



***DETERMINED***  
to make a difference

Catalyst Paper 2005 Accountability Report



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## DETERMINED to improve

*2005 saw progress and disappointment: Better safety and environmental performance, but a continued struggle with the harsh economic effects of the rising Canadian dollar.*



*Paper Recycling Division employee Deb Menuzio works with bales of de-inked pulp*



*In the past five years, Catalyst Paper has managed its business prudently while working with stakeholders, continually improving performance and making the changes necessary to excel.*

**Our vision**

*Catalyst will be the market-leading printing papers company – regarded by customers, investors, employees and community neighbours for our performance, actions and deeds.*

**Our core values**

**Results**

Setting aggressive goals, doing the right things, making things happen, measuring, reporting, getting things done, celebrating success.

**Social responsibility**

Making a difference, testing decisions against social/community impact, adherence to the safety and well-being of ourselves and others.

**Openness**

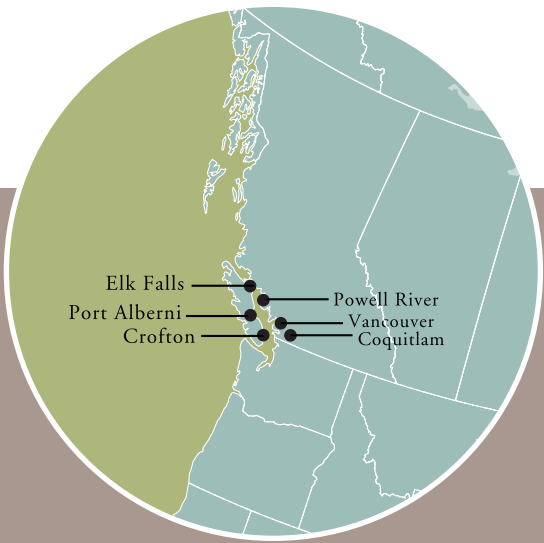
Being forthright, proactive, encouraging, open to other views, willing to see things differently.

**Integrity**

Being lawful and trustworthy, meeting our commitments, maintaining confidentiality, protecting the dignity of others.

**Cooperation  
(Collaboration)**

Being mutually supportive, committing to common direction, forming shared solutions.



01

December – Elk Prime sawdust-based pulp achieves eco-logo certification under Environment Canada's Environmental Choice Program.



02

September – Company concludes a new five-year labour agreement 10 months ahead of schedule – hailed as a “historic breakthrough.”

December – Company partners with World Wildlife Fund Canada to support global forest conservation and responsible paper production.



03

December – Company acquires Newstech Recycling – the largest de-inking facility in Western Canada – to add paper recycling capability.



04

Mid-year – Company establishes community advisory forums for Crofton and Elk Falls, joining those in place in Port Alberni and Powell River.

August – Company signs a co-operation protocol with the Sliammon First Nation.

December – With PricewaterhouseCoopers and customer Office Depot, the company introduces an independent chain of custody system to track certified wood fibre supply.



05

September – Company signs WWF Climate Savers Agreement – one of only nine companies worldwide to do so.

September – 51 MW of biomass electricity produced at Powell River and Port Alberni mills receives eco-logo certification.

November – Paper Recycling Division achieves certification to ISO 14001 environmental management system standard.

December – Business Week Magazine names Catalyst as one of the decade's top 10 global leaders in reducing greenhouse gases.



**Supporting commitments**

**Safety**

We believe that all injuries can be prevented.

**Focus on results**

We will foster a culture that is dedicated to getting things done; determined, and focused on reaching objectives.

**Performance**

We will select the best and expect the best out of our people, motivate them with high standards and challenge, expect them to do what they say they will do, and encourage and reward effectively.

**Operational excellence**

We will make timely decisions, focus on continuous improvement and efficiency and do things right.

**Union partnership**

We will develop a mutually supportive partnership for labour-management relations.

**Teamwork**

We will engage the collective strengths of our teams, valuing the diversity of talents and perspectives, and being respectful and supportive.

**Customer focus**

We will actively understand and meet current and emerging customer trends and needs, staying one step ahead in the market.

**Community wellbeing**

We will be a valued member of the community and convey our sense of social responsibility in our community investments and actions.

**Environmental stewardship**

We will take the lead in environmental sustainability.

For more information about Catalyst's economic, social and environmental performance, refer to the company's annual report or website, [www.catalystpaper.com](http://www.catalystpaper.com).

For Catalyst Paper, sustainability is about the way we do business all the time – being honest and forthright, treating people with dignity and respect and being a responsible neighbour in our operating communities.

We are **DETERMINED** to make a difference.



Catalyst Paper Corporation is a leading producer of mechanical printing papers in North America. The company also produces de-inked and market kraft pulp. With five mills employing 3,800 people at sites within a 160-kilometre radius on the south coast of British Columbia, Catalyst has a combined annual capacity of 2.5 million tonnes of product. Catalyst Paper Corporation common shares trade on the Toronto Stock Exchange under the symbol CTL. The company is headquartered in Vancouver, B.C.



**About this report**  
Unless otherwise stated, the information contained in this report covers the period Jan. 1, 2005 to Dec. 31, 2005, and pertains to Catalyst Paper’s operations in British Columbia, Canada and sales worldwide. The content and format of this report reflects the company’s history of performance improvement, which extends to the candour and content of our accountability reporting. As global standards for social reporting are still being developed, this report was prepared using a number of guiding influences, including the Global Reporting Initiative, other emerging reporting standards and stakeholder feedback.



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Cover  
top row (left to right): *Graham Kissack, Crofton Division; Stuart McKee, Patricia Winchell, Crofton Division*  
second row: *Vanessa Benwell, Crofton Division*  
third row: *Chris Leach, Powell River Division*  
bottom row (left to right): *Doug Tuck, Larry Cross, Port Alberni Division; Rod Bryson, Powell River Division; Steven Gallagher, Sliammon First Nation*

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## OUR PROGRESS

<i>Social</i>	<i>03</i>	<i>04</i>	<i>05</i>
Medical incident rate <sup>1</sup>	3.28	3.43	3.06
Lost-time injury frequency <sup>2</sup>	1.31	1.15	1.15
Employee population	3,836	3,806	3,781
Payroll and benefits (\$ million)	303	313	325
Charitable donations (\$ thousand)	257	313	345

<i>Economic (\$ million)</i>	<i>03</i>	<i>04</i>	<i>05</i>
Total taxes paid	60.3	55.6	55.5
Research and development spending	2.50	2.55	2.59
Total sales	1,820.5	1,878.2	1,823.9
Net earnings (loss)	(84.5)	(28.6)	(25.6)

<i>Environmental</i>	<i>03</i>	<i>04</i>	<i>05</i>
Greenhouse gas emissions <sup>3</sup>	572,329	458,811	397,991
Total reduced sulphur gas emissions <sup>4</sup>	158	152	142
Particulate emissions <sup>4,5</sup>	1,104	1,144	893
Biochemical oxygen demand <sup>4</sup>	2,967	2,811	3,038
Total suspended solids <sup>4</sup>	3,720	4,448	4,245
Water use <sup>6</sup>	205,780,751	197,664,538	188,938,304
Fuel energy use <sup>7</sup>	48,665,471	45,585,739	45,069,004
Electricity use <sup>8</sup>	4,891,728	5,150,990	5,445,368
Solid waste disposal <sup>6</sup>	161,391	188,835	188,833

A complete glossary of terms and definitions is found on page 52.

<sup>1</sup> Number of medical incidents per 200,000 hours worked

<sup>2</sup> Number of lost-time injuries per 200,000 hours worked

<sup>3</sup> Tonnes CO<sub>2</sub>e per year

<sup>4</sup> Tonnes per year

<sup>5</sup> Based on actual test results; may differ from NPRI data due to inclusion of other sources and emissions factors

<sup>6</sup> Cubic metres per year

<sup>7</sup> Gigajoules – includes fossil fuels and biomass

<sup>8</sup> Megawatt-hours – purchased and self-generated

## PRESIDENT'S MESSAGE

*There is no doubt business is being held to a higher social standard. Our commitment to accountability means we stand behind all of our results – the areas we are proud of and those where we have room to improve.*

Courtesy Vancouver Sun



**Russell J. Horner**  
*President and Chief Executive Officer, reads to Mackenzie and Ailis, daughters of Catalyst employee Paul Einarson, as part of the company's participation in the Raise-a-Reader campaign for children's literacy.*

In 2003, when we published our first accountability report, doing so was almost a novelty for most companies. Some saw it as an image-building public relations manoeuvre at best

and at worst, a risky effort at candour that would dissatisfy both critics and friends.

Today, as we publish our third accountability report, sustainability is entering the mainstream. Yet while the number of companies issuing sustainability reports in Canada has more than tripled since 2001, we are still among a minority of TSX-traded companies that take this voluntary step in disclosure. We do so because we believe it is the right thing to do.

### ***Our approach to sustainability***

Sustainability – meeting our current needs without compromising the ability of future generations to meet their own needs – is one of our key commitments. In practice, it means taking a long-term view to find the right balance between what's best for

us as a company and what's best for society and the planet. It's a pursuit that produces more questions than it does answers. Progress comes in small steps, with no "silver bullets." Yet every day we strive to make a difference, to leave this world a little better than we found it.

We don't always get it right, but we are always accountable for our decisions, actions and results. We see our efforts toward sustainability as natural expressions of who we are and what we do – the bedrock of an enduring, high-performance business. They are not add-ons, afterthoughts or philanthropy. Nor are they a "corporate social responsibility program."

We use precious natural resources to make valued paper and pulp products; it's natural for us to be good stewards of those resources and to

**Brian Baarda**  
*Vice-President, Powell River Division*



**Norm Facey**  
*Vice-President, Elk Falls Division*



**Tom Fawcett**  
*General Manager, Paper Recycling Division*





encourage others to also manage them responsibly. We rely on people to make, ship and sell those products; it's natural to be concerned for our workers' safety, both on and off the job. We live, work and buy goods and services in communities; it's natural to establish long-term, productive relationships with residents, First Nations and governments.

And shareholders? We believe they, too, benefit by our efforts to build stronger relationships and make sustainability central to our business strategy. Following this path, we have delivered nearly \$300 million in performance improvements over the past three years. During the same period, we have softened our environmental footprint by reducing emissions, conserving fibre, electricity, water and chemicals and building constructive relationships with key stakeholders.

### *Progress in 2005*

In 2005, we deepened our commitment to continuous environmental improvement by signing a Climate Savers agreement with the World Wildlife Fund, pledging to achieve a sustained 70 per cent reduction in greenhouse gas emissions over 1990

levels by 2010. We actually exceeded that goal in 2005 – the challenge will be to maintain and improve on it as we move forward.

Employee safety is also a bright spot. This year was the safest in our company's history, with our Powell River mill named the safest in Canada for its category and our Paper Recycling Division finishing a close second in its category. We believe our emphasis on safety means someone is alive today who might otherwise have died on the job. I take a lot of satisfaction in that, but until no one gets hurt, there is still room for improvement.

### *Areas for improvement*

There are other areas where we can improve our performance as well. Diversity, for instance, is still not a strong point for our company or our industry. We are making progress, however, and in 2005 we welcomed one woman to our board of directors and two more to our executive team. They have earned their appointments on merit, bringing strong business and professional credentials to their roles.

We can also improve our relationships with the communities in which we operate. Our advisory

forums have opened the lines of communication, but some issues remain contentious. Some community members, for instance, are critical of our campaign to reduce property taxes. Nonetheless, it's a matter of sustainability – for us and for the communities that remain overly reliant on a single taxpayer.

In these and many other areas, there is no doubt business is being held to a higher social standard than ever before. For us, that standard runs right from the forest floor to the customer's door. Our products are judged as much by our integrity in making them as they are by their technical characteristics.

We wouldn't have it any other way. Our commitment to accountability means we stand behind all of our results – the areas we are proud of and those where we have room to improve. Others will judge us according to their own criteria, some concluding that we are doing a good job, others that we are lacking. We leave it to you to draw your own conclusions.



*Russell J. Horner  
President and Chief Executive Officer*

*Don McKendrick  
Vice-President, Crofton Division*

*Mike Putzke  
Vice-President, Port Alberni Division*



**DETERMINED**  
to lead

## BUSINESS FUNDAMENTALS

*Every successful enterprise has a strong foundation – Catalyst's is built upon good governance, solid guiding principles and a commitment to building enduring relationships.*

### Corporate governance

Good corporate governance flows naturally from living the company's values of integrity, openness and social responsibility. It assures shareholders and the public that the company is run properly, ethically and honourably and is essential in building and maintaining trust. Good governance not only helps the company achieve its goals, it helps it achieve them in the right way.

Responsibility for Catalyst Paper's governance is held by its board of directors, which operates under a publicly disclosed mandate with specific terms of reference. The board is committed to continually reviewing and improving its governance procedures to keep pace with changes in regulated and voluntary practices.

Standards of conduct are outlined in Catalyst's Code of Corporate Ethics and Behaviour. The code is designed to ensure all affairs are conducted fairly, honestly and in strict compliance with legal obligations. Areas the code covers include:

- recording transactions
- bribery
- giving and receiving gifts
- political contributions
- conflict of interest
- competition laws
- disclosure to shareholders and regulators

Last updated in January 2006, the code applies to all directors, officers and employees. Officers and managers must review and sign their acceptance of the code annually.

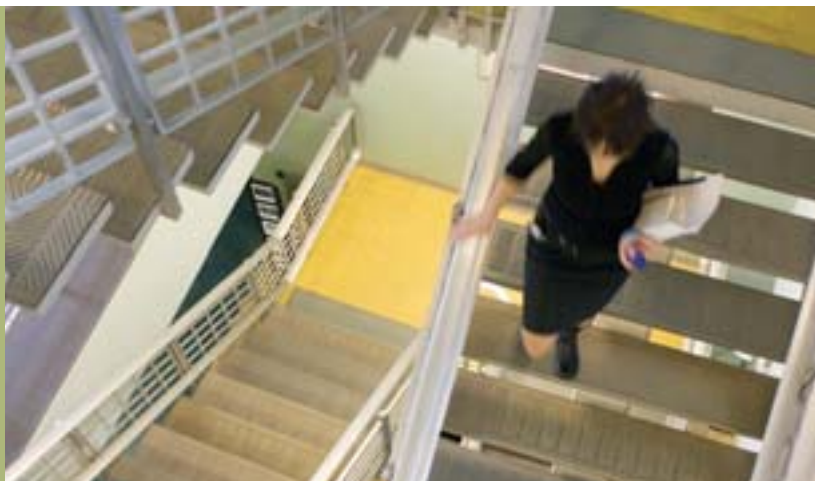
The company has also established a special telephone number employees may use to confidentially and anonymously report questionable accounting matters. These messages are accessible only by members of the board's audit committee. No action is taken against employees who use this procedure.

