



April 17, 2015

Ms. Tracey Braun
Manitoba Conservation
Environmental Approvals
123 Main Street, Suite 160 Union Station
Winnipeg, Manitoba
R3C 1A5

Ms. Braun,

Re: Vale - Environment Act License No. 960VC - 1-1 Mine, Mill: Tailing Delivery System and Effluent Treatment Facility: Dam B Raise — Notice of Alteration

The purpose of this letter is to reply to your letter of March 27th, 2015 regarding the Notice of Alteration of the Dam B Raise at Vale's Manitoba Operations. Vale's request is that you reconsider the decision to classify the Dam B Raise as a major alteration. Before we outline the rationale for the request and share additional information, we wish to acknowledge not only the work to date of Jennifer Winsor and Manitoba Conservation and Water Stewardship, but also the cooperation, flexibility and transparency demonstrated to date. Our discussions thus far have been constructive, pragmatic and reflect a shared interest in balancing the interests of sustainability for the planet, responsible resource development and those of the people of Manitoba.

It was evident in our most recent discussions that Vale could have been more effective in sharing further detail relating to the context, scope and environmental impact for the tailings area upgrade project, specifically as these relate to the Dam B Raise.

It is also worth noting that within Vale during the life of this project, it has been managed by multiple project managers, reporting to numerous managers, due in large part to our ongoing retention challenges in the north. This, along with the 2010 announcement regarding the closure of our smelter and refinery, our \$100 Million Challenge (wherein one of our mines was facing imminent closure), and the ongoing strain presented by a prolonged downturn in the global commodities market, would most certainly have been contributing factors to misunderstanding or disruptions in consistent and regular communication with your department.

Following are additional points that may provide grounds for further reflection on the classification, and ultimately a decision to classify the alteration as minor.

1. Footprint – The Dam B raise is one, relatively small project within what has been a multi-year, multi-phase project that is within the boundaries of our current operating footprint and we believe it is also within the scope of our current environmental act license.
2. Order of Magnitude – The relative significance and scale of this project is much lesser in comparison with other, new construction projects and alterations within the sector that have recently been deemed to be major. Prior to the alteration, Dam B represents 0.07% of our total tailings basin area and following the raise it will represent 0.22%.

3. Precedence – Vale has completed previous dam extensions and raises within our current footprint, none of which have been determined to be major alterations. It is our belief that the Dam B work is not significantly different in terms of scope or impact. The complete tailings management area upgrade project was initiated and notice was given originally in 2009. It represents the first time such a project has been undertaken at our Manitoba Operations—our intention was always to do the work once, to do it right, and to engage appropriate regulators and stakeholders early and often.
4. Life of Mine Plan – This project will ensure that our Manitoba Operations can continue to mitigate risk and achieve regulatory compliance through to our current Life of Mine Plan closure date of 2044
5. Factor of Safety – The current Factor of Safety for Dam B is 1.3 which complies with industry standards, however, at the conclusion of the raise project Dam B will have a Factor of Safety of 2.0.
6. Environmental Impacts – This is not a licensed discharge point and Vale has a demonstrated performance history of meeting and generally exceeding expectations with regards to environmental impact and mitigation. This project is but one example of our commitment to be better than industry standards and minimum requirements in managing risk to as low as reasonably achievable. The water diversion channel associated with the alteration is for fresh water, not for tailings discharge.
7. Regulatory Compliance – In order to remain within regulatory compliance guidelines for tailings management, we need to complete this part of the project by 2017 and we need two full construction seasons to do so. Thus, it is important that the project begins this year.
8. Towards Sustainable Mining – Vale’s Manitoba Operations has continued to participate fully in the Mining Association of Canada’s Towards Sustainable Mining initiative. In 2014, we were externally audited against the protocol criteria, and received two performance awards—one for Tailings Management and the other for Aboriginal and Community Outreach.
9. Corporate Social Responsibility – Vale reports publicly and annually through an Open House that has included regular updates on tailings management and the upgrade project. This has included information on Phase 3 of the project, which includes the Dam B Raise. We have also published an annual update for our regional communities that has included the same information and has provided an opportunity for feedback. To date, there has not been a complaint or concern recorded with regards to the tailings management upgrade project.
10. Community Liaison Committee – This committee meets every 4 months and includes our regional communities of interest, which consist of Aboriginal and community leaders and organizations. Tailings management is a standing item and we have provided regular updates on the project. We have a tour of the area planned in June of this year.

11. Federal Review – The project was previously submitted for review to three separate federal agencies (Department of Fisheries and Oceans, Transport Canada and the Canadian Environmental Assessment Agency) and ultimately federal approval was granted for the Dam B work. The project, including the Dam B Raise, was deemed to be a minor alteration.

It is in light of the additional reasons, information and context that we ask you to consider the Dam B Raise as a minor alteration. If you have any further questions or concerns, or require any additional information, please do not hesitate to ask and we will provide it.

Respectfully submitted,

A handwritten signature in black ink that reads "Kirk Regular". The signature is written in a cursive, flowing style.

Kirk Regular
Manager, Human Resources, Safety, Health and Environment,

Vale
Manitoba Operations
P.O. Box 5000, Thompson, MB R8N 1P3
kirk.regular@vale.com

c.



Vale – Manitoba Operations

Community Liaison Committee – Terms of Reference

Background

Vale has enacted a global sustainable development policy that mandates the company's Operations to adhere to the following principles:

- Vale's mission is to transform mineral resources into prosperity and sustainable development.
- For Vale, sustainable development is achieved when its activities, particularly its mining operations, add value to its shareholders and stakeholders whilst contributing to social strengthening, economic development of regional vocations and environmental conservation and restoration, through a conscious and responsible management approach, voluntary corporate actions and the establishment of partnerships with governments, public institutions, the private sector and civil society.
- Vale's principle is to act with the objective of leaving a positive social, economic and environmental legacy in the areas where it operates by encouraging social inclusion through work education and human development, economic growth and diversification according to local vocations, strengthening of local institutions – supporting the responsible public institutions with the planning of appropriate urban infrastructure, whilst contributing to the conservation and restoration of ecosystems, biodiversity and cultural heritage of the region. Mining is by nature a finite activity, limited to the life cycle of the mineral deposit. The sustainability legacy of our activities depends on the development of new economic vocations that may guarantee the perpetuity of the social wellbeing in balance with environmental conservation.

Purpose of the Community Liaison Committee

The Community Liaison Committee will serve as one instrument to provide organized public input into Manitoba Operations success in adhering to the Vale global sustainable development policy by inviting the committee's membership to provide advice on how the Operations' activities can be improved to better reflect these principles and the needs of communities in northern Manitoba.

The Community Liaison Committee is not intended to alter or affect Aboriginal or Treaty rights recognized and affirmed under Section 35 of the Constitution Act, 1982.

Membership

Participation as formal members of the committee will be sought from communities in close proximity to Vale's operations in Thompson, Manitoba and from stakeholders that are able to lend specific expertise and provide input around best practices associated with Vale - Manitoba Operations. Membership is voluntary and without remuneration, and does not constitute endorsement of Vale - Manitoba Operations of its policies or actions.

The following organizations have been invited to participate in the Community Liaison Committee:

- City of Thompson
- Nisichawayasihk Cree Nation
- Tataskweyak Cree Nation
- Cross Lake First Nation
- Pikwitonei Community Council
- Thicket Portage Community Council
- Wabowden Community Council
- Manitoba Métis Federation
- Northern Health Authority
- Manitoba Conservation
- Manitoba Family Services and Housing
- School District of Mystery Lake
- United Steelworkers Local 6166
- LGD of Mystery Lake
- University College of the North
- Vale (2)

While the formal membership of the Community Liaison Committee shall consist of representatives from the above communities and agencies, the committee shall have the opportunity to identify additional communities or agencies, including non-governmental organizations, to participate in committee activities when specific concerns or issues are considered by the committee. Such individuals are expected to bring specific expertise to assist in advancing resolution to these issues.

Communities and organizations are asked to designate a representative to be a member of the Community Liaison Committee as well as an alternate who could attend meetings when the member is unable to. In the interests of continuity, a commitment by Community Liaison Committee members to attend all meetings is expected. All committee members will be responsible for reporting back to their respective communities or agencies on the activities of the committee, and for maintaining a strong connection with the community or organization that they represent to ensure a timely exchange of information and opinions. All members are expected to respect provisions of confidentiality when requested.

