is being run jointly by the federal and provincial departments of environment.

The 400-mile-long Saint John River is New Brunswick's main waterway. It is seriously polluted by the effluent from pulp and paper mills (the province's leading industry), potato-processing plants, coal mines, and by municipal sewage. About seventy miles of the upstream stretch of the river is shared with the state of Maine and is the international boundary between Canada and the United States.

An interim report on the project was issued last January. It identified the major sources of pollution and made recommendations for controlling them. All large Canadian communities on the Saint John River were given a deadline of December 31 for upgrading their sewage treatment facilities. Polluting industries were given the same order.

Gaps in information concerning the ecological, hydrological, and socioeconomic effects of long-range planning for the river are currently being filled in. The final step in the project will be the issuance of a water-management plan aimed at improving the quality of the river's water without worsening the province's economy.

—SALLY LINDSAY.

# ABORTION AND MORALITY

Has a potential human the right to live inside an actual woman without her consent?

by PAUL R. EHRLICH and JOHN P. HOLDREN

Induced abortion is deliberate human intervention to stop the development of a fetus. It is thus distinguished from spontaneous abortion, which occurs naturally following perhaps as many as one in three human conceptions. Although induced abortion has been the most widely practiced form of birth control since antiquity (with occasional competition from infanticide), the combined effects of four recent events have brought it fully into the public spotlight in America. These events were the rapid acceptance of legal abortion in Japan and Eastern Europe (with no obvious ill effects on society), the increase in concern over the personal and social consequences of unwanted children, the growing awareness of the need for contraception of all kinds to stem population growth, and the efforts of American women to achieve status and privileges equal to those enjoyed by men.

The principal questions that arise concerning induced abortion are also four: Is it needed? Is it safe? Is it moral? Is it the business of government or, indeed, of anyone other than the pregnant woman?

On the matter of need, the women of the world have already recorded their vote. In countries and states where all or most restrictions on abortion have been removed, the abortion rate often approaches or even exceeds the rate of live births. More surprisingly, this is true even in Italy, where abortion is forbidden both by law and by the very powerful Catholic Church. Since it can be safely assumed that most women do not take abortion lightly under any circumstances, the high abortion rate almost everywhere bespeaks a compelling need.

Nor can the need for abortion be eliminated by providing contraception in its place—although contraception should certainly be made universally available. It is not simply a matter of choosing either contraception or abortion, because the question of abortion arises only after contra-

ception has failed. Since failures are inevitable, both technically and owing to human error, the only choice in such cases is between abortion and an unwanted child.

The question of safety is the most easily answered of the four. Medical studies show that an abortion performed under medically controlled conditions is several times safer than normal childbirth. Of course, illicit abortion performed by an untrained person under unsanitary conditions is very dangerous indeed. By making abortions illegal, we encourage dangerous ones and discourage safe ones, for it is already clear that women will have them whether legal or not. This situation is most severe for the poor; women with the required knowledge and financial means simply travel to areas where abortion is legal and undergo the operation in safety.

The question of morality usually centers on whether abortion is equivalent to taking a human life. A fetus is certainly alive—as are the cells destroyed every time you brush your teeth—but it is a *potential* rather than an actual human being. The some thirty thousand eggs present in the ovaries of each human female at birth are also potential human beings one step removed, since they require only sperm—available in abundance—to become embryos. Only a tiny fraction of these eggs are fertilized, however, and society does not mourn the rest. Nor is much thought given to the

countless early spontaneous abortions that pass unnoticed in the menstrual discharge. If abortion is “murder,” are these “accidental deaths”?

Such a *reductio ad absurdum* is not to suggest that abortion be undertaken frivolously. However, it does underline the distinction between potential and actual human beings that is already implicitly recognized by society. Denial of abortion subjects actual humans to the anguish of compulsory pregnancy and the burden of unwanted children—a burden that mothers share with siblings who may already be receiving insufficient care and attention, with unwanted children who may be abused or abandoned, and with the society that ultimately must cope with the maladjusted product. If actual human beings are of more consequence than potential ones, then abortion is moral. Those who believe that some fundamental tenet of religion precludes this view will be hard pressed to be specific. For example, even the great Catholic theologian St. Thomas Aquinas thought abortion permissible until the “quickening” (usually between the sixteenth and twentieth weeks of pregnancy).

If abortion is needed by individuals and by society, is medically safe, and is not patently immoral, it is difficult to be sure exactly what is accomplished in subjecting the procedure to restrictive government scrutiny. The legal distinction between potential and actual human life is clearer than the biological one: Infants are entitled to due process and equal protection under the Fourteenth Amendment to the Constitution, but fetuses are not. Because of this distinction, the relaxation of abortion laws could scarcely imperil the rights of infants or of elderly and otherwise dependent people. Moreover, as Lynette Perkes stated eloquently in a letter to the editor of *Newsweek*, “. . . neither they nor anyone else in our society now have a right even remotely like the one in question—the right to live inside the body of another person against that person’s will.”

Repeal of abortion laws is long overdue. One need not relish the idea of abortion to recognize that the practice is inevitable and its legalization preferable to the alternatives. It can and should be minimized by the development and distribution of more effective contraceptives, but it cannot be eliminated. A more worthy goal for those of humane bent is to improve the lot of those children who are wanted by their parents but who face misery, starvation, and disease in an overpopulated world replete with inequity.

Answer to Wit Twister, page 15:  
petal, pleat, plate, leapt.