Information on governance and Catalyst's board of directors is available through the company's annual report, management proxy circular (at [www.sedar.com](http://www.sedar.com)) and website.

### Working with stakeholders

Catalyst Paper broadly defines its stakeholders as those whose actions and interests intersect with the company's. This includes customers, employees, investors, suppliers, communities, environmental groups and others.

**DETERMINED**  
to face challenges







The company believes the key to building respectful, mutually rewarding relationships is communication. This begins with listening carefully to other points of view and incorporating stakeholder input in day-to-day business and long-range plans.

#### **Policies and management systems**

Catalyst's work to be a responsible corporate citizen is a natural extension of its values. Many aspects of this work have been formalized in policies.

Among the policies that apply to the company's sustainability effort are:

- Code of Corporate Ethics and Behaviour
- Health and Safety Policy
- Employee Relations Policy

- Environment Policy
- Statement of Principles for Fibre Sourcing

All policies are reviewed and updated regularly. The most recent review occurred when the company changed its name in October 2005.

More information about Catalyst's policies is available on pages 43 to 44.

#### **Working with suppliers**

Catalyst relies on some 4,000 suppliers and spends about \$1.2 billion annually on wood fibre, electricity, oil and natural gas, chemicals, machinery, transportation and other business necessities. Most suppliers are based in Canada and the United States, while others are in Norway, Finland, Thailand and other countries.

The company has a formal supplier policy for energy purchases, principles to guide fibre purchases, a chain of custody system and a set of well-established processes and practices for dealing with all suppliers. All transactions are guided by the company's Code of Corporate Ethics and Behaviour.

Safety and care for the environment are key concerns. The company expects suppliers to meet its requirements and share its commitment in these areas. While cost, service and quality are important criteria in selecting suppliers, Catalyst also values long-term, stable relationships.



Matt Neild,  
Port Alberni Division

#### **Globe governance ranking**

*External rankings and benchmarks provide valuable information for comparing the company's performance to its peers'.*

*In 2005, the Globe and Mail newspaper's corporate governance review ranked Catalyst Paper 89th of the 209 companies on the Standard & Poor's/Toronto Stock Exchange composite index.*

*The annual review considers board composition, compensation, shareholder rights and disclosure using criteria based on mandatory regulatory requirements and recommendations by major institutional investors, academics and industry associations.*



***DETERMINED***  
to take the lead



*Ernest Wu,  
Vancouver*





*Top (left to right): Drew Kilback, Jim Fries,  
Brian Baarda, Powell River Division;  
Sandra Tremblay, Powell River city council;  
Denise Smith, Steven Gallagher,  
Sliammon First Nation*



*Peter Wier,  
Paper Recycling Division*

## SOCIAL PERFORMANCE

*Doing the right thing is just as important as doing things right. Our actions are guided by our core values.*

### Key 2005 achievements

- Total number of lost-time injuries reduced 5%
- Total number of medical incidents reduced 15%
- Increased diversity for board of directors and executive
- \$33,000 in scholarships to local students
- \$345,000 in charitable donations
- Ranked second by Michael Jantzi Research and the Globe and Mail Report on Business Magazine for social responsibility in the paper and forest products sector – up from fifth place in 2004

### Key 2006 targets

- Lost-time injuries reduced another 10%
- Medical incidents reduced another 10%
- Formalize community investment policy



## EMPLOYEES

*Catalyst Paper's 3,800 employees are strategic partners in our business; together we tackle challenges and find new ways to improve the company's performance.*

Catalyst strives to be a top employer by providing a safe, challenging and rewarding workplace, and standing for values employees can embrace as their own. In return, the company places strong emphasis on teamwork and involvement. Employees tackle many significant business challenges, including safety, product and service quality and bottom-line performance.

### Rewards

For salaried employees, compensation includes a competitive base salary, variable pay based on individual and corporate performance and flexible benefits. Compensation for unionized employees is specified in a collective agreement; the most recent covers 2003-2008 and provides competitive wage increases.

The company also offers career, succession and retirement planning resources, a computer purchase plan and fitness subsidies. Employees and dependents have access at no cost to an employee and family assistance plan for help with personal matters.

### Total employees and payroll

Year	Workforce	Total paid
2002	4,141	\$301 million
2003	3,836	\$303 million
2004	3,806	\$313 million
2005	3,781	\$325 million

### Growth

Catalyst encourages employees to pursue learning opportunities for personal and professional growth. For those interested in supervision or management, the company has developed internal leadership training. With approval, employees take

courses in local institutions and are reimbursed under the company's educational assistance policy.

### Working with unions

About three-quarters of Catalyst's employees belong to the Communications, Energy and Paperworkers and the Pulp, Paper and Woodworkers of Canada and the Canadian Office and Professional Employees unions.

Catalyst has developed productive partnerships with these unions through honest, frequent communication. Union leaders attend the company's regular business reviews and at quarterly President's Council meetings, company executives and senior mill managers meet with local and national union representatives to discuss relevant issues.



### Core safety values and beliefs

*In pursuit of world-class safety, the company is guided by a series of strongly promoted safety values and beliefs developed by employees from all areas and levels of the business:*

- All injuries can be prevented
- Safety has overriding priority
- Involvement in safety is essential
- Safety is a line responsibility
- Safety is built-in to every job
- Success in safety is contagious

## The path to world-class safety

In early 2002, recognizing that its safety record was not acceptable, Catalyst Paper set its sights on achieving world-class safety – the virtual elimination of injuries.

By the end of 2005, the company had made significant progress. The number of injuries that cause an employee to miss work had been reduced by nearly 60 per cent since 2001 and the number of incidents that require a doctor's help had been cut by 45 per cent. The company has suffered no fatalities in the last five years. While costs are not the focus, these safety improvements have led to significant reductions in the company's worker's compensation premiums.

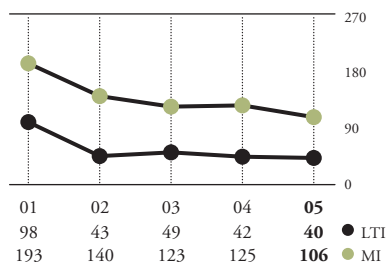
In 2005 several company locations set new safety records – some ranking among the best in the industry:

- In May 2005, Powell River Division employees achieved one million work hours with no lost-time injuries – something the mill had not done since the early 1960s. The mill went on to be recognized as the safest mill in Canada for its category by Pulp and Paper Canada.
- The Paper Recycling Division had a perfect safety record in 2005.
- Port Alberni Division achieved its best-ever result for medical incidents, recording 35 per cent fewer incidents than in 2004.
- Elk Falls reduced lost-time injuries by 38 per cent and medical incidents by 26 per cent from its 2004 levels.

Not all divisions improved. Crofton's lost-time injuries tripled and medical incidents increased by 27 per cent. The Vancouver head office, which includes a fibre-reload operation, saw two medical incidents and one lost-time injury – its first mishaps since the company's formation.

One injury is too many, and the company has not relaxed its focus on safety. Elements of the continued safety effort include regular safety talks with crews, joint union-management health and safety committees, return-to-work programs for injured workers and an emphasis on wellness.

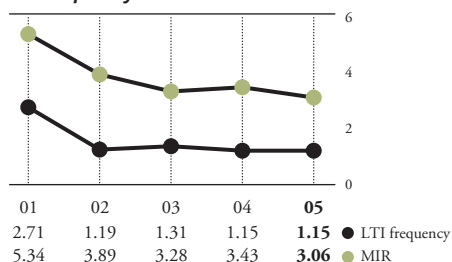
**Total LTIs and MIs**



MI – Total number of medical incidents (incidents requiring medical attention)

LTI – Total number of lost-time injuries (requiring employees to miss work)

**LTI frequency and MIR**



MIR – Medical incident rate, the number of medical incidents per 200,000 hours worked

LTI Frequency – Lost-time injury frequency, the number of lost-time injuries per 200,000 hours worked



Fraser McQuarrie (left) and Brian Carter, Crofton Division

## In my opinion...

"We're part of the senior management team, and will be as long as management understands and respects our values as well as their own. We've had input into customer service, and have been able to let customers see our members at work. They can see that the membership is interested in meeting their needs. Also, because our representatives are on day shift, we have day-to-day input into decisions, and we can get information on safety, quality, industry and business realities, and get it out to the membership daily. One reason why our partnership works is that we separate business and contractual issues."

– Fraser McQuarrie, CEP Local 1132 president



*Vanessa Benwell,  
Crofton Division*

## Working in a “man’s world”

In 2005, a community newspaper article featured “the women of Norske” (now Catalyst). The article highlighted five women from a mill of more than 1,000 employees and explored the challenge of gender diversity in Canada’s pulp and paper industry.

Despite corporate policies and well-meaning programs, the industry is still overwhelmingly run by men. According to BC Stats, men make up about 90 per cent of workers in the forest industry, which includes pulp and paper manufacturing.

Catalyst is no different. Most employees, particularly those in operating and maintenance positions, are men. Women are better represented in staff positions, but men still comprise the vast majority of workers.

As an equal opportunity employer, Catalyst wants women to know there are opportunities in the pulp and paper industry. To date, the company’s efforts to build awareness have been modest, revolving around mill tours and school outreach programs.

## Measuring progress with employees

Every year, Catalyst Paper’s hourly and salaried employees are asked to complete the Focus, Accountability, Involvement and Response (FAIR) Scorecard survey.

The survey provides feedback on employees’ understanding of the company, their personal and departmental goals, their responsibilities, how engaged they feel in the business and how they feel about the feedback, coaching and development they receive.

The company uses the results to measure its progress and to identify areas where employees could be better informed and involved.

Overall FAIR results	03	04	05
Focus	71	78	69
Accountability	57	64	60
Involvement	53	60	60
Response	63	67	61
<b>Overall</b>	<b>60</b>	<b>66</b>	<b>62</b>



*Don Merry,  
Crofton Division*



## **Workforce development and renewal**

Catalyst operates in small communities with an aging workforce. A coming wave of retirements makes workforce development and renewal tremendously important.

It's a problem facing many companies. In a 2004 Canada West Foundation survey, 62 industry associations said they were affected by labour shortages. By 2020, the Conference Board of Canada estimates an aging population and low birth rate will leave Canada short one million workers. Down the supply chain, a 2005 Global Insight study showed the US will be short 111,000 truck drivers by 2014.

Recognizing this, Catalyst has taken steps to ensure enough workers inside and outside the company have the necessary skills to competently assume positions as they become available.

Internally, Catalyst provides one of BC's largest workplace training programs, with 100 apprentices and an annual allowance of \$10 million for education and training. The company recently expanded this effort, introducing an operator technical training program to ensure best practices are shared.

In 2005, acting on recommendations from an industry advisory committee that includes Catalyst, the provincial government funded a millwright apprenticeship program at North

Island College's Campbell River campus. Catalyst helped develop the program.

The company also hires co-op students, has an engineer-in-training program and participates in job shadowing with high schools and Malaspina University-College. Malaspina requires two-week placements as part of its pulp and paper operations certificate program, which Catalyst helped develop. In its first year, more than half of the program's students were hired before graduation.

Other trade and skills development is done through the BC Institute of Technology, and many Catalyst employees attended the University of British Columbia, which houses a pulp and paper research centre.



*Glenn Hepner,  
Port Alberni Division*

## **Indefinite shutdown of Port Alberni's No. 3 paper machine**

*In February 2005, market conditions, the strong Canadian dollar and rising input costs prompted Catalyst Paper to indefinitely shut down Port Alberni Division's No. 3 paper machine.*

*It's a situation many Canadian mills faced in 2005 as the industry fought to bring production in line with demand. For Catalyst it was economically prudent, but not an easy workforce decision – projections showed up to 200 jobs would be affected.*

*That was before the company and its unions began working on a solution. Using a program already in place at the Powell River mill as a model, Port Alberni's union locals and management proposed a slightly shorter work week for all mill employees.*

*Despite a small pay cut, workers voted overwhelmingly in favour of the shorter work week. Coupled with early retirement packages and transfers to other mills, the move reduced layoffs to 75.*

## COMMUNITIES

*Catalyst Paper is committed to being a good neighbour – listening to local concerns, investing in the community, supporting local charities and offering employment.*



### ***Listening to our neighbours, protecting the environment***

*For many years, Catalyst's Elk Falls Division has worked with local streamkeepers to restore Casey Creek, a salmon-bearing stream near the mill.*

*The creek holds a special place in the hearts of employees and residents. When the division decided to harvest trees on private mill land near the creek, it made sense to discuss the plan with the area's other stakeholders.*



*Before harvesting began, the mill received approval from the local municipal council and held consultations with the Storie Creek Streamkeepers and Greenways Trust. Residents were also notified and discussions were held with mill employees.*

*The streamkeepers were especially concerned that the harvesting be done with consideration for salmon. Streamside areas were hand marked and selectively harvested to create minimal impact on the sensitive areas next to the creek. Critical wildlife and fish habitat was conserved and the ecology of the area – originally logged in the 1930s – was carefully protected.*



*The harvesting provided a number of benefits, including better access for streamkeepers, a 10-kilometre-long trail through the forest and along Casey Creek and employment for the local harvesting crew.*

*In total 50,000 cubic metres of mature alder, maple and second-growth fir and cedar were harvested. The area will be reforested in early 2006.*

## Working with our communities

Catalyst builds bridges to residents and keeps local concerns in mind through its community advisory forums (CAFs).

The forums meet regularly to discuss issues related to company operations, share community concerns and offer input the company considers carefully. Participants include homeowners, businesses, environmental groups, employees, First Nations, healthcare workers and local governments.

More information about the CAFs and their work is available at [www.catalystpaper.com/communities](http://www.catalystpaper.com/communities).

## Community investment

Paying \$31 million in property taxes and \$325 million in payroll annually, Catalyst plays an important role in supporting the social infrastructure of its operating communities. Its operations and local buying make thousands of additional jobs possible and ensure its communities remain vital.

Despite poor industry conditions, Catalyst also makes charitable donations, focusing on literacy, learning, youth development, environment and community safety and involvement.

## Charitable giving

Catalyst supports many charities, including the CanWest Raise-a-Reader campaign for children's literacy and Computers for Schools, which helps children access computer technology. Individual mills support local charities and from time to time donate surplus equipment.

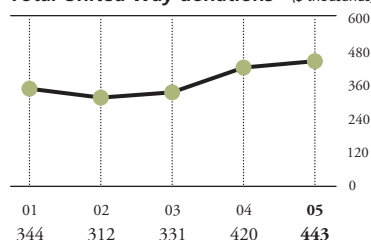
The company's largest contributions go to United Way, which funds hundreds of needs and ensures donations stay close to home. Corporate donations and employee campaigns at all divisions – except Port Alberni, which has no local United Way but supports other causes – have raised more than \$2 million for United Way in the past five years.