Meeting Process

- Vale will appoint a representative to act as chairperson to ensure that the Terms of Reference are followed and reviewed and updated annually or as revisions require.
- Meetings shall be held up to four times per year (typically quarterly), or at the call of the chair when there is consensus among committee members to convene a special meeting of the committee.
- Meetings may rotate to be hosted by communities or organizations
- The Community Liaison Committee acts in an advisory capacity only, and Vale is not obligated to accept the input and recommendations of the committee. As the committee is advisory in nature, the committee is enabled to make two types of decisions. Firstly, it decides on its own procedural matters. Secondly, it provides advice and observations to Vale - Manitoba Operations.
- Vale will seriously consider any advice provided through the Community Liaison Committee. Following the compilation of all meeting minutes, the minutes will be referred to the General Managers of Vale – Manitoba Operations. A member of the senior leadership team for Manitoba Operations will provide a feedback to committee members that explains how the committee’s advice has been used and in cases in which advice was not taken, the reasons why it was not taken.
- Agenda items for meetings will be determined by committee members. Members of the committee will, in addition, recommend any additional participants in committee matters to participate in the consideration of meeting agenda items. Vale will be responsible for compiling the meeting agendas and for ensuring their distribution to committee members to ensure that committee members have sufficient time to review the materials and consult with community members in advance of meetings.
- In addition to receiving input on its sustainable development policy, Vale will review its tailings basin management plans, progressive decommissioning plans, and its determination of material issues of concern to the community with the committee on an annual basis. The company will also share and review comments received through the company’s Environmental Hotline with committee members on a regular basis.
- To allow for the sharing of confidential information with members of the committee, members may be asked to sign a confidentiality agreement.
- A quorum shall consist of 50 percent of the members plus one. Meetings and discussions may be held in the absence of a quorum, but no formal decisions will be made until the next meeting when a quorum is available.
- So that members of the Community Liaison Committee can best listen to and understand local contexts, meetings of the Committee may be rotated throughout communities that make up the membership of the Community Liaison Committee, and/or community presentations will be scheduled.

- Proceedings of the community liaison committee may result in media interest. Members are free to discuss their views or positions on the Community Liaison Committee with the media, but shall not attempt to represent overall committee views or the views of their fellow committee members. If the committee has reached consensus on a topic that becomes a media issue, then committee members will decide at that time who will be spokesperson for the Committee on the particular issue.
- Vale - Manitoba Operations will be responsible for taking meeting minutes and their distribution to members.
- Vale will support the Community Liaison Committee financially to cover the costs of meeting venues, logistics and preparation and distribution of meeting materials. Vale will also cover reasonable costs associated with meeting attendance (i.e. transportation, babysitting).

Fund to Support Committee Research Needs

To proactively advance the priorities of the Community Liaison Committee and to contribute towards capacity building among committee participants, Vale has identified the need to establish a dedicated budget to address the research priorities of the committee should matters arise that require further study. The deployment of this budget will be directed by committee membership to consider matters related to:

- Study to provide information on potential environmental concerns resulting from Vale – Manitoba Operations; and,
- Elaboration on potential solutions to minimize, and mitigate any environmental concerns.

Review of Terms of Reference

Vale – Manitoba Operations will review these Terms of Reference with the Community Liaison Committee on an annual basis at which time the committee may make recommendations to Vale on how the terms of reference can be amended and structured to improve the involvement of participants in this consultation process.

TAILINGS PHASE 3
STRUCTURE LAYOUT

COMPLETE

IN PROGRESS

NOT STARTED



About the Artist



Born Jasyn Bighetty of the Mathias Colomb Cree First Nation, Jasyn was adopted into the Lucas family of Thompson, Manitoba before his first birthday. His father, Jack Lucas, worked at Vale and retired in 2010. Jasyn grew up in Thompson and graduated from R.D. Parker Collegiate. He moved to North Vancouver in 1999 where he graduated from Capilano College with a Diploma in Studio Art.

In 2007, Jasyn returned to Thompson and decided to dedicate his time to a career as a visual artist and painter. He works mainly with acrylic on canvas, both hand-painted applications and airbrush, finding a balance in both traditional and contemporary applications.

Jasyn paints animals and landscapes, but has also worked in a variety of areas such as abstract expressionism, surrealism and sculpture. He is known in Thompson for painting murals on buildings. In 2005, he painted a mural on the side of the Surface Dry building at Vale's Thompson Operations to help commemorate the 50th anniversary of the year of discovery of the Thompson ore body.

Although he was a featured artist at the 2010 Winter Olympics in Vancouver and has sold his works around the world, Jasyn continues to work out of Thompson, Manitoba. He travels, putting on art shows across the country, but his main goal is to further develop his skills and use technology to have a stronger international presence.

For further information visit www.jasynlucas.ca.

For more detailed information, please visit our website www.vale.com/canada or contact Ryan Land, Manager, Corporate Affairs and Organizational Development, Manitoba Operations at ryan.land@vale.com or 204-778-2326.

Standing Strong

2013/2014 Annual Update on Vale in Manitoba



Photo: Keith Derksen

We are what we do

Mission

To transform natural resources into prosperity and sustainable development.

Vision

To be the number one global natural resources company in creating long term value, through excellence and passion for people and the planet.

Values

- Life matters most
- Value our people
- Prize our planet
- Do what is right
- Improve together
- Make it happen

Living by our values



Every day, Vale's Manitoba Operations strives to live by our values. We do this through the distinctive actions of SafeProduction: **plan, accept, care, lead**. This year Vale has placed specific emphasis on the action of **aring** and the difference that seconds and inches can make in reducing risk to as low as reasonably achievable. I would encourage you, especially those of you with children and youth in your lives, to have risk management conversations regularly and to take the time to apply some of the tools of SafeProduction. One of our most important tools is to conduct a **SLAM** — prior to participating in a high-risk activity or situation, we **Stop, Look, Assess** (hazards), and **Manage** (risk). Together, we can move ever-closer to achieving zero harm at work, at home, and at play.

There are many reasons to be both optimistic and proud with regards to our Manitoba Operations as we begin to emerge from one of the more challenging market cycles in our recent history. Not only did we surpass the \$100 million cost reduction challenge, which resulted in the continuing operation of our Birchtree Mine, but we did so while moving closer to achieving zero harm. Notably, our Total Recordable Injury Frequency realized a 40% reduction compared with 2012, and in 2013, our T-1 Mine surpassed the milestone of 3,000,000 hours without a Lost Time Injury. We were also recognized by the Towards Sustainable Mining program in the areas of tailings management and Aboriginal and community outreach. And we celebrated the long-standing commitment of Fred Houston, our operation's first 50-year employee.

As for our ongoing transition to a long-term mining and milling future, we must continue to reduce costs, while improving productivity and production in order to sustain investment in the resource. This will ensure the competitiveness of our operations. Vale has moved the "Footwall Deep" portion of the 1-D resource into the next feasibility stage, and we will continue to invest in order to prove the remainder of the resource. We will soon begin to advance the study for a concentrate load-out facility adjacent to the mill.

Our retention and regional employment rates have continued to improve, as we continue to implement our Northern Employment Strategy. And we successfully concluded the Thompson Economic Diversification Working Group process, which resulted in several ready-to-implement economic action plans for Thompson and the region.

Our business in Thompson continues to utilize operational excellence and continuous improvement in order to ensure that we will be prosperous and sustainable well into the future — our future. We know that we would not have made it this far, and will not realize a long-term future, without the contributions of our employees and their families, and the people in Thompson and the regional communities. We must continue to work together and care for one another while doing so.

Sincerely,

Lovro Paulic
Vice-President Manitoba Operations
Vale Canada Limited

SafeProduction

Ten years of SafeProduction results in 40% reduction in Total Recordable Injury Frequency rates



Thompson Historic Trend — Disabling Injury Frequency Snapshot



The push toward zero harm is a journey that is well represented by the historic trend for Disabling Injury Frequency. The accompanying bar chart shows Disabling Injury Frequency rates since 1998, as well as SafeProduction milestones.

“While employees worked to reduce the operation’s costs by \$100 million, they also reduced the Total Recordable Injury Frequency rate by 40%.”

While Vale Manitoba Operations continued to face significant challenges in 2013, employees never lost sight of the combined actions of SafeProduction — Plan, Accept, Care and Lead — and the business goals — Profit, Cost, Margin and Compete. In fact, while employees worked to reduce the operation’s costs by \$100 million, they also lowered the Total Recordable Injury Frequency rate by 40%. In addition, since SafeProduction’s inception, we have also seen the disabling injury frequency rate drop by 80% (see accompanying chart).

