

Xerox Canada Inc.

Oakville, Ontario

“The Green Analysis helped us to provide a healthier work place and to significantly reduce waste streams from our plant. The program also focused our efforts to reduce resource consumption, increase production yields and improve process efficiency.”

Shane Morin
 Manager, Engineering
 Oakville Colour Toner Plant

THE COMPANY

Xerox Canada Inc. is an affiliate of The Document Company - Xerox, the well-known global company in the document processing market. Its Oakville Colour Toner Plant, with 70 employees, is the sole producer of colour toner for all Xerox colour photocopiers and printers in North America and Europe. Toner is the powder which forms the printed image on paper in the xerographic process.

The Oakville plant has received Xerox company awards for environmental achievements.

THE CHALLENGE

The plant manufactures toners from specially compounded plastic resins, pigments and other components. These elements are mixed, melted, extruded, formed into small pellets and then ground into a powder of specified particle size. The toner is packaged in plastic bottles in a clean, controlled process.

Quality control systems are employed to avoid contamination of the product. The toner is conveyed through the various operations by compressed air and processed under vacuum exhaust conditions. Any toner which escapes is trapped in a dust collector.

In 1994, the plant carried out a company plan to conserve energy, with excellent results. Achieving further reductions was a major challenge. In 1995, the plant and the Ministry of Environment and Energy



The Oakville Colour Toner Plant manufactures toner for all Xerox colour copiers and printers in North America and Europe.

hired Bruce Forrest and Associates Ltd., of Brampton, Ontario, to conduct an environmental and energy analysis.

OPPORTUNITIES

Although the Oakville plant had just received an award for major reductions in energy consumption and discharges to the environment, Xerox wanted additional savings. The analysis focused on improving process efficiency and further reducing energy consumption.

RECOMMENDATIONS

The Green Analysis made 17 recommendations to reduce resource consumption and discharges to the environment. The five most important recommendations were to:

- * install cyclone overflow detection instruments to warn of any significant loss of toner to the dust collector;
- * replace two air ductors with higher efficiency models;

POTENTIAL SAVINGS

Potential annual savings from the recommended improvements were as follows:

	<i>Potential annual savings</i>	<i>Potential savings as per cent of total plant use or production</i>
Toner powder	4,698 kg	2
Electrical energy (at time of use rates)	715,000 kWh	9
Natural gas	142,000 m ³	41
Water and sewer	1,608 m ³	11

These improvements would require capital spending of about \$82,400.

- * reduce the set point for air compressors;
- * install ceiling fans in the warehouse area;
- * use outside air to ventilate and cool the electrical room, instead of using an air conditioner.

The analysis also identified a significant opportunity for business development. The amount of toner going to the dust collection system could be greatly reduced by using a system of modern instruments and controls and cyclones to recover powder.

Such a system could be marketed to other plants which handle a valuable powdered product.

PARTNERSHIP IN POLLUTION PREVENTION AND RESOURCE CONSERVATION

Industrial companies doing business in Ontario may seek ministry/industry services that will help them to:

- * use energy and water more efficiently;
- * reduce, reuse and recycle solid waste; and
- * reduce or eliminate liquid effluents and gaseous emissions.

Equipment and services supply companies can benefit from the information provided on technologies identified for business development.



The Green Analysis identified methods to reduce the carry-over of toner to the dust collection system.

FOR MORE INFORMATION, PLEASE CONTACT:

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MINISTRY OF ENVIRONMENT AND ENERGY SERVICES

For information on Ministry of Environment and Energy assistance to industry, please contact the Industry Conservation Branch at (416) 327-1492, Fax (416) 327-1261.

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This project profile was prepared and published as a public service by the Ontario Ministry of Environment and Energy. Its purpose is to transfer information to Ontario companies about findings and recommendations of a resource conservation and environmental analysis conducted by a consulting engineering firm at an industrial plant in Ontario.

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