## Scholarships and education

Each year, the company offers \$33,000 in scholarships to local students going on to university or college. Since 1996, Catalyst's salespeople have raised US\$129,000 in scholarship funds for graphic design students at California Polytechnic University through an annual customer golf tournament in memory of late salesperson Doc Stapleton.

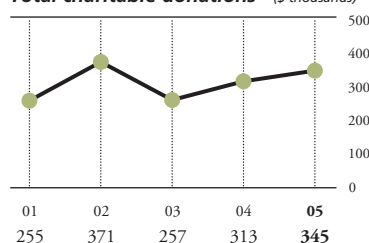
For schools, Catalyst has put \$90,000 toward a \$150,000 pledge to the Malaspina University-College library and offers three-year, \$60,000 grants for research and development at the University of British Columbia's Pulp and Paper Centre.

**Total United Way donations\*** (\$ thousands)



\*Corporate and employee contributions

**Total charitable donations\*** (\$ thousands)



\*Donations to Canadian and U.S. charities as reported for tax purposes.



## In my opinion...

*"When the (Elk Falls) mill was planning the logging project, the mill manager really listened to our concerns. I've been streamkeeping for 10 years, and this was the best cooperative logging project on a watershed that I've ever been involved with. The fisheries people say the same. And on the Casey Creek project, we've had nothing but super co-operation. The mill said they couldn't give us any money, but they'd give us all the assistance they could. They put in roads for us, and connected them to the nature walks. You couldn't get better co-operation."*

— Grant Eriksen, Storie Creek Streamkeepers



## FIRST NATIONS

*Creating enduring partnerships with First Nations helps address unique community needs and opens the door to mutual social, economic and environmental opportunities.*

### **Building closer relationships**

The work Catalyst has done with aboriginal communities near its mills – whether complex initiatives or simple steps such as supporting community events or making aboriginal students aware of summer employment opportunities – add to a stronger relationship based on a deep regard for each other's culture, history, values, interests, perspectives and aspirations.

In recent years, Catalyst and the Halalt First Nation have, together, tackled common local concerns, such as traffic flows on a road that passes through the Halalt reserve on its way to the Crofton mill.

The Halalt have been concerned for some time that the traffic moves too quickly, endangering pedestrians and cyclists. Catalyst helped fund a traffic study in 2004, then paid for a playground fence in 2005. The Halalt remained concerned, however, and in late 2005 erected no trespassing signs on the road.

Although it is one of the main roads to the mill, the company encouraged employees and suppliers to use alternative routes and made a supportive presentation to the provincial government, urging that a new or improved route be built to the same standards as roads reaching other Vancouver Island industrial sites.

Catalyst representatives were honoured in 2005 to take part in a sacred event recognizing Halalt ancestors buried near the Crofton mill. In the Halalt culture, being invited to take part in the ceremony is a symbolic extension of a trusting hand – a trust the company works hard to earn.

In Powell River, Catalyst continues to work with the local Tla'Amin First Nation (Sliammon). The parties remain committed to a 2004 co-operation protocol that recognizes Tla'Amin rights and interests and provides greater certainty for Catalyst's business goals.



*Chief Walter Paul (left) with Powell River Mayor Stewart Alsgard*

### **In my opinion...**

*"Tla'Amin and Catalyst have moved forward on the co-operation protocol to discuss pre- and post-treaty issues that are of common interest and to share the aspirations of both parties. Recognizing the existing mill site is situated on an original village site of Tla'Amin, both parties are committed to building a long-term, productive relationship based on the recognition of Tla'Amin rights and interests. This will provide a degree of certainty for Catalyst economic aspirations and allow us to move forward together to explore the viability and possible development of mutually beneficial opportunities for the citizens and members of our communities."*

**— Chief Walter Paul, Tla'Amin First Nation**

The agreement established a joint working group and forum dedicated to cross-cultural awareness building, opportunity development and constructive issues resolution. One of the first tasks of the working group is a project to honour Tees Kwat as the original village site of the Tla'Amin people.

### **Better business**

Catalyst supports aboriginal aspirations to develop business opportunities and diversify economically in several ways, including membership in the fledgling BC-based Industry Council for Aboriginal Business.

The most comprehensive initiative to date is a three-way partnership the company is negotiating with the Sliammon Development Corporation and the City of Powell River. The joint venture revolves around the company's sale of 327 hectares (800 acres) of surplus property for multi-use redevelopment over time.

The plans contemplate a marine business park, residential properties, selective logging and other uses.

In Port Alberni, Catalyst has provided financial support to Bladerunners, a program run by the United Native Nations Society that helps youths gain on-the-job construction training and apprenticeships. Aboriginals make up 95 per cent of the program's clients.

### **Environmental partners**

Catalyst shares a concern for the environment and frequently works with First Nations on issues that affect local water and air quality.

In Port Alberni, the company is co-operating with the Hupacasath and Tseshaht First Nations to protect the Somass River estuary.

In Crofton, Catalyst is working with the Cowichan Tribes and other stakeholders on a water management plan for the Cowichan River and Cowichan Lake. The system is an important source of water for First Nations, municipalities and the Crofton mill, which operates a weir to control lake and river water levels. Together, the parties are developing a plan for sustainable use of the river's water resources.

As part of a permit amendment that will allow it to burn small amounts of coal as a supplementary fuel, the Elk Falls mill will install air quality monitors at the Cape Mudge Indian Band (part of the We Wai Kai First Nation) settlement on Quadra Island. Nonetheless, the band has appealed the amendment, saying the mill's emissions harm its residents' health and the government has a duty to consult it before changing the permit.



*Larry Cross (left) and Doug Tuck,  
Port Alberni Division*

***DETERMINED***  
to listen



***DETERMINED***  
to set the pace



*Chris Leach,  
Powell River Division*







*Peter Wier,  
Paper Recycling Division*



*Norm Bourcier,  
Crofton Division*

## **ECONOMIC PERFORMANCE**

*Economic stability contributes as much to sustainability as environmental and social performance, allowing continued employment, supporting communities and offering customers long-term certainty of supply.*

### **Key 2005 achievements:**

- Performance improvements of \$84 million, 5% over target
- Customer complaints reduced by 30% since 2003
- Awards from key customers

### **Key 2006 targets:**

- Performance improvement target of \$70 million
- Continued focus on high-value specialty grades

## CUSTOMERS

*Catalyst's goal is to be the preferred supplier for its customers – providing quality products and service, building strong relationships and responding promptly when there are problems.*



### 2005 customer awards

- Verizon Information Services, Catalyst's largest directory paper customer, awarded the company its paper supplier of the year award. Suppliers are rated for quality, customer service, technical service, delivery and more.
- Telephone directory publisher SBC Directory Operations (now AT&T Yellow Pages) – Catalyst's third-largest customer – gave the company its gold award for performance in its Supplier Quality Alliance program.
- In its annual supplier evaluation, commercial printer Vertis named Catalyst the best of 23 suppliers for uncoated papers.
- Crofton Division was one of four mills from eight companies to receive a Gold Quality Award from Dow Jones & Company, owner of the Wall Street Journal newspaper.
- Thai Paper Company, Thailand's largest paper manufacturer, gave Catalyst an award of excellence for quality and performance in supplying pulp.



*Top: Jim Kennedy, Powell River Division*

*Bottom: Deb Menunzio, Paper Recycling Division*

### **Focused on customer satisfaction**

At its heart, being the preferred supplier is about having customers look to Catalyst first and always for reliable products, service and solutions. Customers must have full confidence their orders will be shipped exactly as specified and arrive at the promised time.

Earning customers' confidence also means work behind the scenes, such as living up to environmental commitments, maintaining equipment to high standards, skills training for employees and more. A stable company is a reliable company, and one customers will turn to.

To measure the effectiveness of these efforts, Catalyst takes part in an annual

industry survey conducted by Miami-based MG Taylor Corporation.

MGT conducts independent surveys of a number of industries and is considered an unbiased assessor of customer attitudes and perceptions.

The survey shows Catalyst where it ranks compared to its peers for product quality, delivery, pricing, technical service, sales, customer service, commitment, support for environmental requirements, product range and product availability. The company uses the results to focus its efforts and make necessary improvements.

Overall results in 2005 showed that Catalyst ranked above average with uncoated and directory paper customers and slightly below average with coated and newsprint customers.

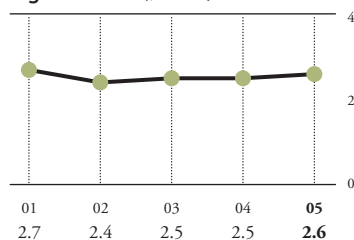
Working with the Forest Products Association of Canada, Catalyst conducts other research to determine customers' satisfaction with market acceptance issues. A 2005 Decima Research poll of 160 forest products buyers showed that 93 per cent considered products from Canada to be environmentally acceptable or superior – more positive than for any other country tested.

### **Research and development**

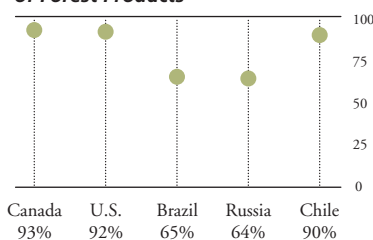
Customers' needs change constantly as procurement criteria are updated to reflect social, environmental and economic goals. Staying competitive means driving innovation in mill production, technology and information systems and through new product development.

Catalyst is concentrating on product quality and performance, finding ways to use natural resources more efficiently and developing products that anticipate customers' future requirements.

**Total payments to external research and development organizations (\$ millions)**



**Environmental Acceptance of Forest Products\***



\*Products considered superior or environmentally acceptable

### **In my opinion...**

*"Catalyst has been relentless in coming up with new ideas, working to solve problems and helping with press audits – all in the interest of achieving optimum runnability on the press."*

*"The best example I can give is when a very large customer of ours was going off soft-nip stock because of budget constraints. Catalyst worked to develop an alternate grade that would meet the customer's brightness requirement, but at the same time, keep costs down. It was a workable solution that allowed us to renew a contract with our customer."*

— Norrie Meth, senior vice-president, retail group, Transcontinental Inc.





*George Illes,  
Powell River Salmon Society*

Applying our technical expertise in lighter basis-weight paper production, we use fewer raw materials and less energy. These papers offer customer advantages, including lower postage, transportation, handling and storage costs, while meeting pressroom requirements for runnability, brightness and opacity.

The company has also developed alternative grades, such as Electraprime™, introduced in 2004 to provide a competitive substitute for supercalendered papers for printing retail inserts and flyers.

Besides internal product development, the company does joint research and development with major suppliers and is a member of the Pulp and Paper Research Institute of Canada.

### ***Helping customers choose the right paper***

As companies add stricter environmental criteria to their procurement policies, choosing the right paper can be complicated.

To make things easier, Metafore, a non-profit organization that promotes business practices and market-based solutions on forest conservation, protection and restoration, is developing a tool – with the input of customers and paper producers – outlining the full range of factors that need to be considered.

The Environmental Procurement Assessment Tool (EPAT) will consider major environmental impacts over the lifecycle of paper products and will be based on standardized information provided by paper suppliers. It will allow customers to assess products against a broad spectrum of sustainability factors.

Meanwhile, Catalyst offers products with lower basis weights, recycled content, a lighter environmental footprint and select paper products made of 100 per cent certified fibre, independently verified to the PricewaterhouseCoopers chain of custody standard.



*Stuart McKee,  
Patricia Winchell,  
Crofton Division*

### ***Making history, improving quality***

Crofton employee Patricia Winchell made history in 2005 as the first woman to win an award that has honoured pulp and paper makers in Canada since 1939.

Patricia won the Pulp and Paper Technical Association of Canada's C. Howard Smith Award, presented annually to recognize the best technical paper by a PAPTAC member under 33. She won the award for describing her use of data analysis software to find ways to reduce chemical use and improve paper quality – valuable information other Catalyst employees are applying today.

## ECONOMIC CONTRIBUTION

*For Catalyst Paper, the essence of sustainability lies in finding a balance between environmental, social and economic concerns. Beyond the bottom line, we also consider safety, community and environmental interests.*

### **Contributing to local and provincial economies**

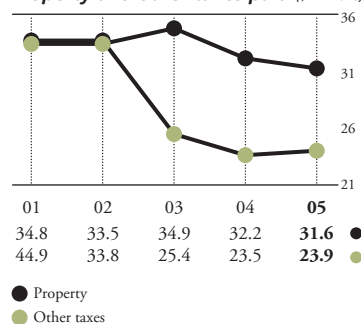
Catalyst is a major contributor to the economies of British Columbia and the communities in which it operates.

The company pays its employees well and even by the most conservative estimates, knows its payroll supports many other jobs directly and indirectly. Despite recording losses for several years, Catalyst pays its taxes on time and continues to invest millions of dollars to maintain its mills and equipment.