SafeProduction, as a culture, is committed to managing risk to As Low As Reasonably Achievable (ALARA). It uses specific tools and processes to identify hazards, the

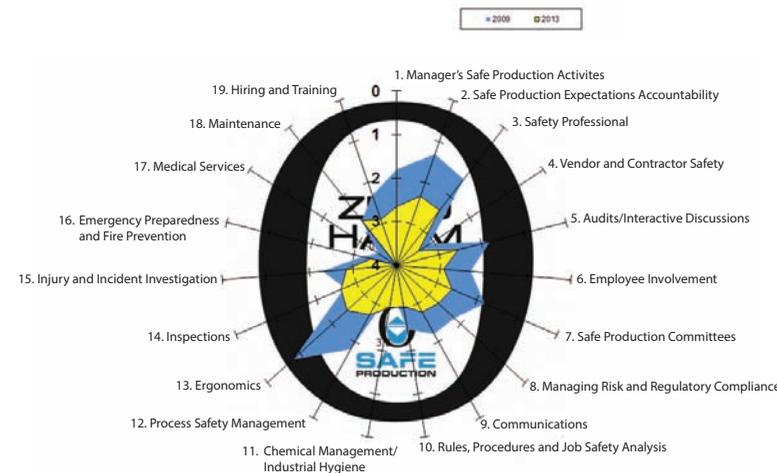
risk associated with the hazards and to manage and reduce those risks to ALARA both at work and at home.

The success of this culture of risk management is evident through the frequent recognition of Manitoba Operations through the John T. Ryan award both on a regional and national level.

The John T. Ryan award is a symbol of premier safety in mining and has been given out since 1941. Trophies are given each year in a number of categories to Canadian mines who have recorded the lowest reportable injury frequency per 200,000 hours worked from the previous year.

Vale Manitoba Operations has won the national award on a number of occasions, including the National Award for Metal Mining in 2004 and 2010; and the Regional Award in 2005, 2006, 2007, 2008, 2009 and 2012.

The culture of SafeProduction has grown beyond the borders of Manitoba Operations. It is now being adopted by Vale worldwide. Of great significance, is that the City of Thompson adopted the culture and developed its own SafeOperations initiative. In 2013, Vale continued to support the City with its initiative and will provide continued support as its initiative evolves.



Each year, Vale audits itself in 19 key areas to determine how well it is moving toward the goal of zero harm. The blue portion of the spider chart represents results from 2012. The yellow portion represents the results from 2013. The more the words ‘zero harm’ become visible, the better the progress towards zero harm.

Employees at Birchtree Mine (photo top left) and T-1 Mine (top right) have earned recognition for safety on both a national and regional level by the Canadian Institute of Mining and Metallurgy’s John T. Ryan award program. The award is a symbol of premier safety in mining in Canada.

Towards Sustainable Mining

Vale Manitoba Operations wins awards for sustainability performance in two areas



In October 2013, the Mining Association of Canada (MAC), through the Towards Sustainable Mining (TSM) initiative, recognized Vale Manitoba Operations in two areas of achievement — tailings management, and Aboriginal and community outreach. This is a significant achievement, as TSM maintains high standards for best practices in the Canadian mining industry.

“TSM is a valuable program for improving the mining industry’s performance in a number of areas,” said Robyn Millar, Environment Coordinator.

“We are assessed for our tailings management, energy use, greenhouse gas emissions, Aboriginal and community outreach, crisis management planning, biodiversity and conservation management, and safety and health. While we have been making continual improvement in almost all of these protocols, it is particularly gratifying for our Operation to be recognized for achievement in tailings management and Aboriginal and community outreach.”

Tailings management

MAC recognizes that tailings impoundments are not only

“TSM is a valuable program for improving the mining industry’s performance in a number of areas.”

necessary components of mining activity, but it is crucial they are managed to protect human safety and the environment. The TSM protocol for tailings management goes beyond adhering to technical standards.

Aboriginal and community outreach

MAC believes that strong relationships with communities of interest are fundamental to sustainable mining. TSM looks for meaningful dialogue with communities, whether or not their feedback is considered in decision-making, and whether or not the operation has a clear mechanism

for receiving and acting upon complaints and concerns.

Of special significance is Vale’s contribution to the Thompson region through the Thompson Economic Diversification Working Group (TEDWG). Vale funded and co-launched this working group which created action plans to help diversify the economy of the region. TEDWG saw unprecedented collaboration between Aboriginal communities, government, business and other organizations. As a result, Vale was selected as a finalist for a new award — the 2014 TSM Award for Community Engagement.

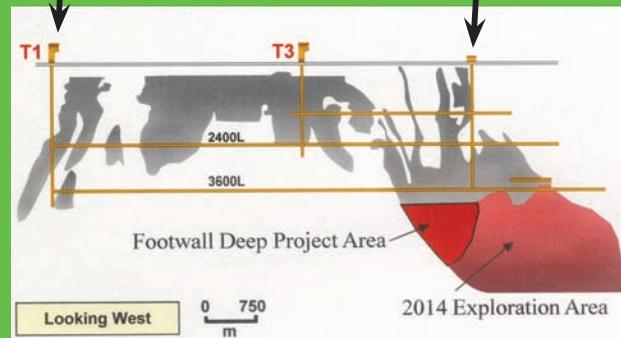
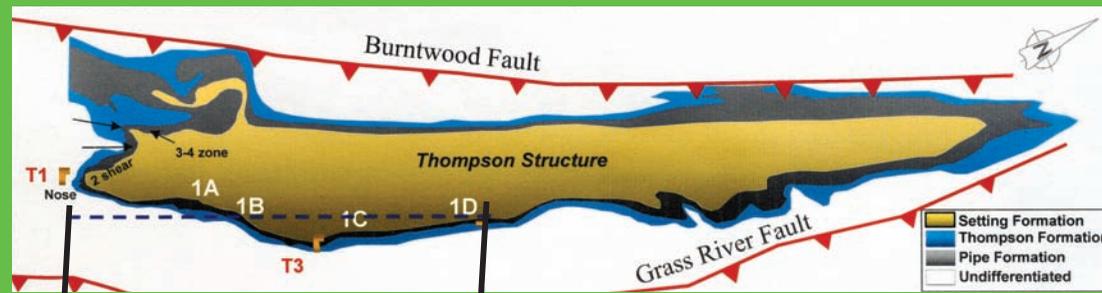


Vale hosts annual Open House sessions to help keep the public informed of its progress and to get feedback from the community.

Members of the Community Liaison Committee, which represents stakeholders within the Thompson region, toured the site of the decommissioned Soab South Mine (top photo). Members of the Thompson Economic Development Working Group (TEDWG) (bottom left) discuss details on one of the action plans. Development of the plans included community input from focus groups and community presentations (bottom right).

Footwall Deep Project

Vale begins feasibility study for what could extend the 'life of mine' to 2028



Thompson Mine Project Location

For 2014, the exploration program is concentrated in and around Thompson Mine. Multiple drills are working from underground locations to expand the boundaries of known ore bodies.

The north end of Thompson Mine has been under study for several years — geologists have studied core samples taken from thousands of feet below surface; mine engineers have studied various ways to access the potential ore; and, accountants and analysts have researched costs and returns on investment. That study took an even more positive turn in 2014 when the Footwall Deep Project FEL 3 Study was launched.

There are four stages in Vale's Project Development System (PDS). FEL stands for "Front End Loaded", meaning the risk associated with a project is managed responsibly by front end loading the technical and financial work that goes into a particular project. FEL 3 is the feasibility study stage which immediately precedes the project execution phase. "If the FEL 3 Study is successful and the required approvals are put in place, we would move into the project execution phase," said Mark Scott, General Manager, Mining & Milling. "But I have to stress the 'if', as there is a lot more work required. The technical and financial dimensions of the FEL 3 study need to be solid in order for final approval to be gained from the Vale Board of Directors."

"One thing is certain, if the Footwall Deep Project is approved for execution, it will form the heart of our mining operations in Manitoba for the next 15 years."

The Footwall Deep FEL 3 scope includes a potential 11 million tons of nickel-bearing ore located in the footwall and mid-band zones at the north end of Thompson Mine between 4250 and 5750 Levels. It includes all the associated infrastructure required to produce ore from this area through 2028. Infrastructure includes driving a ramp down to 5800 Level, establishing working levels at 100-foot intervals on the way down, along with ventilation, backfill, dewatering and material handling upgrades throughout the Thompson Mine material handling system. The FEL 3 Study involves

the detailed design, planning and scheduling of this work, suitable for the actual execution of the project. The FEL 3 Study will carry on through 2014 and into 2015.

"If the FEL 3 Study goes well and all the pieces come together, we hope to submit the project for approval by early 2016," said Mark. "While we are optimistic, there are many variables involved in a project of this scope, all of which need to be accounted for in the FEL 3 Study. One thing is certain, though, if the Footwall Deep Project is approved for execution, it will form the heart of our mining operations in Manitoba for the next 15 years."



