

Business Feature

BY DEBBIE QUAILE
ROCKWOOD & AREA

Imagine the vision: find an alternative to burning PCB-laden waste, instead of releasing more dangerous compounds into the atmosphere. That was the dream of Dr. Douglas Hallett, Vice Chairman of ELI Eco Logic Inc. In 1986 he developed a commercially-viable alternative.

Prior to 1980, Dr. Hallett spent 17 years with Environment Canada, where he was Senior Scientific Advisor and Chairman of the Toxic Chemicals Program. Hallett is known throughout the world for his discoveries, is a former President and Chairman of the International Association for Great Lakes Research and was awarded a United Nations Silver Medal for Environmental Stewardship.

From humble beginnings, the company now boasts over 90 engineering and related professionals and support staff at their offices in Rockwood, Kwinana, Western Australia, and Annapolis, Maryland. At the Rockwood facility, where the majority of the employees are local, Hallett has pilot units where ECO LOGIC performs construction, testing and training.

The Technology

The ECO LOGIC Process is an innovative, patented, closed-loop, non-incineration/non-landfill technology that converts on-site organic hazardous wastes into reusable or disposable products. Worldwide hazardous waste cleanup market include PCBs (polychlorinated biphenyls), electrical equipment, contaminated soils, chemical warfare agents, petrochemical wastes, certain low level radioactive wastes and municipal sludge.

The process involves the gas-phase reduction of organic compounds by hydrogen up to 850C. Chlorinated hydrocarbons, such as PCBs and polychlorinated dibenzo-p-dioxins

(dioxins), are chemically reduced to methane and hydrogen chloride (HCl), while non-chlorinated organic contaminants, such as polycyclic aromatic hydrocarbons (PAHs) are reduced substantially to methane and minor amounts of other light hydrocarbons. The HCl produced can be recovered as acid or 'scrubbed out' in a caustic scrubber downstream of the process reactor.

Using the actively reducing hydrogen atmosphere for the destruction of PCBs means that no dioxins or furans are formed. Any dioxins or furans in the waste are also destroyed.

Environmental Impact

There are no uncontrolled emissions to the environment due to the closed-loop system in the ECO LOGIC Process. It has proved itself extremely effective in consistent destruction and removal of at least 99.9999 per cent of PCBs and other hazardous organic compounds. Following PCB treatment, no PCB residuals remain on site, and all materials generated from the process are reused on-site, recycled or safely disposed of off-site. Materials generated by the process include what the company terms "product gas" (primarily methane and hydrogen), treated solids and clean water. All output is held and tested before being discharged or disposed of, in accordance with regulatory requirements. Product gas is recirculated or reused as fuel on-site. Treated solids can be landfilled, and treated soil can be returned to the location from which it was excavated. Clean water that is not used on-site for cooling can be discharged to a sewer system once chemical analysis has demonstrated that it complies with regulatory requirements.

Continuous monitoring devices are used during waste processing to record performance. The ECO LOGIC Process has been successfully permitted in Canada, the

ECO LOGIC of Rockwood

United States, and Australia. From their history of regulatory compliance and proven absence of residual contaminated materials or emissions, ECO LOGIC has gained favorable public and regulatory reaction. As well, their process is often more cost effective than waste destruction methods such as incineration or possibly containment and storage. This is particularly true when considering the risk of transporting toxic materials, or environmental liability resulting from landfill or storage.

On the Horizon

On March 19, ECO LOGIC announced that they accepted contracts from two commercial organizations in Australia who required remediation of PCBs using the company's patented gas-phase reduction process, the only current solution for high strength PCB treatment in the country. The contracts required that ECO LOGIC complete the work by June 30, 1998. The job is valued slightly in excess of \$1,500,000.