This economic contribution extends beyond the company's mill towns, to fibre, chemical, electricity and other suppliers:

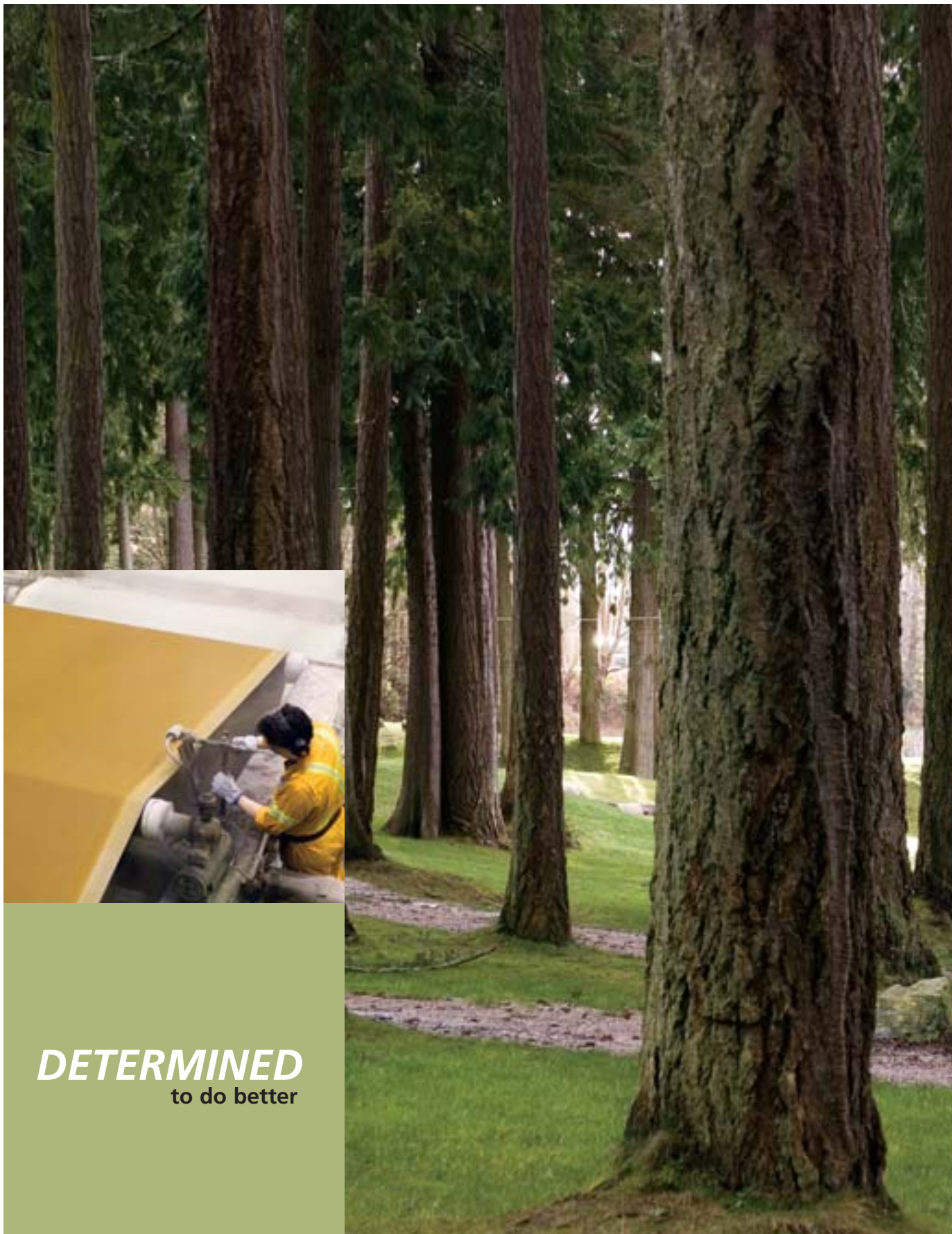
- One of the largest customers of the BC forest industry – consuming eight per cent of the total provincial harvest
- Annual fibre purchases (chips, sawdust, hog fuel and transportation) of \$300 million – 70 per cent from coastal forestry operators
- More than \$1 billion a year in purchases provides steady cash flow to support utilities, the solid wood sector, transportation and thousands of suppliers both large and small
- Energy purchases (electricity and fossil fuels) of more than \$200 million annually make Catalyst the largest single customer of the province's electric utility

**Property and other taxes paid (\$ millions)**



***DETERMINED***  
to take the lead





***DETERMINED***  
to do better





## ENVIRONMENTAL PERFORMANCE

*We know our operations leave an environmental footprint. Our aim is to lighten that footprint by conserving, sustaining and making efficient use of the resources we consume.*

### Key 2005 achievements

- Reduced year-over-year greenhouse gas emissions by 9%
- Reduced total year-over-year fuel energy use by 1.1%
- Installed equipment to reduce mill odour by 30% at Crofton Division
- Paper Recycling Division's environmental management system registered to ISO 14001 standard
- Joined WWF's Climate Savers program, pledging to achieve a sustained 70% reduction in greenhouse gas emissions over 1990 levels by 2010
- Received EcoLogo certification for 51 MW of biomass power generation at Port Alberni and Powell River mills

### Key 2006 targets:

- Reduce electricity consumption by 2%
- Reduce water use at mills by average of 2.6% at each mill

## COMMITTED TO ENVIRONMENTAL IMPROVEMENT

*Living in the province ranked No.1 in the BC Progress Board's environmental quality index, British Columbians have high expectations for environmental performance. Catalyst meets those expectations through continual environmental improvement and product innovation.*

### **Stronger through partnerships**

Catalyst's commitment to continual environmental improvement is assisted by its willingness to constructively engage supporters and critics alike on issues of shared concern.

One of Catalyst's key environmental partners is World Wildlife Fund Canada. The company has worked with WWF since 2002 to support global forest and marine conservation, species protection and responsible paper production.

The centerpiece of this partnership is a value-chain project that is helping to define the elements of environmentally preferred paper products – from responsible forest management and greenhouse gas reductions to cleaner air and water, improved use of resources and transparency in reporting.

In 2005, as part of a pilot project at the Port Alberni mill, local stakeholders provided input on their priorities for increasing resource efficiency and promoting clean production. The Port Alberni pilot project is already providing valuable information to the Elk Falls, Powell River and Crofton mills.

The company is also part of the Coast Forest Conservation Initiative, which brings environmental groups and the forest industry together to resolve forest management issues in the sensitive ecosystems of British Columbia's central and north coast.

### **Environmental management systems (ISO 14001)**

With the Paper Recycling Division's successful audit in 2005, all Catalyst mills' environmental management

systems (EMS) are registered to the ISO 14001 standard.

These systems include a guiding environmental policy, annual facility objectives and targets and a library of legal and other requirements, which help the company set priorities for issues and actions.

At the operational level, procedures and policies define management responsibility, employee training and awareness, communications, standard operating procedures, emergency preparedness and document control.

At least two audits are conducted annually and the company records and follows up on issues that arise. An independent auditor re-registers each site's EMS to the ISO 14001 standard annually.

### **In my opinion...**

*"Catalyst Paper is prompt in responding to identified non-conformity reports. As well, our team is impressed by the company's efforts to continuously improve the recycle fibre quality in an environmentally friendly manner. Catalyst has a comprehensive environmental training package, and the awareness of EMS in general among employees is good, for the most part. Their training in general is well established and well implemented, and their management review package is well prepared for discussion."*

— Alex Lee, ISO auditor, QMI



### Compliance with regulations

Complying with regulations, maintaining environmental management systems registered to the ISO 14001 standard, making strategic capital investments and increasing employee awareness help Catalyst consistently improve its environmental performance.

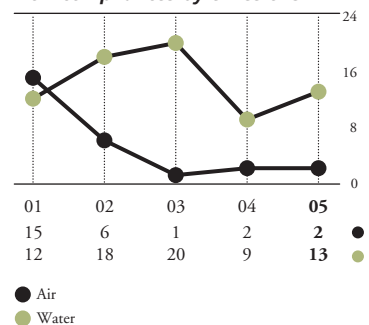
Independent audits against environmental legislation, engineering standards and best practices – the most recent in 2004 – have confirmed that the company is substantially compliant with its permits and legislation. The next independent audits are scheduled for late 2006.

Beyond compliance audits, other reviews ensure infrastructure is adequate for issues such as hazardous chemical releases, seismic integrity, site security and site contamination. Findings are documented and addressed under ISO 14001 to ensure they are managed appropriately.

The company investigates all permit non-compliances (contraventions of mill permits or legislation) and significant events (environmental events or near misses that could affect the mill's compliance or operations) to ensure they do not happen again.

Complete details of Catalyst's 2005 permit compliance record are available on page 46.

**Non-compliances by emissions**



### What is environmentally preferred paper?

According to Portland, Oregon-based Metafore, a non-profit organization that promotes business and market solutions to conserve, protect and restore forests, producing environmentally preferred paper requires:

- Efficient use and conservation of raw materials
- Minimization of waste
- Conservation of natural systems
- Clean production
- Community and human well-being
- Credible reporting and verification
- Economic viability



## CLIMATE CHANGE

*For a company focused on efficiency, combating climate change is natural – by making smart choices about fuel use we reduce greenhouse gas emissions, improve air quality and reduce operating costs.*



### **Catalyst joins Climate Savers**

*In September 2005, Catalyst Paper joined the World Wildlife Fund's Climate Savers program, the first company in Canada and one of only nine worldwide to meet the admission requirements.*

*In joining, Catalyst pledged to achieve a sustained 70 per cent reduction in greenhouse gas emissions over 1990 levels by 2010. The commitment was hailed by WWF as one of the most significant reductions committed to by a public company.*

*Climate Savers, jointly administered by the WWF and the Center for Energy and Climate Solutions, gives companies access to leading experts on technologies and innovative strategies for reducing greenhouse gas emissions.*

*Catalyst has already made significant progress in reducing CO<sub>2</sub> emissions, and plans to cut them even further through lower energy consumption, fuel switching from fossil fuels to biomass, better equipment efficiency and monthly tracking of CO<sub>2</sub> emissions.*

*The WWF estimates that by 2010, Climate Savers companies will collectively reduce carbon pollution by some nine million tons annually – about the same amount generated every year in North America by two million cars or 800,000 houses.*



## Leadership on climate-change issues

With numerous studies showing that the earth's average temperature is rising, climate change has taken increasing prominence in world affairs.

While others debate the issue, Catalyst Paper has taken a leadership role:

- In September 2005, Catalyst joined the World Wildlife Fund's Climate Savers program, pledging to achieve a sustained 70 per cent reduction in greenhouse gas emissions over 1990 levels by 2010. By the end of 2005, the company had reduced greenhouse gas emissions by 71 per cent compared to 1990 levels – equal to eliminating nearly one million tonnes of greenhouse gases annually.
- In November 2005, Catalyst Paper president and CEO Russell Horner joined other Canadian corporate leaders in asking the federal government to take stronger action to fight climate change. In a letter to the prime minister, the CEOs came out solidly in support of the Kyoto protocol and urged that Canada's climate-change plan extend beyond the protocol's 2008-2012 timeframe.
- Catalyst is a member of The Climate Group, an organization of global leaders who have acted early to reduce greenhouse gas emissions.

- As much as possible, the company has shifted from using fossil fuels to using less-greenhouse gas intense biomass fuels. Coupled with initiatives to reduce energy use and improve efficiency, this has reduced greenhouse gas emissions, fossil fuel use and operating costs.
- Catalyst was named one of the top 10 companies of the decade for reducing greenhouse gases in a list compiled by BusinessWeek Magazine, The Climate Group and a panel of judges. The company was ranked seventh for its efforts to reduce carbon dioxide emissions as well as its results relative to revenues and management's leadership on environmental issues.

## Biomass fuel – part of the solution

A fuel used since prehistoric times is providing a modern way to reduce greenhouse gas emissions.

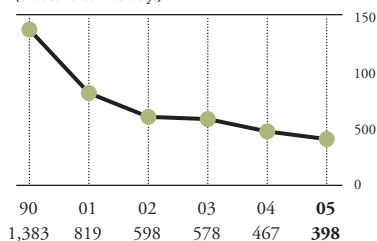
Biomass fuel – derived from wood residuals left after the pulping process ("black liquor") and sawmill leftovers like bark, wood shavings, sawdust – is clean, green and Canada's second-largest renewable energy source. Best of all, it is carbon-neutral, meaning that burning it releases the same amount of carbon dioxide it would release if left to decompose.

Catalyst uses biomass fuel in boilers equipped with emissions-control equipment to generate most of the steam and some of the electricity needed to manufacture its paper and pulp products. Doing so has helped the company:

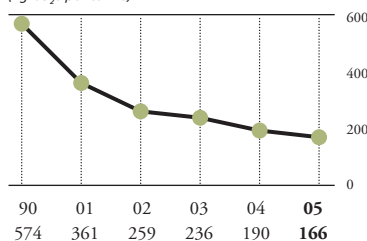
- Reduce absolute greenhouse gas emissions by the equivalent of removing 250,000 cars from the road
- Generate about 63 per cent of the energy the company uses – in 2005, burning biomass produced 65 megawatts of power on average
- Reduce fossil fuel use by 46 per cent since 2002 – the equivalent of 689,000 barrels of oil – avoiding millions in fossil fuel costs

In 2005, Catalyst's Port Alberni and Powell River mills received EcoLogo certification for their biomass power generation under Environment Canada's Environmental Choice program. The EcoLogo is granted only to those sites that use biomass and meet criteria for superior environmental performance.

**GHG emissions absolute**  
(thousand tonnes CO<sub>2</sub>e)



**GHG emissions intensity**  
(kg CO<sub>2</sub>e per tonne)



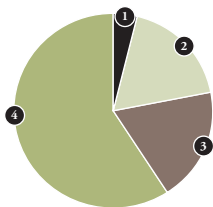
*In British Columbia, trees are harvested to build houses. Catalyst uses the leftovers – chips, sawdust, bark, planer shavings – and trees that are not good enough for the sawmill. We turn waste into useful products.*

### **Catalyst's fibre supply**

Today, many of Catalyst's customers work with procurement policies that include stringent environmental criteria. The company has responded by increasing the transparency of its fibre supply system, promoting traceability and certification through well-established fibre sourcing principles and an independently verified chain of custody system.

Most of the fibre Catalyst uses consists of residuals from BC sawmills – chips, shavings and sawdust. The company also uses poor quality softwood logs that are defective or otherwise unsuitable for lumber manufacture, and de-inked pulp that is recycled from old newspapers and magazines.

**Fibre types and percentages**



- 1 Recycled de-inked pulp 4%
- 2 Sawdust 18%
- 3 Pulp logs 19%
- 4 Sawmill wood chips 59%

Catalyst also uses fibre from trees killed by the mountain pine beetle epidemic, which is expected to kill up to 80 per cent of pine in north-central BC by the time it runs its course in 2013. The company does not use fibre from Canada's boreal forest.

### **Chain of custody standard extended to Elk Falls**

In 2005, Elk Falls Division was registered to the PricewaterhouseCoopers certified chain of custody standard.

The mill joined the Port Alberni and Powell River mills in offering independent verification that select paper products from their operations contain 100 per cent fibre certified by a major sustainable forest management certification system – the Canadian Standards Association, the Forest Stewardship Council or the Sustainable Forestry Initiative. The company does not make a claim for paper containing less than 100 per cent certified fibre.

The PwC standard, which is comparable to other leading certification systems in terms of mechanics and transparency, allows customers and consumers to be assured the paper they buy does not contain fibre from unknown, environmentally sensitive or socially conflicted sources and that rigorous controls, management and reporting systems are in place.

Customers have responded favourably, and Catalyst will register the Crofton mill to the standard in 2006.

### **Recycling and recycled content**

Catalyst's Paper Recycling Division – the largest facility of its kind in Western Canada – annually processes 163,000 tonnes of recovered paper, including 67 per cent of the old newspapers and magazines collected in BC and Alberta. Catalyst's mills use the de-inked pulp it produces to manufacture new paper products.





In 2005, 16 per cent of the company's finished products had some recycled content, with the average recycled content of all products at six per cent. All of the company's products are recyclable.