Exploration of the Footwall Deep Project continues underground on the 3600-foot level. Drill core from approximately 6,000 feet below surface is brought to surface for analysis.

Tailings Management

Vale expands the capacity of the Tailings Management Area to accommodate future production



The Tailings Management Area (TMA) is a collection and settling area for mine discharge and mill tailings. It comprises approximately 58 square kilometers. It was designed in 1960, at a time when tailings deposition was 6,000 to 8,000 tons per day and mine closure was expected to be 2013. The current mine forecast is for tailings to peak at 7,000 to 11,000 tons per day and mine cessation sometime after 2028.

A plan was needed to expand the capacity of the management area without increasing the size of the footprint. Work on that plan began in 2011 and continued through 2013.

Several initiatives to upgrade the TMA that were started prior to 2013 were completed last year. They include completion of upgrades to the CN Dam, raising of Dam A1 and

“Several earth and rock-fill dams form the TMA, which is divided into five sub-basins referred to as Areas 1 to 5. There is also a control structure called the Discharge Weir. The TMA is fed by the Grass River water system via marshy creeks at the south end of the Vale property. Water travels northeast to discharge at the Weir and eventually into the Burntwood River system through marshy creeks at the northeast end of the basin.”

A, as well as continued work on the Dam B coffer dam. The total effect of this and other work completed the previous year was to raise water levels by approximately one foot in areas 1, 2 and 3 of the TMA.

“We want to eventually raise the water level by approximately four to five feet,” explained Dennis Pilon, Tailings Coordinator. “We want to cover the exposed tailings in Areas 1 to 3 to reduce the nickel load to the basins. Raising the level of the water will allow us to deposit the required tailings to maintain the planned mine production. We still have to finish Dam B in order to raise levels in other areas of the TMA.”

Operations continue during construction, which requires ongoing monitoring and management practices to ensure Vale is protecting its downstream water courses, as well as maintaining compliance with environmental permitting. These practices include annual bathymetric surveys that determine the contours of the bottom of the TMA. These surveys help determine where to safely deposit tailings. The addition of lime to suppress nickel load is also employed during specific times of the year.

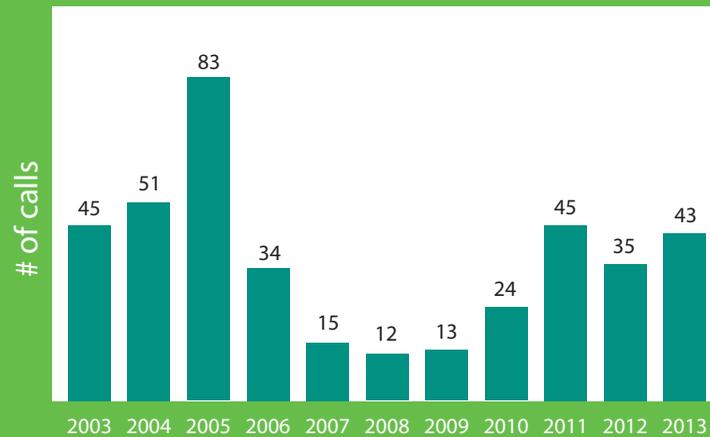
Flow leaving the catchment area at the control structure known as the Weir (top photo) is sampled and analyzed weekly with reports sent to provincial and federal governments. Another control structure is the Narrows flow gate and coffer dam, which were completed this year (photo left). The merganser standing on a log by the CN dam (bottom right) is an example of the abundant wildlife found in the TMA.

Environment

Partnerships help Vale work toward zero harm to the environment



Volume of Calls to the Manitoba Operations' Environmental Hotline 2003-2014



Anyone can call 204-778-8888 to report sulphur dioxide in the air or any other environmental concern.

Vale is a working partner with several organizations in monitoring air, water and wildlife to ensure our operations are meeting the SafeProduction principles of working toward zero harm to the environment.

The most recent partnership began in 2012 when Vale Manitoba Operations started helping the Nickel Producers Environmental Research Association (NiPERA) in the collection of high-nickel sediment for ongoing sediment toxicity studies. This research will help generate higher quality and more realistic sediment quality standards, which is important both to the environment and to the industry. Collection of sediment continued through 2014.

In 2008, Manitoba Conservation invited Vale Manitoba Operations to participate on an advisory committee for the management of woodland caribou in the Wabowden and Wapisiu caribou ranges. Studies of migration patterns and other aspects of caribou habits and habitat have been ongoing. In 2014,

Caribou Strategy

“Vale will be involved in the development of management action plans, along with Aboriginal organizations, government, non-government organizations, industry and the public. The goal of the strategy is to ensure the needs of caribou are met and human developments and actions are sustainable.”

Manitoba Conservation will release the updated draft of the Boreal Woodland Caribou Conservation and Recovery Strategy for Manitoba.

Ozone concentration analysis in the atmosphere was added in 2013 to an air quality monitoring partnership that started some 10 years ago. The partnership is with Manitoba Conservation and involves an ambient air quality monitoring network within the city of Thompson that monitors sulphur dioxide, particulate matter and heavy metals. Data collected has contributed to pollution abatement activities locally, as well as to Canada-wide strategies.

In addition to these partnerships, Vale continues daily, weekly and monthly sampling of water at various locations within its operations and at its Tailings

Management Area. Results are reported to both provincial and federal levels of government. Air quality is continuously monitored at its four stations located throughout the city of Thompson.

Vale continues to employ the Voluntary Emissions Reduction Program (VERP) whenever wind currents blow the plume from the stack towards the city, helping to reduce levels of sulphur dioxide to acceptable limits. And it continues to operate its 24-hour Environmental Hotline. Anyone can call 204-778-8888 to report sulphur dioxide in the air or any other environmental concern. (See accompanying chart.)

A variety of wildlife thrives in the region of the Vale Manitoba Operations site. A red fox rests beside a cache of pipe for the Tailings Management Area (photo left), while a family of moose crosses an open space in the area of Birchtree Mine (right).

Northern Employment Strategy

Vale invests in tomorrow's workforce by creating awareness among youth



At Vale, careers in mining do not begin with a job application. They begin in elementary schools. "Our priority has been to develop a robust pipeline for our future workforce," said Ryan Land, Manager for Corporate Affairs and Organizational Development. "We begin that pipeline by creating awareness of mining in general to students starting in elementary school!"

One of the most exciting initiatives for creating awareness in 2013 was the delivery of Mining Matters to approximately 550 youth in Thompson and Nisichawayasihk Cree Nation (NCN), as well as to educators. Vale has been a sponsor of Mining Matters, an initiative of the Prospectors and Developers Association of Canada (PDAC), since 2010 at the national level, but the 2013 program in northern Manitoba was the largest delivered to date. The program uses hands-on activities and games to teach the full life cycle of mining — from finding resources to refining those resources for market.

Vale has found that one of the most critical times to reach students is when they are in Grade 8, as they will be making course selections for Grade 9 that will help advance their career choices. In 2013, Vale continued several initiatives

"The most critical times to reach students is when they are in Grade 8, as they will be making course selections for Grade 9 that will help advance their career choices."

to reach these students. A Vale-initiated program is a tour of its operations tailored for Grade 8 students from Thompson and NCN.

Vale also supports Skills Manitoba-Canada with several of its northern programs. These include the Northern In-School Liaison program for Grade 8 students, the Northern Young Women's conference and, new in 2013, a northern young men's conference, aimed at introducing them to careers in trades and technologies.

Vale continued to sponsor the Mineral Sciences Program at R. D. Parker Collegiate in 2013. This program offers students in Grades 9 through 12 courses in mining-related matters ranging from geology to rock mechanics. Vale also partnered with Keewatin Tribal Council in 2013 to produce a Community Employment Pathways Aboriginal Job Seekers Resource Guide that will be distributed in 2014.

Vale supports post-secondary education programs, including the Aboriginal Engineering Access Program (ENGAP) at the University of Manitoba. Vale allocates funds to assist northern Aboriginal students in the program.

Not all Vale sponsorships and partnerships are directly related to mining. The company supported the Earth Rangers program, bringing it to the School District of Mystery Lake in 2013. Earth Rangers delivers a message of conservation and how our actions affect wildlife.

"We also attend as many career events as possible," said Ryan. "We focus on what we call our TEDWG* region, but also include other northern communities such as Cranberry Portage and The Pas. It was only a few years ago that we did not have enough applications from this region to fill jobs. That is no longer the case."

Creating awareness is a large part of Vale's Northern Employment Strategy. Just as important is ensuring potential employees understand an industrial work environment and are prepared to work safely within that environment. The Process Operators in Training program was initiated, in part, to help achieve this goal. (See next page.)