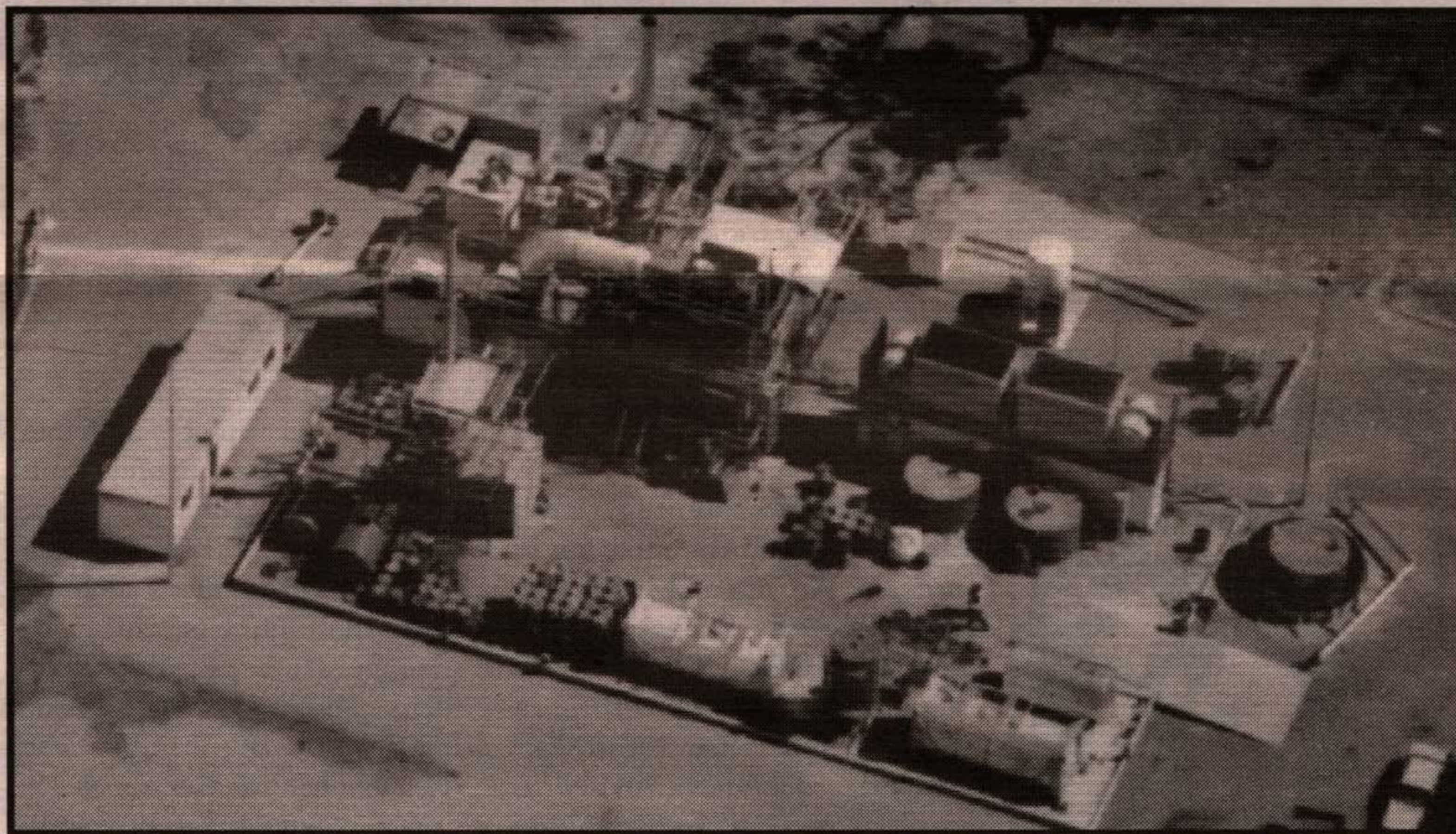
ECO LOGIC has operated a commercial scale plant for PCB and other hazardous

waste destruction in Kwinana, Western Australia for over two years, servicing the needs of ten or more customers who share in utilization of the plant's capacity. They anticipate that, with the addition of the recently signed work to complement existing backlog, the plant will be operating at near capacity through the end of the second quarter.

Fred Arnold, ECO LOGIC's Chief Executive Officer reported that, "While new contracts for our services are always welcome news, the fact that we feel confident in accepting large commitments with a relatively short delivery schedule is even more important. We have devoted substantial resources over the last six months to improving efficiency, predictability, and throughput in Australia as we continue to strive to pass the litmus test of commerciality: sustained operations and profitable levels. Operational results from the plant continue to underscore the conclusion that this investment was prudent, and when matched by strong reflections of market demand suggest that the future for our Australian business is sound."

Other progress for ECO LOGIC throughout 1998 includes designing a pilot plant for partners in Japan, Tokyo Boeki and Nippon Sharyo. They have trained Japanese engineers in its operation, thereby satisfying an essential element of ECO LOGIC strategy: to transfer technology outside their own organization. The company has met commitments to the Lockheed Martin team and their joint customer, the US Army's ACWA program office, and anticipate positive news for procurement in late April. ECO LOGIC has also defined broader applications for the proven capabilities of their process for chemical weapons demilitarization support, and have established partnerships to allow this to occur. Finally, they have taken steps to consolidate business potential in Southern Ontario with complementary technologies to address projects that go beyond the company's current capabilities.

From such dedicated beginnings, the vision has grown to world-wide capabilities. For further information, the public is invited to locate their website at www.eco-logic-intl.com



OVERHEAD SHOT OF ECO LOGICS FACILITY IN KWINANA, WESTERN AUSTRALIA.

The first ELI destructor has been destroying high strength PCB liquids, transformer fluids and liquid high strength DDT pesticide mixtures as well as processing contaminated electrical equipment for government and industrial customers since May 1995. In August 1996, the expansion of the former 2-3 tonne capacity SBV to a 6-10 tonne capacity was completed.

HALTON HILLS COUNCIL NEWS

by Kevin Kuiack

1993 Tax News - budget deliberations have just wrapped up and need to come to Council to be ratified, if passed by the end of the month tax will go up approximately \$133.00 on an average house appraised at \$185,000, or approximately a 6% increase on your tax.

Our town, itself, increased the taxes by approximately 0.7%, while the downloading costs by the provincial government totals approx. 5.3%.

Included in the budget for the rural areas are \$106,000 for a knoll removal on the the 6th Line north of Hwy 7, engineering work to be done on an area of the 8th Line

from Lot 24 to Lot 25, on 5th Line north of Hwy 7 to 32 Sideroad, improvements to 4th Line north of 10th Sideroad.

As well, our staff will be busy working on the Halton Urban Structure Plan which will help in the planning of our 401 Corridor Development Areas.

The Rural councillors have met with a small group of Hornby residents, as well as from Norval. If you would like us to meet with your group to discuss more local issues, feel free to contact one of us to organize a meeting time.

Please call: Rick Bonnette, Regional Councillor-519-853-4203; Kathy Gastle, Ward 2 - 905-877-7059; Kevin Kuiack, Ward 2 - 905-877-8963



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