### ***Making paper recycling work***

Adding recycled content to paper is a wise use of resources. Making the most of it, however, means acknowledging some key facts:

- Paper that includes 100 per cent recycled content is not the only responsible solution, and is ultimately not sustainable. Recycled fibres can only be used five to seven times before they become too short and brittle to be made into new paper, so some virgin fibre will always be needed to continue the cycle.
- In 2002, Canadian mills used five million tonnes of recovered paper, almost half of it imported from the US. Catalyst prefers to source recyclable paper close to home, processing 67 per cent of the old newspapers and magazines collected in B.C. and Alberta.
- Recycling close to home reduces emissions associated with transportation and creates local markets for old newspapers and magazines. The cleanest, highest quality paper that Catalyst's Paper Recycling Division processes comes from its home, the Greater Vancouver region.
- All of the fibre Catalyst uses is waste – sawdust and wood chips that would otherwise be burned or buried and logs that can't be used for lumber. Most trees are worth far more as lumber than paper.
- Recycling reduces the load on landfills and allows the maximum value to be derived from wood fibre. It also uses less energy and water than using virgin fibre.

### ***Fibre sourcing principles support good forest management***

*Catalyst follows a set of fibre sourcing principles in buying wood fibre from its suppliers. These principles require all suppliers to regularly provide evidence that the forests they harvest are managed responsibly. Usually this means they have an environmental management system and are registered with a major forest management certification system – the Canadian Standards Association, the Forest Stewardship Council or the Sustainable Forestry Initiative.*

*In 2005, 72 per cent of the fibre Catalyst used came from suppliers with recognized sustainable forest management systems.*



*Recognizing the importance of air quality to the communities in which it operates, Catalyst continually upgrades its processes and equipment to achieve ever-better results.*

### **Monitoring air quality**

Local air quality at all Catalyst mills is measured by monitoring stations to ensure it remains within standards set by the provincial government to protect human health and the environment.

On average in 2005, ambient air quality met provincial standards 100 per cent of the time for respirable particulate and 98.8 per cent of the time for odourous sulphur compounds. (Air quality results for all of Catalyst's communities are available at <http://www.elp.gov.bc.ca:8000/pls/aqiis/air.summary>.)

Mill initiatives include:

- The Crofton mill updated its ambient monitoring stations with full online monitoring of fine particulate, sulphur dioxide, nitrogen dioxide, hydrogen sulphide and hydrogen chloride, as recommended by a 2004 independent health risk assessment. The additional monitoring shows concentrations to be well within human-health-based guideline levels. Compliance to the odour-threshold based ambient air quality objectives continues to improve at Crofton, and the mill is planning further odour-reduction projects.
- Crofton moved an ambient air station that had been located temporarily at Crofton Elementary School to its mill site in October as part of an odour assessment research project. On loan from the Pulp and Paper Research Institute of Canada (Paprican), the monitor showed that fine particulate levels at the school were well within Canada-wide standards.
- As part of its work with the local community advisory forum, the Elk Falls mill is installing an additional mobile ambient monitoring station to monitor additional compounds. The unit will test air quality at locations agreed upon by advisory committee participants.



### **Powell River achieves top air quality scores**

*Catalyst's improved mill emissions, along with favourable topography and weather, paid off last year as Powell River's air quality was recognized in the BC Lung Association's report "The State of Air in British Columbia: 2005."*

*Among all communities monitored, Powell River had the lowest ambient levels of fine particulate matter – airborne particles produced by motors, residential wood smoke and industrial combustion.*

*Powell River's mill has decreased particulate emissions by almost 80 per cent since 1998. It has also reduced odour and cut greenhouse gas emissions by almost 90 per cent over 1990 levels.*

- Powell River Division will buy a new ambient particulate monitor in 2006. The unit will be located at one of the existing air quality stations.

### Reducing odour

The odour produced by pulp and paper mills is a special concern, as studies have shown the human nose can detect sulphur in concentrations so low they would be equivalent to finding four teaspoons of liquid in an Olympic-sized swimming pool.

Recent odour-reduction work:

- The Crofton mill installed new equipment to capture and incinerate about 30 per cent of the site's total reduced sulphur emissions. The mill also continued

to do enhanced ambient air quality measurements to guide further emissions improvements. In 2006, the mill will investigate more equipment changes that could further reduce odour.

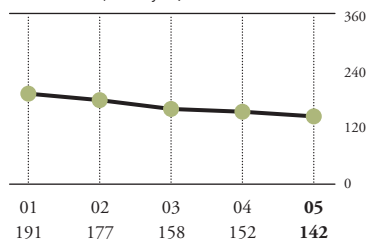
- Powell River continued to search for solutions to control odour from the mill's primary clarifier. When the use of caustic soda proved only somewhat effective and too costly, the mill began working with an odour control product called Enviroscrub. Though community complaints about odour have declined significantly, the mill is investigating the feasibility of modifying a smaller, surplus secondary clarifier to replace its oversized primary clarifier.

### Reducing particulate

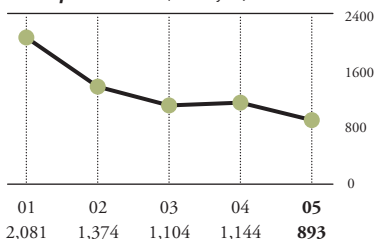
Particulate consists of small particles from mill stack emissions, motor vehicles, backyard burning, wood stoves and other industries.

- In Crofton, particulate complaints from the public have decreased by 75 per cent since 2002 due to improved hog fuel management, capital upgrades, improved operational controls and preventive maintenance.
- In 2005, the Paper Recycling Division shut its residual dryer down when it could not find an adequate solution to excessive dust discharge.

**Total TRS (tonnes/year)**



**Total particulate (tonnes/year)**



\* Based on actual test results; may differ from NPRI data due to inclusion of other sources and emissions



*Dan Orlando,  
Elk Falls Division*

**DETERMINED**  
to improve



## Permit amendments

From time to time, the provincial government changes the permits that regulate emissions from Catalyst's mills. Changes in 2005:

- The Crofton mill provided input for a Ministry of Environment update to the mill's air permit. In October, the ministry shared a draft of the amended permit with the local community advisory forum, along with a letter from the mill outlining its emissions improvements. The permit amendment deals with emissions improvements and is considered minor. The ministry will discuss the permit with the advisory forum in early 2006.
- Elk Falls received an amendment to its air emissions permit that will allow it to use low-sulphur coal as a supplementary fuel in its No. 5 wood waste power boiler. The amendment followed an extensive trial period and environmental studies that showed adding coal improved boiler efficiency and reduced many emissions. The local We Wai Kai First Nation has appealed the permit amendment, citing health concerns about mill emissions and the government's failure to adequately consult them. The mill will continue to use coal, as allowed by the permit, pending an environmental appeal board hearing.

## Cleaning up dioxin and furan emissions

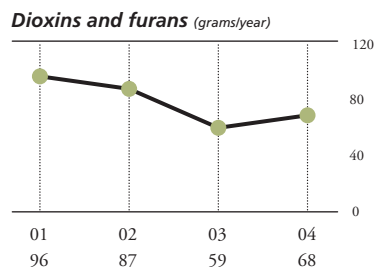
On British Columbia's coast, logs have traditionally been transported in floating ocean booms. It's an efficient method with one drawback – the ocean salt that saturates the logs.

When mills burn the wood waste byproducts of those logs to generate steam and electricity, chlorinated organic compounds known as dioxins and furans are released. Pollution-control equipment and proper combustion ensure the amounts emitted are small – all Catalyst mills comply with federal dioxin emissions standards that come into force in 2006 – but it would be better if none were formed in the first place.

One solution is to remove the salt, and Elk Falls Division has been working with Natural Resources Canada since 2003 to find an economical way to do so.

Particularly promising are trials in which the wood is washed before burning. With the salt rinsed away, dioxin emissions are significantly reduced. Other operational benefits include energy recovery and savings, reduced greenhouse gas and particulate emissions and reduced boiler corrosion.

Buoyed by the successful trials but constrained by capital, the mill is looking for an economical way to wash all its salty wood, eliminating the problem entirely.



\* 2005 emissions still being quantified at time of publication – will be released with company's NPRI data on June 1, 2006.

Elk Falls has also reduced dioxin emissions by burning low-sulphur coal as a supplementary fuel in its power boiler. The coal helps wood waste burn more efficiently, which also reduces dioxin and furan formation.

Other mills are also reducing dioxin emissions. Port Alberni Division is considering power boiler modifications in 2006 to allow reduced flue gas temperatures. The changes would reduce dioxin formation and improve the boiler's energy efficiency. In other locations, the company has switched to delivering logs by truck to some of the companies that chip pulp logs on its behalf, avoiding ocean storage and the problem of sea salt entirely.

## Ozone-depleting substances

Some Catalyst operations still operate air-conditioning and other equipment that uses hydrochlorofluorocarbon (HCFC)-containing chemicals. These ozone-depleting substances (ODS) are scheduled to be phased out in developed countries by 2020 in accordance with the Montreal Protocol.

These systems are serviced and maintained by certified personnel and contractors in accordance with federal and provincial regulations. The company maintains inventories of ODS-containing equipment on its sites and has established training records for maintenance and repair personnel. Wherever feasible, the company replaces HCFCs with safer chemicals, and all mills have procedures for reporting ODS releases that exceed regulatory limits.

### ***In my opinion...***

*"We have worked with Catalyst over the last three years on greenhouse gas emissions, FSC certification and toxics. It's fair to say that Catalyst's environmental reporting is excellent and is comparable to trendsetters in the European market, which have tended to set the benchmark for environmental reporting."*

*"The company has recently made a significant commitment to reduce greenhouse gas emissions and has been recognized by WWF as a 'Climate Saver.'"*

*"Mainly because of a lack of availability of FSC-certified fibre, Catalyst hasn't been able to produce FSC-certified paper yet. We hope that the new FSC labelling rules and the new FSC BC standards will allow progress in getting FSC-certified Catalyst products on the market."*

*"In the area of toxics, we've worked with the company at the Port Alberni mill to identify priority chemicals that are of concern and to develop strategies to phase out or reduce them."*

**— Dr. Chris Elliott, regional vice-president,  
World Wildlife Fund Canada, Pacific Region**



### ***Dirty dozen ranking***

Every year, Catalyst submits emissions data for an ever-broadening set of compounds to Environment Canada's National Pollutant Release Inventory (NPRI) program.

Because of the long NPRI verification process, the data is often out of date when it is released, and changes in reporting requirements make it difficult to compare results from year to year. Despite this, critics often use dated NPRI data to judge current performance.

In 2005, critics used 2003 NPRI data to rank two Catalyst mills and six other BC pulp and paper facilities among the province's top emitters of industrial compounds. The Crofton and Elk Falls mills placed 10th and 11th, respectively, on a "Dirty Dozen British Columbia Air Polluters" list assembled by Environmental Defence and the Canadian Environmental Law Association. The mills – among the five largest in Canada – placed 117th and 125th nationally.

While the list ranks air polluters, many emissions included are discharges to engineered landfills, not releases to air. In 2004, for example, the company's actual dioxin emissions to air were about two grams, but total discharges were 68 grams.

## WATER

*Using water wisely means reducing the amount our mills draw, improving the quality of water we return and protecting the quality of the water around our mills.*



### **Crofton mill takes a leading role in water resource planning**

*Catalyst's Crofton mill is playing a key role in developing a management plan for the Cowichan lake and river system – a vital resource for wildlife, residents, recreation and industry.*

*As well as using water from the river in its manufacturing processes and filtering water for the nearby town of Crofton, the mill operates a weir that controls lake and river levels under the direction of the Ministry of Environment.*



*In recent years, the river system has been affected by low winter snow packs and dry summers, threatening fish populations, recreational users, municipalities and the Crofton mill.*

*The threat is serious enough that the mill, local governments, First Nations, environmental groups, regulators and special interest groups are developing a strategic watershed plan for the river system.*

*The groups began by funding \$277,000 for a technical and public process that included a water issues report. The report said climate change is expected to make summer droughts longer and more common – making Catalyst's weir even more vital to store spring runoff in Cowichan Lake.*



*Catalyst will continue to work with the planning group in 2006 as it gathers information and works with the public to examine management alternatives for the river system.*



## Water use

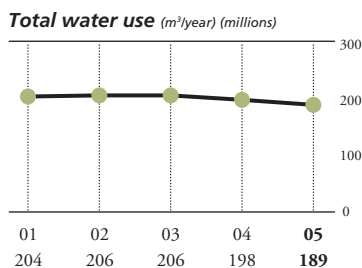
Catalyst's mills use up to 100 cubic metres of water per tonne of product, which is far in excess of standards for best-available technology. Most of that water flows out of the mill after use and treatment, but it's still far too much.

While Catalyst has steadily reduced water consumption in recent years – down six per cent in 2003 and another three per cent in 2004 – consumption increased two per cent in 2005 due to new processes and product quality challenges.

- Elk Falls and Powell River reduced water use in 2005 – Elk Falls by seven per cent per tonne of product, Powell River by two per cent per tonne.
- The Paper Recycling Division's total water consumption rose by seven per cent as it suspended two reduction projects while working to improve product quality.
- Crofton's water consumption rose 2.4 per cent per tonne of product as new equipment and processes were introduced.

- Port Alberni's total water consumption fell by 20 per cent when one paper machine was indefinitely curtailed. Consumption per tonne of product, however, rose two per cent.

Beyond conserving an important natural resource, using less water lowers pumping and heating costs and reduces the load placed on effluent treatment facilities. For 2006, each mill has established targets and identified projects that will reduce water consumption by 2.6 per cent on average.



## Water discharges

All Catalyst mills except the Paper Recycling Division, which uses the municipal sewer system, discharge treated waste water into local water bodies.

The quality of this waste water – mostly produced through pulp and paper manufacturing processes and storm water systems – is improved by primary and secondary effluent treatment systems. Primary treatment reduces solids through settling, while secondary treatment uses microorganisms to reduce the effluent's biochemical oxygen demand and toxicity.

The quality of discharged waste water is governed by provincial and federal permits. Details of 2005 performance are available on page 50.

## Local water quality

Catalyst takes a leading role in protecting and enhancing water quality in the lakes, rivers and ocean near its mills.

The Crofton mill is part of the multi-stakeholder Cowichan Basin Water Management Forum, which works to conserve and manage local water sources. Similarly, the Port Alberni mill is working with local stakeholders and government agencies to implement a plan to protect and enhance environmentally sensitive areas in the Somass River estuary.