*(TEDWG stands for Thompson Economic Diversification Working Group. It identified a 'catchment' area for communities using Thompson as a service and economic hub).

Vale is proud to sponsor events for youth that help develop their understanding of the world around them. The Kid-netic Energy Camp (top photo) has energized education in science for dozens of Thompson youth. Special attention is paid to education in mining through special tours (photo bottom left) and participating in the Mining Matters initiative (bottom right).

Growing Our Own

Meet the graduates of the POinT program — they are Vale employees



Photo: Chris Sundevic



Photo: Chris Sundevic

“When I applied to Vale, I was nervous. I had no experience in industry. But after the POinT program and a few months of actually working at Vale, I feel I could be a spokesperson for women to get into the industry!” exclaimed Holly Martin, Skid Steer Operator in the Thompson Smelter.

Holly is one of 37 people to graduate from Vale’s Process Operator in Training (POinT) program. Vale Manitoba Operations launched POinT in June 2012 as part of its Northern Employment Strategy.

Prior to implementation of POinT, 80% of new hires came from outside the Thompson region. As of 2012, approximately 50% of all new hires would leave the company within the first two years. In another two years, 75% of new hires were gone. This resulted in labour shortages, increased costs and the inability to meet production targets.

In the meantime, Vale was aware of the large, untapped labour market available in surrounding Aboriginal and northern communities. It also realized that most people in these communities were unaware of the potential for developing a career within industry. So, it developed the

“I felt prepared in that I understood the big picture, the terminology and the principles of risk management. I didn’t have to start from scratch.”

POinT program — to both educate northern people about careers in industry, and to provide a pathway to jobs. Today, approximately 90% of the 37 graduates are still employed at Vale’s Thompson operations.

“We started in a classroom setting, which is good,” said Holly, who lives in Thompson, “because everyone is familiar with a classroom. We learned theoretical knowledge, toured areas and were provided with information that many long-term employees would have learned. I felt prepared in that I understood the big picture, the terminology and the principles of risk management. I didn’t have to start from scratch.”

Malcolm Hunter lives on the Nisichawayasihk Cree Nation (NCN) and commutes the hour to Thompson. The five-days-on, four-days-off cycle works well for Malcolm, a Plating Tankman in the Thompson Refinery. He was raised by his grandparents and has a close connection to the outdoors. He particularly loves hunting and providing for his family.

“When you go out on the land all the stress disappears. Then you come back into work, and you can work as hard as you want. It’s a good combination. It’s a stepping stone to a new career,” he said.

The program is comprised of four modules: Industry Awareness, Safety, Smelter Operations and Refinery Operations. The program includes guest speakers and tours of various areas. As well, the classroom instructor becomes a mentor to the students as they transition to the workplace.

“When I started working in September 2013, I was the single new hire laborer in the Smelter,” recalled Holly. “But I still felt confident. Everyone was supportive — from my supervisor to my co-workers. The information I learned in POinT transferred well to the actual work. I feel I have come a long way from not knowing what a mine shaft and smelter are to operating equipment in the smelter.”

Participants in the POinT program spend some time in the classroom, but they also tour all areas of Vale’s Manitoba Operations to get a better understanding of mining and processing (top photo). Malcolm Hunter of the Refinery (bottom right) says the work cycle, which provides four consecutive days off, provides time for family and outdoor activities. Upon graduation from the POinT program, Holly Martin of the Smelter (bottom left) said she felt prepared to enter an industrial work environment.

One Procurement

Vale re-establishes local procurement team

If you supply Vale in Thompson with products or services, you will appreciate the move in July 2013 to re-establish a local procurement team. Four Procurement Analysts are now available to help vendors address concerns and to help Vale improve its local purchasing processes.



Photo: Chris Sundevic



Photo: Chris Sundevic

Beth Ann Coombs, on a recent tour of local supplier Norwest Manufacturing, learned about the quality controls in making cathode boxes for the Thompson Refinery. Manager Will Juneau appreciates having a local contact to address concerns.

“The big benefit to this action is that our vendors and suppliers now have a local contact point — someone who is on site and who understands our procurement systems.”

“The big benefit to this action is that our vendors and suppliers now have a local contact point — someone who is on site and who understands our procurement systems,” explained Donna Patterson, Manager of Operation Support & Procurement. “If a vendor is having a problem, we can cut through barriers to help them.”

Other benefits come in the form of expediting emergency purchases, informing local businesses of potential service or procurement contracts and providing the assurance that concerns are being heard and addressed.

“Having a local point of contact is tremendously important to our vendors,” said Donna. “They now have a person to phone locally, who will call them back or answer their emails in a timely manner. It could even be their neighbour, so the confidence that concerns will be addressed is greatly improved.”

Most of Vale’s purchasing is still handled through the procurement offices in Toronto or Rio de Janeiro. Some goods or services, however, are more regional or site specific in nature. The local procurement analysts are an especially valuable resource to the procurement process when Thompson-specific purchases or services are required.

“Some of our needs are more unique in nature,” explained Donna, “such as our cathode boxes from Norwest Manufacturing or our one-of-a-kind items such as the lime slaker in the Mill. Or, we may have a special project, such as testing anode bags. We become the point of contact or the conduit to ensure that we are getting the best value. We are aware of freight charges, distances and so on, so we are also a valued asset to the regional and global purchasing team.”

Thompson’s Procurement Analysts are Denise Horton, Sherri Hohl, Beth Ann Coombs and Heather Thompson.

SLAM Dunk

Vale is turning garbage into a resource

In 2013 we changed our view on garbage. Instead of seeing it as waste, we began to think of it as a potential resource. SLAM Dunk, a new waste management program, provided tools to help separate the waste into streams that could be recycled. This keeps waste out of the landfill, thereby extending the life of the landfill without increasing the size of its environmental footprint. It also helps offset the costs of recycling.

“Our commitment to the environment goes beyond simply complying with regulations,” said Toni Paulic, Senior Engineer. “It reflects our corporate values and requires a commitment from everyone on Vale Manitoba Operations property — employees, contractors and visitors.”

Toni said the plantwide objective is to continually increase the amount of waste that is diverted from the Vale landfill. The company decided in 2013 to take its learnings and successes and share them with others in the community. Its first step in this direction was in March 2014 with Grade 8 students in

Thompson during a Learning for a Sustainable Future youth forum. “Three sessions were held where we shared what goes into making good choices to help Reduce, Reuse and Recycle,” explained Toni.

2013 saw a total of 48% of Vale’s waste diverted from landfill (with a peak of 62% in August) and at the end of June 2014, 58% has been diverted, bringing us closer to our goal of extending the life of our new landfill.

“As a potential resource, our new way of thinking resulted in more than \$20,000 from new rebates which included pallets, recycling and wet cell batteries. Any way you look at it, SLAM Dunk can be considered a success!” concluded Toni.

“Our commitment to the environment goes beyond simply complying with regulations.”



Employees, contractors and visitors are able to sort recyclables according to colour-coded bins at their work sites. Since the inception of SLAM Dunk, 144 bales of recyclable material, adding up to 32 metric tonnes have been shipped for processing.



Memo

To	Matthew Vanderhyden	File no	TE143004
From	Michael French	cc	Mike Sauerteig Michael Cyr Andy Small
Tel			
Fax	(506) 857-9974		
Date	April 8, 2015		

Subject: Dam B vs. Mount Polley Perimeter Dam

In response to your e-mail message of April 3, 2015 regarding similarities and differences between Vale Thompson Dam B and Mount Polley Mining Company (MPMC) Perimeter Dam, we have prepared a side-by-side comparison of the two structures, presented in tabular form on the following page.

We trust that this comparison provides the information you are seeking. Please feel free to contact any of the Amec Foster Wheeler project team should you have further questions.

