EXTRACTIONS

a newsletter from O'CONNOR ASSOCIATES

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SOIL-CLEANING DEMONSTRATION

Following a preliminary study last year, the Toronto Harbour Commission announced the second in a three-stage plan to clean contaminated soil in the industrial waterfront district. A $4.3 million plant will demonstrate technologies for washing soil, extracting heavy metals and removing organic contaminants. The first process washes the contaminated soil under high pressure leaving 80% of the soil as clean sand. The second, a process adapted from the mining industry, removes toxic heavy metals. The last process uses bacteria under controlled conditions to digest the organic contaminants.

The third stage in the plan, if the demonstration plant is successful, will be a permanent plant costing about $25 million to handle 300 000 tonnes per year. At that rate the Commission expects to clean all the contaminated soil in the industrial waterfront district within seven years.

QUEBEC'S HAZARDOUS WASTE

A Quebec commission, headed by Yvon Charbonneau, has released its report containing 153 recommendations to improve management and disposal of 1.3 million tonnes of hazardous waste annually. The commission recommended eliminating PCB-contaminated oil over the next 3 years by recycling, stabilizing and burning. After calculating the amount of hazardous waste generated, imported, exported, dumped, incinerated, and recycled, the commission was missing 368 000 tonnes. It wants to make the accounting for waste 10% more accurate by 1996.

The commission recommended measures to burn de-inking sludge and waste from pulp mills to reduce effluents. It also suggested controlling groundwater contamination by recycling most of the 125 000 tonnes of used oil dumped along the roadsides annually.

OCEAN DUMPING CONTINUES

Canada continues to dump millions of cubic metres of waste into its coastal waters without checking for toxic materials. A federal report says that last year Environment Canada issued permits to dump nearly 5 million cubic metres of dredged material, 14 000 tonnes of wallboard and 1 400 tonnes of scrap metal. Permit fees range from $50 for a single dump to $1000 for repeated dumping. Critics think these fees are too low compared to the environmental damage, and their biggest concern is the possibility of heavy metals dispersing through the water when the dredged sediments are dumped at sea.

TOXICITY DEFINED

New US regulations came into effect March 29, 1991 to expand the definition of hazardous waste. Any material containing one of 25 organic toxicants, including benzene, carbon tetrachloride, cresol, chloroform, methyl ethyl ketone and vinyl chloride, at concentrations exceeding allowable levels will be a hazardous waste and will be subject to stringent control. The Toxicity Characteristic allowable levels are based not only on the toxicity of the chemical, but also on the expected fate of the chemical when it reaches the environment.

(from *Pollution Eng.*, May 1990, p. 14-15)

NOVA SCOTIA RECYCLING FUNDS

Nova Scotia Environment Minister, John Leefe, announced a Resource Recovery Fund with the goal of providing a multi-material recycling program to 70% of Nova Scotians by the end of 1993. The fund will raise money from those industries whose products contribute to the province's waste stream. Already, the Nova Scotia Liquor Commission, the Atlantic Provinces Soft Drink Association and the Canadian Council of Grocery Distributors have contributed a total of $3.2 million to the fund. Other manufacturers and distributors of products such as newspapers, food containers, packaging, disposable diapers, tires, batteries and lubricating oil will be asked to contribute also. The minister also announced new beverage container regulations.

THEY CLEAN UP FIRST, THEN SUE FOR COSTS

The British Columbia Department of the Environment is now preparing draft laws on cleaning up land that has been contaminated by hazardous waste in the province. Looking at some new US environmental laws may help these legislators to write better laws for BC.

The original US Superfund law, which was in force for a few years, provided for government cleanup of abandoned hazardous waste sites. The process was lengthy and there were many lawsuits to determine who had to pay. One of the more surprising developments under the Superfund law in recent years is the explosion of private cost recovery suits under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as more and more owners of contaminated property have chosen to clean up first and then try to recover their costs.

The new National Contingency Plan (NCP), issued last year, will accelerate this trend by encouraging private parties to clean up contaminated sites to high standards voluntarily and will give them a better chance to recover their costs quickly.

Before now, to successfully recover the cleanup costs, owners had to show that the cleanup procedures were "consistent with the national contingency plan." The new NCP now requires only "substantial compliance" and relaxes the formerly strict requirements to meet the standard the government must meet when it cleans up. The new NCP also relaxes previous requirements for exhaustive study before cleanup begins and permits lawsuits to begin before the cleanup is finished.

(from *Pollution Eng.*, May 1990, p. 18-27)

LOWER PESTICIDE LEVELS

In 1987, the Ontario Ministry of Agriculture and Food launched *Food Systems 2002* to cut in half chemical pesticide use by the year 2002. It's working. The Ontario Ministry of the Environment has released 2 reports which show significantly lower pesticide levels in drinking water in 1987 and 1988 than in previous years. In 1988, all pesticide concentrations were well below Health and Welfare Canada drinking water guidelines—the highest concentration, 8 ppb of atrazine from the Dresden Water Treatment Plant, was only one-eighth of the federal allowable maximum.

The Ontario Ministry of the Environment is supporting *Food Systems 2002* by promoting integrated pest management techniques in place of chemical pesticides.

TOXIC ORPHANS

The BC government is the first to sign an agreement with the federal government under the National Sites Remediation Program and other provinces will follow. New remediation technologies will be developed, demonstrated and then shared throughout Canada. The former site of Expo 86 in Vancouver, a typical *orphan site*, will be tackled first. *Orphan sites* are high-risk contaminated areas where the responsible parties cannot be identified or cannot pay for the cleanup. Under the initial agreement, both governments will contribute $14.6 million with 20% for technology development and demonstration and the rest for the actual cleanup. Over the next five years federal and provincial governments will each contribute $25 million for technology development and $100 million to clean up the 30 to 50 *orphan sites* across the country.

RELIANCE CLEANUP

Transport Canada's aviation weather service at Reliance, NWT is closing after 32 years of service due to federal budget cuts. However, a contaminant cleanup project at the station may continue for another 10 years. After discovering petroleum contaminants seeping into Great Slave Lake in 1989, Transport Canada retained O'Connor Associates who concluded that the contamination was from a variety of fuel handling activities over the years. Because the shale bedrock underlying the site was fractured, conventional cleanup by excavating was impractical. O'Connor Associates designed a special containment / collection system as well as an upgraded tank farm / fuel distribution system. Transport Canada expects to finish construction of the systems early this year at a total cost of $1.8 million.

NEW RULES FOR DANGEROUS GOODS

Canada is phasing in new rules for transporting dangerous goods. The latest rules cover containers, packing and testing methods and apply to all international marine transport and most air transport. A United Nations Committee of experts helped develop the regulations.

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