### In my opinion...

*"With storage at a seasonal high due to a wet spring, a sequence of pulse flow releases from Catalyst's Lake Cowichan weir assisted chinook salmon that were holding in the lower Cowichan River to migrate upstream to spawn. Catalyst also maintained the river at an ideal flow for the counting fence that helped us extend assessment of chinook returns later into the fall. This continued co-operation is an excellent example of industry caring for the local salmon resource. The actions show how salmon and industry can both be sustained in the Cowichan Valley."*

— Wilf Luedke, Acting Area Director, South Coast Area,  
Department of Fisheries and Oceans



Other recent developments:

- The Powell River mill began assessing the condition of a concrete ship hulk – one of 10 in the harbour – that has been anchored near the mill as part of an ocean breakwater since the 1930s. The mill is assessing options for disposing the ship in 2006.
- Port Alberni Division replaced a culverted road crossing over the fish-bearing Dry Creek with a clear-span bridge. The project eliminated the risk of culvert failure and made it easier for fish to pass. In 2006, the mill will replace a retaining wall near the same creek to further protect fish.
- Paper Recycling Division will buy a sweeper in 2006 to prevent manufacturing materials and de-inked pulp crumbs on its dock and parking lot from running into the nearby Nelson Creek and Fraser River during rain.
- Crofton Division is helping fund a sediment assessment of water quality in the Cowichan River by the Department of Fisheries and Oceans.

### Co-planar PCBs

Catalyst stopped using polychlorinated biphenyls (PCBs) in the late 1980s due to concerns about long-term environmental and health effects.

Recently, however, effluent discharge tests at some Quebec paper mills identified co-planar PCBs as previously unrecognized compounds in mill waste streams. PCBs are considered persistent organic pollutants that can bio-accumulate and affect reproduction for aquatic life.

In 2005, Catalyst tested its mills' effluent and found low levels of co-planar PCBs in all waste discharges. The highest measured concentration was 25 parts per quadrillion – quite low, but still a concern. Catalyst is tracking the issue with the help of the Forest Products Association of Canada and hopes to eliminate the discharges once an appropriate solution is found.

### Working with fish in mind

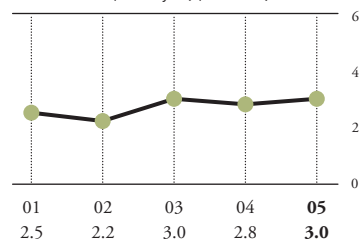
Catalyst plays an important role in protecting the health of salmon and other sensitive marine life in waterways near its mills.

The company operates a dam at Great Central Lake near Port Alberni to maximize salmon productivity in the Somass River. Without proper management of the dam, the watershed's salmon populations would decline.

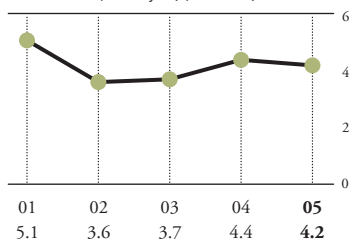
Catalyst also operates a weir at Cowichan Lake to control water levels in the Cowichan River. The mill ensured enough water was available to allow rearing juvenile salmon to survive during recent droughts, and took part in a project with the Department of Fisheries and Oceans to assess fish migration.

This work by the Port Alberni and Crofton divisions was recognized in November 2005, when the Pacific Salmon Foundation awarded Catalyst for managing water resources and considering salmon's critical water requirements.

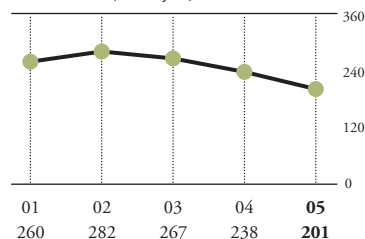
**Total BOD (tonnes/year) (thousands)**



**Total TSS (tonnes/year) (thousands)**



**Total AOX (tonnes/year)**



A complete glossary of terms and definitions is found on page 52.

The Powell River mill site is home to a salmon hatchery operated by the Powell River Salmon Society. In 2005, mill employees joined volunteers to release thousands of salmon fry into local waters.

At Elk Falls, the mill has worked with local streamkeepers on a multi-year project to restore Casey Creek. Industrial activities in the mid-20th century diverted and filled the creek with silt, making it uninhabitable for fish. After years of improvements, however, fish have begun to return.

### ***Tracking the effects of discharges on water quality***

To monitor the potential effects of waste water discharges into the marine environment, the company conducts studies that satisfy federal environmental effects monitoring (EEM) requirements.

EEM studies are done in iterative, three-year cycles to assess fish or shellfish health, local invertebrate communities, concentrations of contaminants in fish and shellfish tissues and the chronic toxicity of effluent. All Catalyst mills are working with regulators and local stakeholders to plan the next round of studies, due in 2007.

The company undertakes additional annual monitoring of chlorinated dioxin and furan levels in sediment and crabs near its Crofton and Elk Falls mills; similar monitoring at Port Alberni and Powell River was halted in the late 1990s because dioxin/furan levels in crabs and other shellfish near those mills were consistently within Health Canada guidelines. Acting on input from local stakeholders, however, Port Alberni will conduct dioxin/furan testing in 2006 to confirm levels are low and continuing to decline.

Results of the most recent EEM studies for each mill are available on the Catalyst website.



*Drew Kilback,  
Powell River Division*

### ***Eliminating malachite green***

*In 2005, tests showed that some wild salmon in BC contained small amounts of malachite green. Malachite green is a carcinogen that has the potential, much like PCBs, to bio-accumulate in fish and other aquatic species. It has been used by fish farms on BC's coast as a disinfectant and anti-fungal agent.*

*Catalyst uses small quantities of dyes containing malachite green in three of its mills. Tests conducted at the mills found no trace of malachite green in effluent.*

*Despite these findings, the company is working with suppliers to identify alternatives, and plans to phase out the use of dyes that contain malachite green by the end of 2006.*



*Catalyst has achieved both environmental benefits and cost savings by reducing total energy requirements and purchases, increasing use of biomass fuels and improving production efficiency.*

### Generated energy

As much as possible, Catalyst's mills produce energy and steam by burning biomass fuel – a renewable energy source derived from bark, wood shavings, sawdust and wood residuals left after the pulping process.

Catalyst also burns fossil fuels like natural gas and fuel oil. While it has cut fossil fuel use by 46 per cent since 2002 – the equivalent of 689,000 barrels of oil – Catalyst spends about \$54 million annually buying and transporting fossil fuels.

In 2005, the Port Alberni mill produced 90 per cent of its steam energy using biomass supplemented by small amounts of tire-derived fuel. Doing so, along with shutting down one paper machine, allowed the mill to operate without its natural-gas-fired No. 3 power boiler for seven months in 2005 and to continue into 2006.

Elk Falls introduced online energy management software that monitors and adjusts the type of fuel being used in its power boilers to produce steam.

The system reduces overall fuel costs by first using fast-responding fossil fuels to meet increased demand, then substituting lower-cost wood waste. It also allows the mill's turbo-generator to produce more electric power through better steam pressure control.

By generating its own energy, Catalyst reduces reliance on the power grid, extending the life of existing power facilities and reducing indirect greenhouse gas emissions.

### Purchased energy

Beyond the energy it generates on its own, Catalyst spends about \$150 million annually buying electricity from BC Hydro, the province's electrical utility. This makes Catalyst the utility's biggest customer.

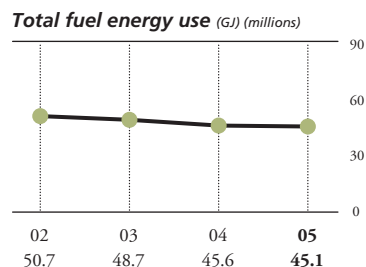
In recent years, Catalyst has reduced the electricity it buys by improving processes and upgrading equipment. Conservation measures implemented as part of BC Hydro's Power Smart program have saved the company more than \$2 million.

Catalyst will pursue further reductions in 2006 when BC Hydro introduces a new, two-tier rate system for large customers. Aiming to reduce overall energy use by two per cent, the company will focus initially on lighting, compressed air and pumping systems, fans and agitators.

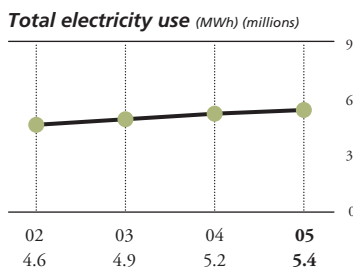
### Alternative supplementary fuels

Besides natural gas and oil, Catalyst uses alternative supplementary fuels like tire-derived fuel and coal to improve combustion of wood waste in power boilers, reduce reliance on fossil fuels and improve emissions.

- Port Alberni has used tire-derived fuel since 1999. Tests in 2004 confirmed that doing so reduced dioxin formation and emissions.
- In 2005, following a two-and-a-half-year trial period, the Elk Falls mill was given approval to burn coal as a supplementary fuel.
- Until recently, the Paper Recycling Division used methane extracted from a local landfill to operate a residual dryer. The mill is examining the feasibility of mixing this fuel with natural gas to operate its boilers, reducing the mill's annual use of natural gas by 18,000 GJ.
- In 2005, the Crofton mill withdrew its 2003 application for an alternative supplementary fuels trial.



Includes fossil fuels and biomass fuel.



Includes purchased and self-generated electricity.

# SOLID WASTE

*By making efficient use of materials that might otherwise be sent to landfills, Catalyst reduces disposal of solid wastes.*

## Solid waste disposal

Typical solid wastes produced during paper and pulp manufacturing include boiler wood ash, lime mud from the recausticizing process, sludge from effluent treatment systems and de-inking operations and small amounts of unusable wood refuse. All mills recycle solid wastes, including wood, metal, paper, fluorescent lights and oil.

Nearly all non-recyclable and non-combustible solid wastes are sent to landfills, most of which are on company property and have at least three years' capacity.

- Because it has a small landfill that is reaching capacity, the Powell River mill has for several years transported power boiler flyash to a Washington State landfill. Rising disposal and transportation costs and an opportunity to use the flyash in other products have prompted the mill to look at using its own landfill, which has a two-to three-year lifespan. The mill is

evaluating future options, which include building a new landfill on top of a site closed in 1995, recycling flyash into concrete for oil/gas wells or building a new landfill in another Powell River location.

- In 2005, Elk Falls applied to expand its landfill, which was originally commissioned in 1981 and has lasted more than 10 years beyond its expected expansion date due to recycling efforts and retiring old, inefficient wood waste boilers. The mill will begin initial engineering work on expansion plans in 2006.
- The Paper Recycling Division sent 29,000 tonnes of residuals (inert carbon ink and paper fibre) to customers instead of landfills in 2005. The facility also tried to further process residual sludge to extract pigments for use in papermaking, but tests did not produce a workable solution.

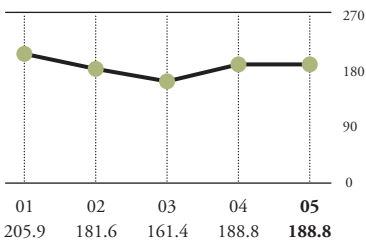
## Cleaning up contaminants

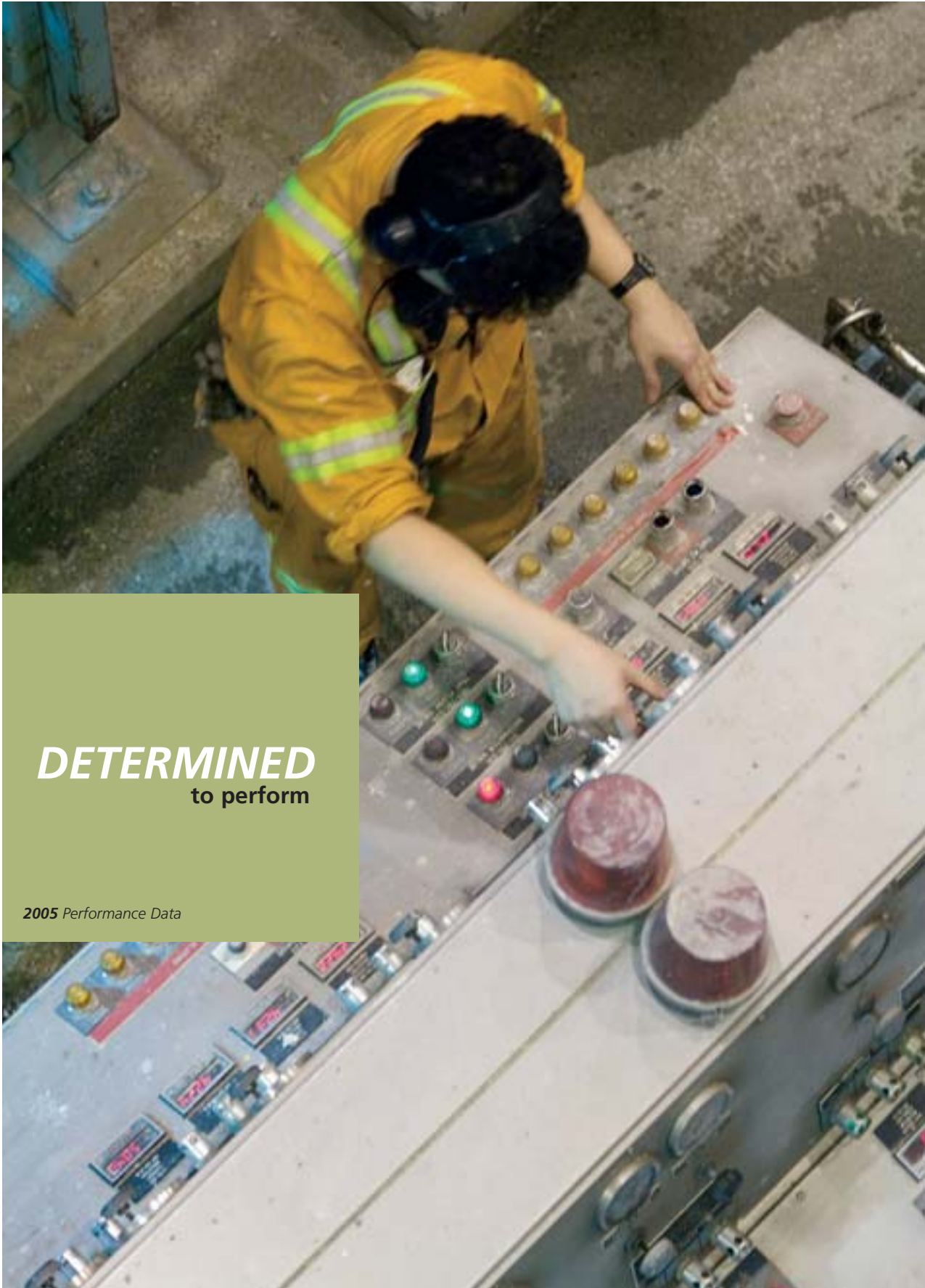
All contaminants identified on Catalyst properties are properly disposed using approved procedures and facilities.