Sincerely,

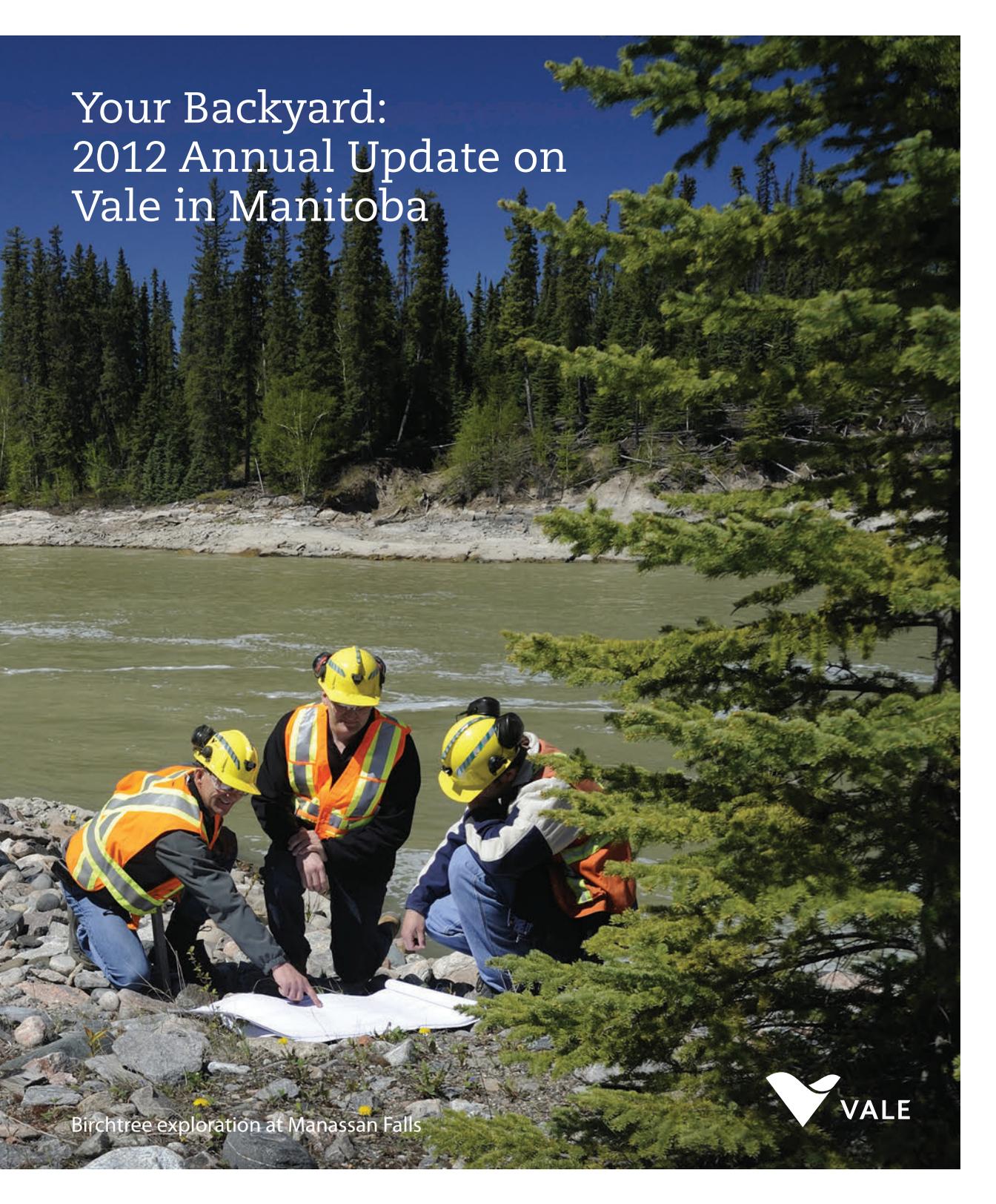
**Amec Foster Wheeler Environment and Infrastructure,
a Division of Amec Foster Wheeler Americas Limited**

A handwritten signature in blue ink that reads "Michael French".

Michael French, P. Eng.
Direct Tel.: (506) 856-9650
E-mail: michael.j.french@amecfw.com

	MPMC Perimeter Dam	VT Dam B	
		Existing	After Phase III Raise
Date of original construction	1996	Early 1970s	Early 1970s
Purpose	Impoundment of tailings (and water during operational period).	Impoundment of tailings and water during operational period and closure.	Impoundment of tailings and water during operational period and closure.
Design concept	Zoned earth and rock fill dam.	Zoned earth and rock fill dam.	Zoned earth and rock fill dam.
Construction method	Modified centreline	Centreline	Downstream
Maximum height	148 ft	85 ft	91 ft
Length	6,870 ft	1,100 ft	2,053 ft
Downstream slope	1.3H:1V	2H:1V	3H:1V
Spillway	None.	Concrete water control structure capable of routing the IDF for the operational period.	Concrete water control structure capable of routing the IDF for the operational period.
Raise history	Raised 8 times between 1996 and 2014. Raises supported by impounded tailings.	None to date.	1 st raise scheduled to begin in 2015.
Instrumentation	Piezometers, inclinometers, settlement markers. However, insufficient to properly assess conditions in the foundation.	Piezometers, inclinometers, settlement markers. Pore water pressure does not affect strength of bedrock foundation.	Piezometers, inclinometers, settlement markers. Pore water pressure does not affect strength of bedrock foundation.
Current factor of safety	1 (at failure through the foundation)	1.3 (corresponds to a shallow slip in the slag shell, greater than 1.5 for deep-seated failure)	2.0 (corresponds to a deep-seated slip in the original slag shell)
Fill materials adequately characterized and modeled?	Uncertain. The raise strategy created a convoluted cross-section that was difficult to model.	Yes. The existing dam was built in a single stage. The cross-section is simple, comprising 2 main fill types.	Yes. Extensive modeling was completed to represent the various stages of construction.
Foundation adequately characterized and modeled?	No. The existence and nature of the upper glaciolacustrine unit, which ultimately experienced undrained failure, was not appreciated.	Yes. The dam is founded on bedrock, which is not susceptible to this type of failure.	Yes. The raise is to be founded on bedrock, which is not susceptible to this type of failure.
Water balance adequacy?	No. Too many uncertainties in the approach used.	Yes. A detailed water balance was developed for the Tailings Basin and has been followed by Vale.	Yes. A detailed water balance was developed for the Tailings Basin and it is expected that Vale will continue to follow.
Filter adequacy?	No. Filter was often too coarse and internally unstable.	Yes.	Yes.

Your Backyard: 2012 Annual Update on Vale in Manitoba



Birchtree exploration at Manassan Falls



Where We Are Today



Vale is proud to report the accomplishments of our industry-leading Manitoba Operations to the community. As a life-long Northerner and a resident of Thompson, I take our responsibility and commitment to the people in this region very seriously. I trust that you will see that demonstrated clearly — in both words and action — as you make your way through this report.

As you are likely aware, our operations, and Vale's broader business, have recently faced significant challenges, largely as a result of a downturn in the global commodities market and, in the case of Base Metals specifically, the lower price of nickel. We are overcoming these challenges and improving our business every day, while remaining committed to SafeProduction through managing risk to As Low As Reasonably Achievable (ALARA). One of our mines was once again

recognized as being amongst the safest in Canada when T-1 Mine received the 2012 John T. Ryan Award for the safest underground metal mine in the prairies and territories. This success is a team effort and it reflects the commitment of our entire operation to the actions of SafeProduction towards achieving zero harm: **Plan, Accept, Care and Lead**. In seven of the last nine years, our mines have been acknowledged regionally and nationally with John T. Ryan Awards, which is a tremendous accomplishment.

We are also focused on ensuring the long-term sustainability of our operations by controlling our costs and improving our productivity. This will require the support of not only our employees, but also our communities and stakeholders. When our communities are healthy and strong, so is our business. With this in mind, our ongoing investments continue to

prioritize economic development, wellness initiatives, environmental awareness, infrastructure renewal, cultural events, education, Aboriginal inclusion, and workforce development.

We launched our Northern Employment Strategy late in 2011, and it has meant a significantly increased proportion of our hiring has happened in the region. This is a good story for our business and for our communities, and it is one we will continue to write as we continue the program in 2013.

Again, our intention is always to "do what is right." We value your input as it informs our decision-making and our business processes. Please take a moment to complete a feedback card or respond using the contact information enclosed.

Lovro Paulic
Vice-President,
Manitoba Operations

We are what we do

Mission

To transform natural resources into prosperity and sustainable development.

Vision

To be the number one global natural resources company in creating long term value, through excellence and passion for people and the planet.

Values

- Life matters most
- Value our people
- Prize our planet
- Do what is right
- Improve together
- Make it happen

Celebrating SafeProduction

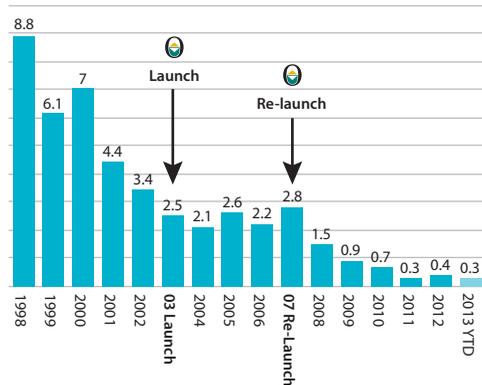
It has been more than a decade since Vale's Manitoba Operations and the USW Local 6166 first adopted SafeProduction as the joint risk management system with the daily goal of zero harm — to people, the workplace, the communities where we operate, and the natural environment.

