

EXTRACTIONS



a newsletter from **O'CONNOR ASSOCIATES**

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A CLEANER GASOLINE

Atlantic Richfield has developed an experimental cleaner-burning gasoline which may cut toxic emissions by 50%. While some groups are looking to methanol, ethanol, natural gas, or more exotic fuels for automobiles in the future, ARCO's fuel requires no refitting of existing cars or changes to existing service station pumps or tanks. The impetus to develop cleaner-burning fuels comes from California where the Air Quality Board is about to set new fuel standards for 1996. Other oil companies are likely to have similar plans to keep North America hooked on gasoline.

[from *Time*, July 22, 1991 p. 34]

EPA FAVOURS UNDERGROUND INJECTION

The US Environmental Protection Agency's Office of Solid Waste and Emergency Response (OSWER) says that deep underground injection is one of the safest ways to dispose of hazardous waste. It results in lower environmental and health risks than landfills, underground storage tanks and ocean dumping when current EPA standards are followed. These standards require owners or operators of injection wells to demonstrate that hazardous waste would not migrate from the injection zone for 10 000 years. Specific requirements include injection deeper than 1 500 feet in zones separated from potable water by impermeable overlying rock several hundred feet thick. Wells must have double casings and be constantly monitored to prevent leaks.

[from *Groundwater Newsletter*, vol. 20, No. 12, June 30, 1991]

ENVIRONMENTAL COPS

One group of EPA investigators in Texas has been issuing field citations, much like traffic tickets, to operators with potentially faulty underground storage tanks. They hope these citations will encourage operators to comply quickly with strict field regulations and act to maintain environmental protection while not penalizing operators excessively for minor violations.

[from *Groundwater Newsletter*, vol. 20, No. 12, June 30, 1991]

HWAC UPDATES 1988 REPORT

The Hazardous Waste Action Council is an association of scientific and engineering firms that practice hazardous waste management. The Association of Engineering Firms Practicing in the Geosciences and the American Consulting Engineers Council are also members. The 1991 HWAC report concludes that technology is improving and that technical ideas are more widely available than in 1988.

However, the report recommends these changes to laws and regulations:

- Change laws so that they do not apply standards for new waste as goals for cleanup of existing hazardous waste sites.
- Use guidance documents for "guidance" not as standards of practice.
- Have the EPA eliminate duplication and conflict in guidance documents.
- Make new federal laws to establish negligence as the standard for judging liability of consultants.
- Have the EPA encourage new technology with financial incentives like those grants for innovative technology outlined in the Clean Water Act.

[from *Groundwater Newsletter*, vol. 20, No. 12, June 30, 1991]

FALSE TESTS COST FIRM \$1.3 MILLION

Science Applications International Corp. pleaded guilty to performing analyses for the US Environmental Protection Agency on hazardous waste sites more than 10 days after collecting samples then back-dating the reports to pretend the work was done on time. Since chemicals may have dissipated from the soil and water samples, the results were invalid. The several hundred false reports delayed cleanup and cost US \$76 000 for retesting. The company paid fines of US \$1.3 million and later fired the 6 employees who admitted making the false reports.

[from *Kitchener-Waterloo Record*, August 27, 1991, p. F5]

WHO SETS DIOXIN LIMITS

The World Health Organization recently set a human exposure limit of 10 trillionths of a gram of dioxins per kilogram of body weight per day. This is significantly less stringent than the current US Environmental Protection Agency's limit of 0.006 trillionths of a gram of dioxins per kilogram of body weight per day. The EPA limit allows for one additional cancer fatality per million people.

However, some researchers are questioning the carcinogenicity of dioxins. The EPA has begun a year-long review of the procedures for determining dioxin hazards. Officials of the agency are concerned about the review expanding because they use the same procedures for determining allowable limits for contaminants in air and water for most of the other chemicals the agency regulates.

[from *Canadian Occupational Health and Safety News*, Vol. 4 No. 35, September 2, 1991, p. 4]

ON THE ONE HAND

Margaret N. Maxey claims "that rather than being a victim of technology, nature remains an overwhelming culprit endangering our lives." She cites the following data:

- Geophysicists have calculated that three large volcanic eruptions between 1887 and 1947 (Krakatoa, Katmal and Helka) have put more particles, CO₂ and sulphur oxides into the atmosphere than all of the activities of industrial man.
- Deaths from industrial disasters
Chernobyl - 34 Three Mile Island - 0
Bhopal - 2000 Love Canal - 0
- Deaths from natural disasters
Cyclone in Bangladesh - 10 000
Earthquake in Mexico - 10 000
Volcano in Columbia - 20 000
- Nuclear fission will contribute only 1 ten millionth of one percent to the toxicity of the environment compared to the toxicity of 8 naturally occurring substances - mercury, lead, cadmium, chromium, selenium, barium, arsenic and uranium.

Ms. Maxey supports her call to change public research spending priorities with this example: \$8.5 billion are spent per fatality limiting exposure to asbestos while only \$50 000 are spent per fatality researching cervical cancer.

[from National Council of Examiners for Engineering and Surveying of South Carolina Registration Bulletin, July 1991, condensed in the newsletter of the Association of Professional Engineers Geologists and Geophysicists of the Northwest Territories, vol. 8 no. 3, August 1991]

ON THE OTHER HAND

J. O. Nriagu from the National Water Research Institute in Burlington, Ontario says that "Chronic lead poisoning can be regarded as one of the major ecosystem and public health issues of our times." His studies show that the present concentration of lead in the Antarctic ice fields is 4 times higher than the level in pre-technological times. He concludes that the emissions of lead from man-made sources are nearly 30 times higher than emissions from natural sources.

[from a paper presented at the joint annual meeting of the Geological Association of Canada and the Mining Association of Canada, May 1991]

BC SCRAP-TIRE RESEARCH

The British Columbia Sustainable Environment Fund has contributed \$1 million to the Science Council of BC to promote research and development by BC companies in the reprocessing or recycling of scrap tires. Currently, most scrap tires that are diverted from landfills are being used as fuel in BC's cement kilns. The Department of Environment hopes that the grant will help develop viable tire-based recycling industries, reduce air pollution and reduce the risk of tires burning in landfill sites.

[from a BC Environment news release, August 30, 1991]

SASKATCHEWAN MINING REGULATIONS

The Mineral Industry Environmental Protection Regulations now cover all types of mining and all minerals. Previous regulations did not cover uranium mining. The new regulations deal with all phases from exploration through to final closure and make Saskatchewan a world leader in environmental protection in the mining industry.

[from a Saskatchewan Govt. news release, August 6, 1991]

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