- Port Alberni removed the last sections of an old mill water woodstave pipeline. Along with associated creosote contaminated soil, the wood was incinerated in a Princeton, BC facility. With the wood and soil removed, the mill made fisheries improvements to creek crossings along the pipeline route in consultation with the Department of Fisheries and Oceans.
- The Crofton mill is working with students from Victoria's Royal Roads University to determine the extent of oil contamination at an old oil transfer station and to generate options for bio-remediation of the soil.

## Total solid waste to landfill

(m<sup>3</sup>/adt) (thousands)





***DETERMINED***  
to perform

2005 Performance Data



## PERFORMANCE DATA – SOCIAL

<i>Employment</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
Employees	4,141	3,836	3,806	3,781
Total payroll (millions)	\$ 301	\$ 303	\$ 313	\$ 325

Market conditions, retirements and consolidations have contributed to job reductions across the industry since the mid-1990s. The company does not currently have a system for tracking employee turnover (defined as the percentage of employees who leave the company voluntarily).

### *Health and safety*

Under the terms of the company's Incident Reporting and Investigation Policy, employees are required to report all incidents as soon as possible, promptly seek first aid when injured, inform supervisors of their injury status, participate in incident investigations and report unsafe acts or conditions.

In accordance with British Columbia's Workers Compensation Act, each Catalyst Paper location has a joint health and safety committee composed of union and management representatives.

	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
Medical incidents <sup>1</sup>	193	140	123	125	106
Lost-time injuries <sup>2</sup>	98	43	49	42	40
Medical incident rate <sup>3</sup>	5.34	3.89	3.28	3.43	3.06
Lost-time injury frequency <sup>4</sup>	2.71	1.19	1.31	1.15	1.15
Severity <sup>5</sup>	111	56	48	33	40

<sup>1</sup> Incidents requiring medical attention

<sup>2</sup> Requiring employees to miss work

<sup>3</sup> Number of medical incidents per 200,000 hours worked

<sup>4</sup> Number of lost-time injuries per 200,000 hours worked

<sup>5</sup> Average number of days injuries caused employees to miss work

Many companies, particularly those operating in the developing world, have policies on HIV/AIDS. While acknowledging the seriousness of the illness, Catalyst Paper operates primarily in Canada and does not have a specific policy on HIV/AIDS. The company does, however, have policies that protect employees against discrimination based on their health status, including the Employment Equity and Employee Relations policies. The company also provides benefits, such as long-term disability insurance, to support employees who cannot work because of illness or injury.

### *Training and education*

As part of its World-Class Safety program, all Catalyst employees receive regular safety training. The company also provides one of the province's largest apprenticeship programs, with 100 technical apprentices and an annual allowance of \$10 million for education and training. In 2005 the company introduced an operator technical training program to ensure best practices are identified and shared at all locations.

The company has developed an internal leadership training program for those interested in supervisory or management positions. Under the company's educational assistance policy, employees may be reimbursed for approved courses they take in local institutions.

### ***Diversity, non-discrimination and opportunity***

Catalyst's Employment Equity and Employee Relations policies set out the company's commitment to equal opportunity for all employees in hiring and advancement, equal pay for similar work and other related issues.

As of Dec. 31, 2005, Catalyst's board consisted of nine male directors and one female director. The executive consisted of six male employees and two female employees.

### ***Human rights***

The company's manufacturing operations are conducted in British Columbia, Canada, and are governed by applicable provincial laws, including the British Columbia Human Rights Code. The company adheres to these laws and has cultivated a strong working relationship with its unions, and does not believe a specific human rights policy is required to bolster its provisions.

### ***Freedom of association, collective bargaining and child, forced and compulsory labour***

The company's manufacturing operations are conducted in British Columbia, Canada, and are governed by applicable provincial laws, including the Labour Relations Act, which specifies employees' rights to belong to trade unions and to participate in collective bargaining, and the Employment Standards Act, which places restrictions on hiring children, sets standards for hours of work and conditions for employment. The company adheres to these laws and has cultivated a strong working relationship with its unions, and does not believe specific policies are required to bolster their provisions.

### ***Bribery and corruption***

Issues of bribery and corruption are addressed in Catalyst's Code of Corporate Ethics and Behaviour. The code is designed to ensure all business affairs are conducted fairly, honestly and in strict compliance with legal obligations.

### ***Political contributions***

Under the terms of Catalyst's Code of Corporate Ethics and Behaviour, the company may not make contributions to political parties or candidates unless the contribution is lawful in the country where it is made and has been approved by the board of directors. In 2005 the company made one contribution of \$25,000 to a political party, and has purchased tickets for dinners sponsored by a variety of political parties and candidates.

### ***Customer health and safety, product labelling***

Catalyst's customers are commercial printers, publishers and paper manufacturers experienced in the safe use of paper and pulp products. These products are generally viewed as benign to use and handle and the company does not extend its safety policy to address customer health and safety. All of Catalyst's products are clearly labeled using a system developed in consultation with customers.

### ***Respect for privacy***

The company's manufacturing operations are conducted in British Columbia, Canada, and are governed by applicable laws, including the Personal Information Protection Act, which sets standards for privacy and use of personal information.

Beyond adhering to these laws, the company's Employee Privacy Policy explains the personal information the company collects from employees and how it uses that information. The Confidential Information and Protection of Employee Privacy Policy additionally outlines expectations related to the confidentiality of the company's business affairs.

## PERFORMANCE DATA – ECONOMIC

<i>Production (000 tonnes)</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
Paper	1,726.5	1,850.1	1,880.9	1,765.5
Pulp	374.3	418.8	420.9	474.2
Total	2,100.8	2,268.9	2,301.8	2,239.7
<i>Financial (\$ millions)</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
Sales	1,704.0	1,820.5	1,878.2	1,823.9
Operating earnings (loss)	(121.9)	(111.6)	(31.3)	(25.1)
Net earnings (loss)	(123.3)	(84.5)	(28.6)	(25.6)
Total assets	2,897.1	2,816.4	2,745.9	2,695.9
<i>Property taxes (\$ thousands)</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
Crofton	6,909.2	7,923.6	7,881.0	8,046.1
Elk Falls	8,338.0	8,431.4	8,361.5	8,094.4
Paper Recycling <sup>1</sup>	1,183.7	1,204.7	1,256.1	1,332.0
Port Alberni	7,366.0	7,749.8	7,656.5	7,357.9
Powell River	7,685.8	6,836.2	6,526.7	6,276.4
Vancouver <sup>2</sup>	2,000.0	2,750.6	496.8	527.7
Total	33,482.7	34,896.3	32,178.6	31,634.4
Other taxes <sup>3</sup>	33,830.0	25,361.0	23,459.0	23,910.0
Research and development	2,365.9	2,500.9	2,545.7	2,592.9

<sup>1</sup> Located in Coquitlam, BC; acquired in 2003.

<sup>2</sup> Estimated for 2002; 2004 figure reflects a rebate received after an appeal of 1996-1999 property taxes by head office landlord.

<sup>3</sup> Includes income taxes, large corporation capital taxes, provincial capital taxes and provincial sales tax.

## **PERFORMANCE DATA – ENVIRONMENTAL**

### ***Details of 2005 non-compliances and significant events***

#### ***Crofton Division***

The mill realized its lowest environmental events count ever in 2005 with only two permit non-compliances for exceeding its total reduced sulfur (TRS) permit. These incidents were fully investigated, including an extensive round of process testing, and the mill is investigating equipment changes that will help ensure future compliance. The project will collect and treat one of the site's largest remaining sources of TRS.

#### ***Elk Falls Division***

Following operational changes aimed at simplifying the wastewater treatment system in 2005, there was an unforeseeable reduction in the performance of the facility during the summer. During this period there was compromised effluent quality leading to one failure of a fish bioassay and 14 tests in excess of the mill's provincial five-day biochemical oxygen demand (BOD5) concentration permit. The mill did not exceed federal BOD5 limits.

A review by several experts found that the effluent treatment plant's performance was being limited by biological retention time in the plant's secondary clarifiers. Operational changes were made immediately and the treatment plant's performance returned to normal. A project in 2006 will address settling in the plant's secondary clarifiers and reduce biological retention time.

#### ***Paper Recycling Division***

Effluent discharge to the sewer exceeded the 5,000 cubic metre daily permit limit on June 2. Alarms were modified to sound at a lower discharge volume, allowing the control room operator sufficient time to make process changes.

Four fish bioassays of the mill's final effluent before it was sent to the Greater Vancouver Regional District's treatment works failed. Re-tests in all four cases resulted in passing tests. A consultant determined that the toxicity was related to high levels of the nutrient ammonia. An expert reviewed the effluent treatment plant manual and retrained all plant operators to maintain better control of ammonia concentration in final effluent. The mill has not failed any subsequent fish bioassays.

#### ***Port Alberni Division***

The mill achieved 100 per cent compliance on all permits during 2005.

In April 2005 a fire started on company property in a pile of creosoted wood from a decommissioned mill water pipeline. The local fire department responded immediately. The completion of the mill's pipeline demolition and remediation project has now eliminated this risk.



### Powell River Division

The mill recorded 10 provincial permit non-compliances for effluent discharges. Nine were related to pH excursions at two cooling water/storm water outfalls. All were short duration and were investigated with corrective actions completed to prevent recurrence.

The final incident involved a single BOD5 concentration above the permit limit. The root cause was identified as a significant increase in loading to the treatment system coupled with insufficient nutrients (nitrogen). External experts were consulted and operational changes were made to correct the situation.

### Total key materials used

(tonnes)	% <sup>1</sup>	04	05
Water		197,664,537	202,775,937
Wood chips and pulping logs	63	2,981,357	2,770,754
Hog fuel	20	882,287	872,611
Old newspapers and magazines	4	176,999	165,781
Fossil fuels		144,611	118,210
Oxygen		132,705	97,192
Precipitated Calcium Carbonate		103,613	104,309
Sodium Hydroxide		55,306	56,309
Clay		55,159	66,512
Sodium Chlorate		33,704	32,843
Hydrogen Peroxide		27,750	28,445
Sulphuric Acid		26,386	24,708
Sulphur Dioxide		20,242	20,315
Silicate		16,588	16,296
Starch		9,858	8,739

<sup>1</sup> Percentage of raw materials sourced from wastes

Solid waste to landfill	01	02	03	04	05
Crofton	0.050	0.050	0.060	0.070	0.070
Elk Falls	0.146	0.140	0.090	0.090	0.090
Paper Recycling				0.150	0.080
Port Alberni	0.069	0.073	0.077	0.061	0.086
Powell River	0.079	0.033	0.030	0.030	0.040

m<sup>3</sup>/adt (cubic metres per air-dried tonne)

A complete glossary of terms and definitions is found on page 52.

### Reported total NPRI emissions

Substance (tonnes)	01	02	03	04
Sulphur Dioxide		2,598	3,057	4,705.9
Carbon Monoxide		5,019	3,919	3,627.5
Nitrogen Oxides		2,975	2,593	2,647.3
Volatile Organic Compounds – total			1,618	1,441.2
Total Particulate		1,010	892	1,188.3
Hydrochloric Acid	1,005	1,148	869	823.5
Methanol	805	936	1,237	663.0
PM10		905	675	600.2
Phosphorus			451	528.2
Nitrate Ion	827	446	400	429.2
Manganese	270	296	287	416.5
PM 2.5		741	468	411.6
Ammonia	288	201	219	256.8
Hydrogen Sulphide	179	168	118	112.0
a-Pinene				79.1
Zinc	45	45	71	76.6
Limonene				54.2
b-Pinene				37.3
Acetaldehyde	92	62	53	36.9
Isopropyl Alcohol				27.1
Phenol	62	6	23	26.6
Formaldehyde			94	18.4
Ethyl Alcohol				14.4
Carbonyl Sulphide				10.3
Sulfuric Acid	31	16	16	9.9
Chlorine Dioxide	47	6	6	6.4
Methyl Isobutyl Ketone				5.2
Methyl Ethyl Ketone			14	4.6
Toluene				1.6
Chloromethane	28	17	13	
Dichloromethane			30	
<i>(kilograms)</i>				
Lead		1,930	1,951	2,563.9
Arsenic		510	706	769.9
Sum of PAH's (17)	555	334	495	497.7
Hexavalent Chromium Compounds		793	459	365.4
Cadmium		301	340	287.5
Mercury	15	25	19	10.4
<i>(grams)</i>				
Hexachlorobenzene (HCB)	432	312	636	414.6
Dioxins & Furans	96	87	59	67.7

Annual releases to air, water, land and disposal or recycling are reported to Environment Canada under the National Pollution Release Inventory (NPRI) program each June for the preceding calendar year. Emissions are based on actual measures or defensible estimates and are reported if levels surpass specific thresholds.

Data for all sectors – industrial, government, commercial and others – is available at [www.ec.gc.ca/pdb/npri](http://www.ec.gc.ca/pdb/npri).

A complete glossary of terms and definitions is found on page 52.

<i>Air emissions (by mill)</i>	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
<b>Crofton</b>					
Total GHGs as kg CO <sub>2</sub> e/year	318,000,000	236,741,000	187,677,000	153,407,000	127,325,000
Total GHGs as kg CO <sub>2</sub> e/adt	490	303	255	196	166
Particulate matter kg/day	1,494	1,205	1,050	1,235	850
Particulate matter kg/adt	0.77	0.60	0.50	0.58	0.40
TRS kg/day	322.2	218.6	205.0	209	207
TRS kg/adt	0.259	0.181	0.179	0.175	0.195
Power Boiler Dioxin ng/m <sup>3</sup> TEQ	0.089	0.091	0.290	0.320	0.078
Ambient TRS % compliance A level 24 hr average	91.1	94.8	89.8	97.8	95.8*
Ambient PM2.5 98th percentile (ug/m <sup>3</sup> )					14.5
Ambient PM10 % compliance A level	99.9	100	100	100	100
<b>Elk Falls</b>					
Total GHGs as kg CO <sub>2</sub> e/year	266,434,000	238,742,000	287,636,000	204,096,000	184,671,000
Total GHGs as kg CO <sub>2</sub> e/adt	370	322	351	254	219
Particulate matter kg/day	1,917	2,266	1,748	1,569	1,413
Particulate matter kg/adt	0.86	0.99	0.78	0.71	0.61
TRS kg/day	201	267	227	208	183
TRS kg/adt	0.21	0.23	0.20	0.28	0.25
Power Boiler Dioxin ng/m <sup>3</sup> TEQ	0.11	0.168	0.054	0.047	0.043
Ambient TRS % compliance A level 24 hr average	99.99	99	69	97.3	99.5
Ambient PM2.5 98th percentile (ug/m <sup>3</sup> )					25.65
Ambient PM10 % compliance A level	100	100	100	99.2	100
<b>Paper Recycling</b>					
Total GHGs as kg CO <sub>2</sub> e/year	9,104,827	7,542,583	7,613,738	7,054,236	8,173,113
Total GHGs as kg CO <sub>2</sub> e/adt	70	67	56	47	56
Particulate matter kg/day	1,217.8	95.3	103.0	93.8	67.44
Particulate matter kg/adt	3.4	0.3	0.3	0.2	0.17
<b>Port Alberni</b>					
Total GHGs as kg CO <sub>2</sub> e/year	95,000,000	63,293,000	66,268,000	61,231,000	52,844,000
Total GHGs as kg CO <sub>2</sub> e/adt	256	178	155	139	153
Particulate matter kg/day	250	123	121	215	107
Particulate matter kg/adt	0.22	0.122	0.097	0.18	0.114
Power Boiler Dioxin ng/m <sup>3</sup> TEQ	0.24	0.12	0.1675	0.17	0.12
Ambient PM10 % compliance A level	100	100	100	100	100
<b>Powell River</b>					
Total GHGs as kg CO <sub>2</sub> e/year	79,393,000	11,609,000	23,134,000	33,023,000	24,978,000
Total GHGs as kg CO <sub>2</sub> e/adt	157.3	27.1	50.5	77.5	56.1
Particulate matter kg/day	822	75.1	2.7	22.8	9.0
Particulate matter kg/adt	0.39	0.06	0.01	0.02	0.01
TRS kg/day	38.5	n/a	n/a	n/a	n/a
TRS kg/adt	0.08	n/a	n/a	n/a	n/a
Power Boiler Dioxin ng/m <sup>3</sup> TEQ	0.045	0.016	0.057	0.022	0.011
Ambient TRS % compliance A level 24 hr average	99.89	99.99	99.95	100	100
Ambient PM2.5 98th percentile (ug/m <sup>3</sup> )					7.0
Ambient PM10 % compliance A level	100	100	100	100	100

\*Data available for January to October 2005 only from Ministry of Environment at time of publication.  
A complete glossary of terms and definitions is found on page 52.