SafeProduction is an interdependently adopted approach that is based on the actions of Plan, Accept, Care and Lead combined with the business goals of Profit, Cost, Margin and Compete. It uses specific tools and processes to identify hazards, the risk associated with the hazards and to manage and reduce that risk to As Low As Reasonably Achievable (ALARA) both at work and at home.

A key component to the success of SafeProduction is union involvement. The strength of standing together in promotion and support of the SafeProduction fundamentals has allowed Vale's Manitoba Operations to improve risk management every day. Indeed, one of our mines, T-1, was recognized as being the safest underground metal mine in the prairies and territories in 2012. Our mines have been recognized either regionally or nationally through the John T Ryan program seven out of the last nine years — not a coincidence that it is within the same timeframe that the actions of SafeProduction were adopted by the company and union.



Thompson Historic Trends — Disabling Injury Frequency



SAFE PRODUCTION

SafeProduction: 10 years strong

Thanks to your commitment and dedication, we are celebrating 10 strong years of SafeProduction in Manitoba.

We are committed to:

- Planning all work with risk assessment
- Accepting the boundaries around our work — and doing the right things, the right way, all of the time
- Caring for ourselves and each other
- Leading by example

Zero Harm Through SLAM Dunk

Vale is implementing SLAM Dunk — a waste management system that will help us to move closer to achieving zero harm to the environment.

Prior to the implementation of this program, very little of Vale's waste was diverted from landfill. In 2012, the highest 'diverted from landfill' level achieved was only 16% (August). Since implementation, we have improved this performance to as high as 51% (June 2013).

SLAM Dunk segregates waste at the source so that it can be converted into resources. Colourful containers help to facilitate the segregation of waste, much of which can be sold to other industries that recycle the materials into usable products.

The intent of the SLAM Dunk initiative is to promote sustainability, and help our people make the right choices without impeding on our everyday activities. Every Vale employee, contractor and visitor is equally responsible to the program and helping us reduce, reuse and recycle.



Sam Davies, geologist-in-training, Exploration, is a new Vale employee who takes SLAM Dunking seriously — at his work station and for his department.



Growing Our Own

Traditionally, Vale's Manitoba Operations in Thompson has attracted employees from across Canada. But there are drawbacks to recruiting employees whose families live in distant locations. Today, Vale is working hard to attract people who live in the region, love the north, and can remain close to their extended families. This led to the development of the Process Operator in Training program (POinT) in 2010, and the broader adoption of a Northern Employment Strategy.

The eight-week POinT program brings Northerners with limited exposure to heavy industry to Thompson. The program provides an industry-based education platform with an in-depth view of our operations, processes and SafeProduction. As a result of the Northern Employment Strategy, Vale hired 100% of its entry-level and process operator employees from within the region — representing 11 northern communities.

Two POinT programs are scheduled for 2013. For more information, please visit www.valejobs.ca.



Since the inception of the Northern Employment Strategy, Vale has hired 100% of its entry-level and process operator employees from within the region.



The eight-week POinT program provides an in-depth view of our operations, helping to develop an appreciation for the underground environment and the challenges within it.

The deeper we dig down, the further we extend our reach.

At Vale, we believe it's important to put as much back into our communities as what we take out of the ground. Here are just some of the shared legacies we – and our 7,000 Canadian employees – helped build in the communities we call home.

20,000 hours



Funded and contributed to the Thompson Economic Diversification Working Group (TEDWG) – 20,000 hours of engagement between stakeholders, government departments, agencies and NGOs to address challenges and opportunities in 41 regional communities.



1.9 Million kg

Upgrades to equipment and piping at our Voisey's Bay mine in Labrador saved 735,000 litres of diesel fuel in 2011, reducing CO₂ emissions by 1.9 million kg.

\$125,000



Taking a leadership role in Health & Safety, Vale contributed \$125,000 to establish an Occupational Health & Safety Research Chair at Laurentian University in Sudbury.

3,700 Laptops



Leading corporate sponsor of the One Laptop Per Child program, helping distribute more than 3,750 laptops to Aboriginal youth, developing technology and math literacy in 40 northern communities across Canada.

16 Olympic-Sized Swimming Pools

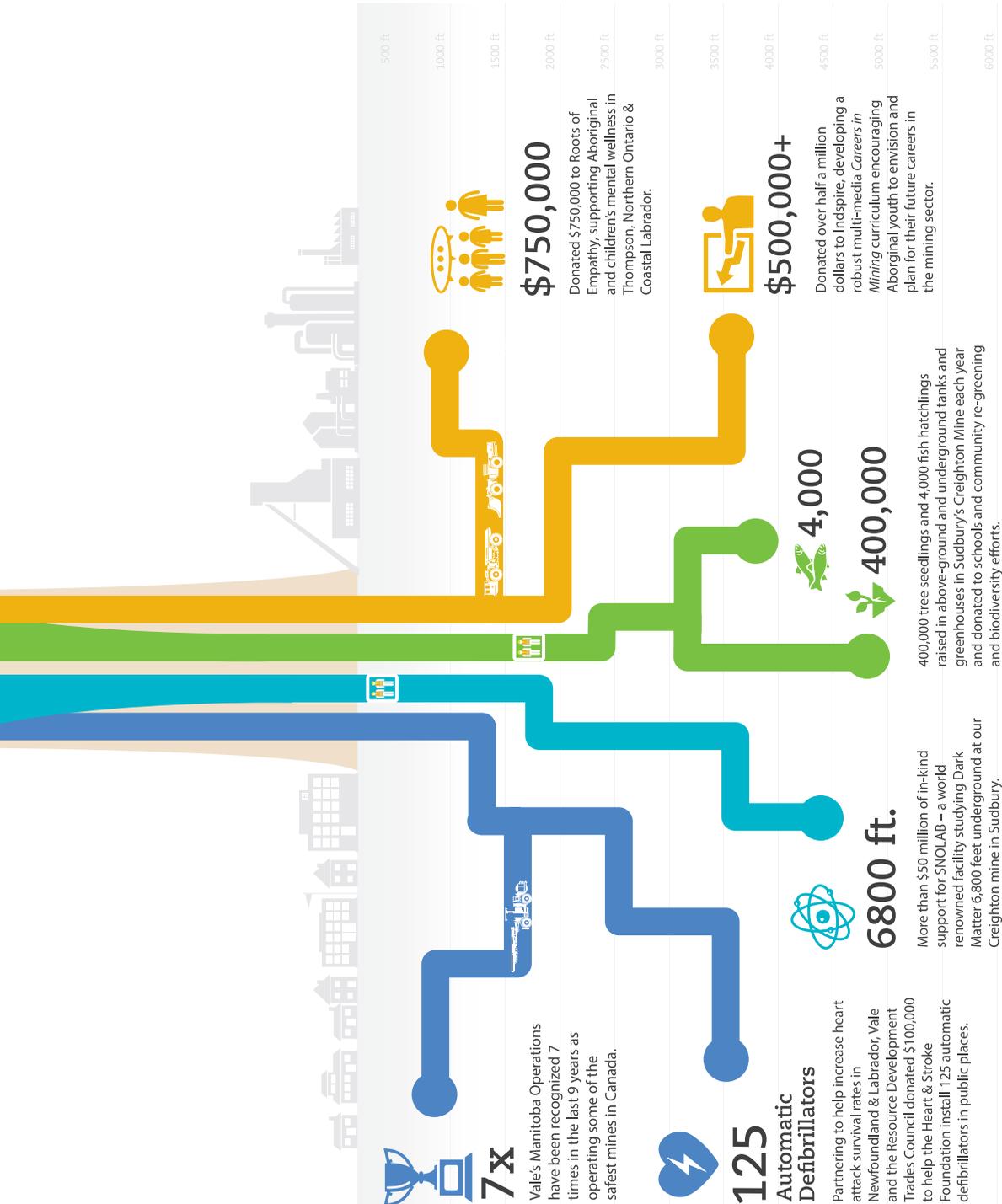


Vermillion water plant processes enough water every day to fill 16 Olympic-sized swimming pools, partnering with the City of Sudbury to supply 10,000 people with clean water.

5,800 km



The Thompson Commuter Challenge included 60 carpooling employees who eliminated the emissions from over 5,800 kilometres driven – enough to drive coast-to-coast across Canada.



Monitoring Our Environment

Vale uses the principles of SafeProduction to ensure zero harm to water downstream of our operations and within our Tailings Management Area. Daily and weekly water samples are taken at various locations, with sample results reported to both provincial and federal levels of government.

In addition, the tailings line, basin and dams are surveyed daily for any abnormalities.