<i>Effluent (by mill)</i>	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
<b>Crofton</b>					
TSS kg/day	3,000	3,400	3,400	3,674	3,311
TSS kg/adt	1.9	1.8	1.6	1.8	1.5
BOD kg/day	1,400	1,360	1,600	1,566	1,270
BOD kg/adt	0.79	0.7	0.76	0.76	0.59
AOX kg/day	341	369	372	422	330
AOX kg/adt	0.35	0.36	0.34	0.33	0.31
2378TCDD ppq	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
2378TCDF ppq	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>2</sup>
Trout toxicity % compliance	100	100	100	94	100
<b>Elk Falls</b>					
TSS kg/day	6,500	5,239	4,631	4,965	4,990
TSS kg/adt	2.92	2.43	2.06	2.26	2.16
BOD kg/day	3,400	3,437	4,978	4,269	5,001
BOD kg/adt	1.53	1.59	2.21	1.94	2.16
AOX kg/day	371	403	359	231	220
AOX kg/adt	0.49	0.59	0.45	0.37	0.29
2378TCDD ppq	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>	ND <sup>1</sup>
2378TCDF ppq	5.3	20	13	27	2.2
Trout toxicity % compliance	92	100	100	94	96
<b>Paper Recycling</b>					
TSS kg/day	364	296	470	387	428
TSS kg/adt	1.02	0.95	1.25	0.96	1.06
BOD kg/day	472	640	702	467	603
BOD kg/adt	1.31	2.04	1.74	1.15	1.50
Trout toxicity % compliance	100	100	100	100	100
<b>Port Alberni</b>					
TSS kg/day	660	630	790	1,060	500
TSS kg/adt	0.55	0.65	0.70	0.91	0.55
BOD kg/day	500	460	550	700	450
BOD kg/adt	0.42	0.47	0.48	0.6	0.49
Trout toxicity % compliance	100	100	100	100	100
<b>Powell River</b>					
TSS kg/day	3,400	400	900	2,100	2,400
TSS kg/adt	2.00	0.20	0.50	1.5	1.7
BOD kg/day	1,200	180	300	700	1,000
BOD kg/adt	0.70	0.10	0.20	0.5	0.70
AOX kg/day	200	n/a	n/a	n/a	n/a
AOX kg/adt	0.34	n/a	n/a	n/a	n/a
2378TCDD ppq	ND <sup>1</sup>	n/a	n/a	n/a	n/a
2378TCDF ppq	ND <sup>1</sup>	n/a	n/a	n/a	n/a
Trout toxicity % compliance	100	100	100	100	100

<sup>1</sup> ND – non-detectable: Test result was below two parts per quadrillion

<sup>2</sup> ND – non-detectable: Test result was below five parts per quadrillion

A complete glossary of terms and definitions is found on page 52.



<i>Water and energy use</i>	<i>01</i>	<i>02</i>	<i>03</i>	<i>04</i>	<i>05</i>
<b><i>Crofton</i></b>					
Water use m <sup>3</sup> /adt	80.1	77.8	73.7	66.4	68
Fuel energy usage GJ	17,683,750	18,630,122	17,116,051	17,465,973	17,290,671
Fuel energy intensity GJ/adt	27.01	23.81	23.21	22.36	22.58
Electricity usage MWhrs		1,143,718	1,132,266	1,272,867	1,312,911
Electricity intensity MWhrs/adt		1.47	1.48	1.63	1.71
<b><i>Elk Falls</i></b>					
Water use m <sup>3</sup> /adt	83	80	79	73	68
Fuel energy usage GJ	18,771,821	18,928,898	18,126,460	14,140,120	14,609,573
Fuel energy intensity GJ/adt	25.79	25.52	22.11	17.63	17.30
Electricity usage MWhrs		1,387,660	1,538,793	1,609,245	1,838,519
Electricity intensity MWhrs/adt		1.76	1.87	1.84	2.18
<b><i>Paper Recycling</i></b>					
Water use m <sup>3</sup> /adt	12.1	11.1	10.8	10.6	11.65
Fuel energy usage GJ	438,952	382,913	411,106	416,138	428,917
Fuel energy intensity GJ/adt	3.36	3.39	3.05	2.81	2.94
Electricity usage MWhrs	69,361	61,300	68,950	73,441	71,286
Electricity intensity MWhrs/adt	0.53	0.54	0.51	0.50	0.49
<b><i>Port Alberni</i></b>					
Water use m <sup>3</sup> /adt	107	121.5	101.3	99.4	101
Fuel energy usage GJ	6,156,108	6,096,833	6,712,225	7,041,370	6,386,313
Fuel energy intensity GJ/adt	16.04	17.16	15.67	15.93	19.09
Electricity usage MWhrs		837,098	953,860	979,781	883,288
Electricity intensity MWhrs/adt		2.36	2.30	2.29	2.64
<b><i>Powell River</i></b>					
Water use m <sup>3</sup> /adt	95.2	97.1	91	98	96
Fuel energy usage GJ	12,104,391	6,667,974	6,299,629	6,522,138	6,353,530
Fuel energy intensity GJ/adt	23.98	15.56	13.75	15.32	14.28
Electricity usage MWhrs		1,123,322	1,197,859	1,215,656	1,339,364
Electricity intensity MWhrs/adt		2.71	2.75	2.86	3.01

GJ – Gigajoules

adt – Air-dried tonnes

MWh – Megawatt-hours

A complete glossary of terms and definitions is found on page 52.

## GLOSSARY

### **A level TRS**

British Columbia's 'A' level ambient odour objective is two parts per billion average or less over a 24-hour period. Percentage compliance with this objective is a measure of the percentage of days in the year in which the daily average was at or below two parts per billion.

### **Alternative fuels**

Non-traditional fuels used to offset fossil fuels and improve combustion conditions in boilers and kilns; examples include landfill methane, tire-derived fuel, coal, clean demolition debris and refuse-derived fuel.

### **Ambient PM10**

Measure of ambient levels of fine particulate of less than or equal to 10 microns. BC's A Level PM10 objective is 50 micrograms per cubic metre.

### **Ambient TRS**

Measure of ambient Total Reduced Sulphur gases.

### **AOX – Adsorbable**

#### **Organic Halide**

A measure of the amount of chlorine bound to an organic substance; occurs in kraft operations' bleaching process.

### **Asbestos**

Fibrous mineral form of impure magnesium silicate, previously used for fireproofing, electrical insulation, building materials and chemical filters. Inhaling asbestos has been shown to lead to cancer or scarring of the lungs.

### **Basis weight**

Weight of a standard amount of paper cut to a standard size; measured in grams per square metre or pounds.

### **Biomass fuel**

Renewable energy source derived from bark, wood shavings, sawdust and black liquor. Biomass is carbon neutral, meaning that burning it releases the same amount of carbon dioxide it would release if left to decompose.

### **Black liquor**

Byproduct of chemical pulping consisting of wood fibre residue, water and chemicals; generally burned to produce energy and steam.

### **BOD – Biochemical Oxygen Demand**

A measure of the amount of oxygen used during biodegradation of effluents over a five-day period.

### **Calender**

Pressing paper between rollers to make it smooth and glossy. Most calenders add gloss, while some create a dull or matte finish.

### **Caustic**

Also known as sodium hydroxide; odourless, corrosive clear or slightly cloudy liquid, one use is to control odour in effluent treatment systems.

### **Certification**

Voluntary process providing objective evidence that forests harvested to manufacture wood and paper products are responsibly managed; a company's performance against objectives and standards is verified by independent, third-party experts.

### **CO<sub>2</sub>e**

The effective greenhouse gas emission expressed as equivalent tonnes of carbon dioxide. Some greenhouse gases have a stronger warming effect than others and the CO<sub>2</sub>e measure provides an appropriate comparison of the warming effects of every greenhouse gas.

### **Cooling water**

Clean water streams used only for cooling which have little or no contamination.

### **Creosote**

Volatile, heavy, oily liquid obtained by the distillation of coal tar or wood tar and used chiefly as a wood preservative; considered highly toxic and its use has been banned in many countries.

### **Daphnia magna toxicity**

Test to measure the toxicity of a chemical compound in water; daphnia magna is also known as a "water flea."

### **De-inked pulp**

Pulp produced by recycling paper; ink is removed by mechanical and chemical means to produce clean fibres.

### **Dioxins and furans**

Specific chlorine-containing compounds that have been detected in trace amounts in pulp and paper facility emissions. 2378 TCDD & 2378 TCDF denote specific dioxin and furan substances. A non-detection result is noted as ND.

### **DNCG – Dilute**

#### **Non-condensable Gases**

Low-concentration odorous gases emitted from the kraft operations.

***Electrostatic precipitator***

Emissions control device typically used on combustion devices like boilers; removes particulate matter from the stack gases.

***Environmental audit***

A tool used to evaluate how well the organization, management and equipment are meeting regulations and goals.

***Estuary***

Wide body of water formed where a river meets the ocean; contains both fresh and salt water.

***Fossil fuel***

Hydrocarbon-containing natural resources such as coal, petroleum and natural gas.

***GHG – Greenhouse Gases***

A group of gases believed to trap heat from radiating out into space, causing an increase in global temperatures. Carbon dioxide is the greenhouse gas mostly produced from combustion of fossil fuels.

***Groundwood paper***

Paper made with pulp produced primarily through mechanical pulping processes.

***Hog fuel***

A mixture of bark and other wood waste usually produced by sawmills making solid wood products; burned to produce energy and steam.

***HCFC – Hydrochlorofluorocarbon***

Man-made compound used as a refrigerant or propellant and which has been shown to break down the earth's protective ozone layer.

***ISO 14001***

An international environmental management standard that outlines necessary elements of a management system.

***Kyoto protocol***

Agreement under which signatory countries will reduce their greenhouse gas emissions which came into force in February 2005.

***Lime kiln***

Rotary furnace used by pulp operations to recycle calcium as part of the liquor recovery process.

***MoE – Ministry of Environment***

B.C. provincial regulator responsible for regulating the pulp and paper industry.

***Montreal protocol***

International agreement to phase out the production and use of compounds that deplete ozone in the stratosphere.

***NOx – Nitrogen Oxides***

A group of gases made up of oxygen and nitrogen formed during combustion processes that can be an ingredient in ozone formation and is also a greenhouse gas.

***Opacity***

A measure of the clarity of the air emissions that approximates the level of particulate in the gases.

***Ozone-depleting substance***

Chemicals that react with ozone molecules to destroy them.

***Particulate matter***

Small particles originating from stack emissions or other sources like chip piles.

***PCB***

A specific organic compound containing chlorine that was used widely in electrical equipment as a transformer fluid.

***Power boiler***

Large burner designed to burn wood bark from sawmills and generate electricity and steam for the mill operations.

***Power boiler dioxins***

Low levels of chlorinated compounds absorbed into the combusted wood ash that originate from sea salt contained in the waste bark fuel. Power boiler dioxins are expressed as dioxin equivalent units (TEQ).

***PCC – Precipitated Calcium Carbonate***

A filler used in paper production to improve paper properties, including brightness, opacity and bulk.

***Pulp logs***

Logs that are unsuitable for use in manufacturing lumber because they are too small, too knotty, too twisted or contain rot.

***Recausticizing***

Treating chemicals recovered from the chemical pulping process with lime so they can be used again.

***Recovery boiler***

Burns byproducts of the chemical pulping process to produce energy and steam and recycles pulping liquors for reuse.

***SO<sub>2</sub>***

A gas made up of oxygen and sulphur that forms an acid when exposed to water. SO<sub>2</sub> can be an ingredient of acid rain formation.

***Solid waste***

Any wastes generated by mills that require landfilling. These include boiler wood ash, lime wastes, waste wood and construction debris.

***Stickies***

Adhesive contaminants found in recycling newspapers and magazines.

***Supplementary fuels***

Fuels such as natural gas or oil that are added to the waste wood burned in power boilers to create better combustion.

***TDF – Tire-derived Fuel***

Supplemental fuel made by chipping old tires.

***Treated effluent***

Water discharged from pulp and paper processes that is cleaned by removing settleable solids and dissolved substances.

***Trout toxicity***

Test that exposes juvenile rainbow trout to liquid substances for 96 hours. If less than 50 per cent of the fish die, the substance is considered non-toxic.

***TRS – Total Reduced******Sulphur gases***

Gases with the characteristic smell of rotten eggs and cabbage that are emitted from kraft pulp mill operations and effluent treatment systems.

***TSS – Total Suspended Solids***

Filterable solids remaining in the treated mill water before discharge into the receiving environment.

***UNOX***

Effluent treatment system that uses pure oxygen and fertilizers with hundreds of tonnes of microbiological organisms to remove BOD and toxicity.

***Wood waste***

Tree bark, poor quality wood chips, sawdust and other clean wood-based waste products that cannot be converted into solid wood products or pulp and paper products; used as fuel to generate steam and electricity.



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