The Mining Association of Canada (MAC) conducts an external audit of our performance through its Towards Sustainable Mining (TSM) initiative. We achieved a milestone in 2012 for earning an A or AA rating in every category of the Tailings Management Area audit for the first time since the adoption of TSM.

Vale also uses the principals of SafeProduction to ensure zero harm to the atmosphere. We have taken several measures to reduce particulates (dust) to the atmosphere. In 2012, we emitted 289 tonnes of particulates — 60% below the federal limit target of 735 tonnes per year. We achieved this through several initiatives including the commissioning of a new electrostatic precipitator, upgrading existing units and improving processes.

We continue to employ the Voluntary Emissions Reduction Program (VERP) whenever wind currents blow the plume from the stack towards the city. This helps reduce levels of sulphur dioxide (SO₂) to below detectable limits. If you have a concern about the levels of SO₂ in the air, please contact us at 204-778-8888.



Dave MacDonald, senior supervisor, Environment, obtains data from the flow monitor at the discharge of the tailings basin.



This naturalized area at the weir in the Tailings Management Area is part of Vale's ongoing capital upgrades.

Managing Our Tailings

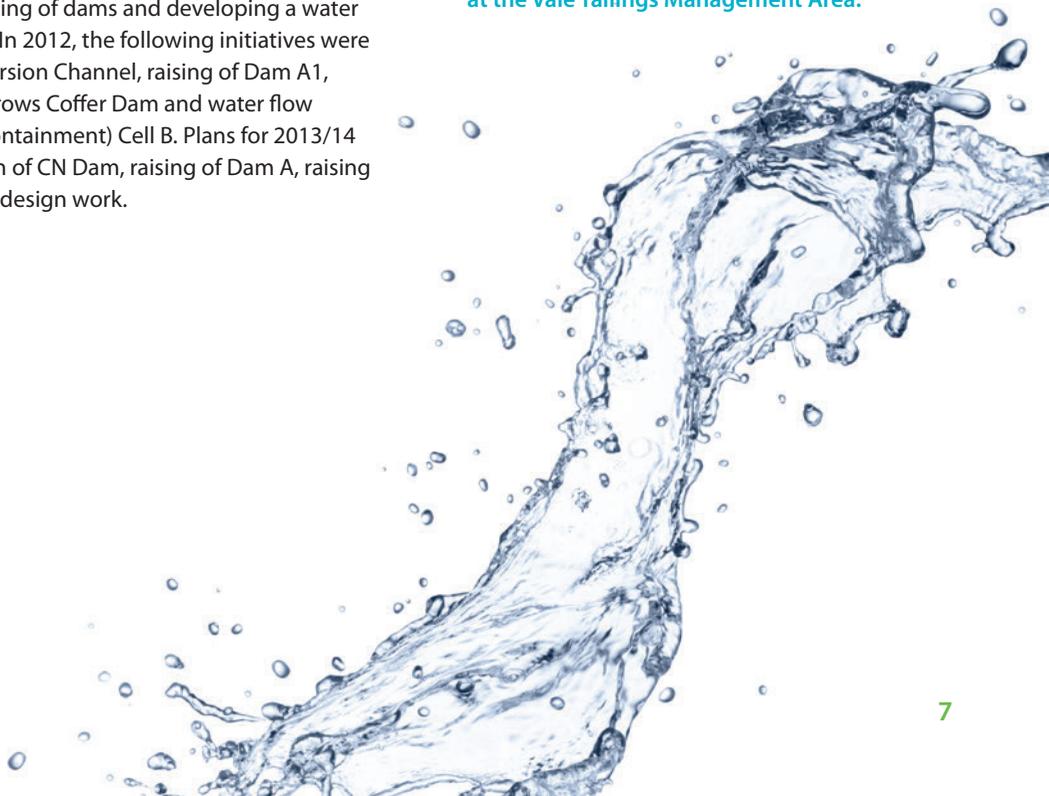
Ore is transported to the Mill where it is crushed, ground and separated by flotation into copper concentrate, nickel concentrate and tailings or waste. Tailings are then deposited into designed and approved disposal sites.

Vale's Tailings Management Area was designed in 1960 to handle up to 8,000 tons per day with a mine closure date of 2013. Current mine forecast is for tailings to peak at 7,000 to 11,000 tons per day. As a result, it became necessary to expand the capacity of the area without increasing the size of the footprint.

The four-phase project includes changes to the tailings delivery system, raising of dams and developing a water diversion structure. In 2012, the following initiatives were completed: CN Diversion Channel, raising of Dam A1, construction of Narrows Cofferdam and water flow control gate and (containment) Cell B. Plans for 2013/14 include construction of CN Dam, raising of Dam A, raising of Dam B and other design work.



The CN diversion channel and bridge are among the upgrades completed or in progress at the Vale Tailings Management Area.

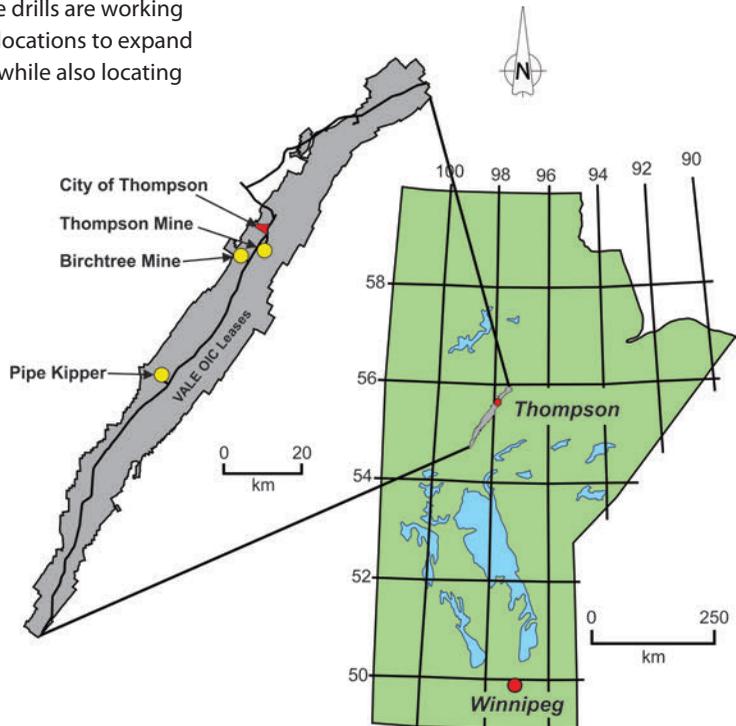


Exploration Ensures Our Future

Nickel sulfide deposits from the Thompson Nickel Belt (TNB) have produced 2,500 kilotonnes of nickel thanks to exploration that started in the late 1940s.

Initial exploration consisted of airborne geophysical surveys, followed by detailed ground geological and geophysical surveys and diamond drilling. This systematic approach has led to the discovery of more than a dozen nickel deposits.

In 2013, the exploration program is concentrated in and around Thompson Mine. Multiple drills are working from both underground and surface locations to expand the boundaries of known ore bodies while also locating new ones.



Committed to Our Community

In 2012, Vale's Manitoba Operations had one of its largest years for community investment, contributing close to \$400,000 in Thompson, its region, and the province.

This included support to more than 70 events, projects, conferences, charities and organizations, including:

- MKO for the Northern Commuter Project,
- University of Manitoba's Aboriginal Engineering Access Program (ENGAP), and
- the Rotary Splash Park.

In Thompson, we continued the Vale Employee Community Calendar, Vale Cup and employee and community engagement events such as bowling, Winter Day and Fishing Derby, parades, and Vale Night with the Northstars.

Over the past three years, Vale provided \$2.5 million to support the Thompson Economic Diversification Working Group (TEDWG) process. This resulted in unprecedented levels of research, engagement and baseline data, in addition to a new Zoning By-Law and the publication of several action plans for Thompson and its region. The action plans address education and training, restorative justice, Thompson and regional infrastructure, district development, housing, local and regional identity and economic development. For more information, please visit: www.thompson.ca.



- Working Group Members
- Invited Stakeholders
- Facilitator/Technical Expertise

TEDWG Process Quick Facts:

- Created or strengthened relationships between 10 stakeholder members
- Incorporated input from approximately 40 government departments, non-governmental organizations, and service agencies
- Hosted 25 public meetings, workshops and focus groups to engage the broader community
- Held over 60 meetings and workshops with stakeholders to gather input and develop the Plan
- Developed five Action Plans and four Regulatory Framework Plans to address systemic issues facing Northern Manitoba
- Dedicated approximately 20,000 stakeholder and consultant hours to the process over two years

For more detailed information, please visit our website www.vale.com/canada or contact Ryan Land, manager, Corporate Affairs Manitoba Operations at (204) 778-2326.

