

Rio Tinto



# Sustainable Development Report 2012

# President and CEO's Message

A sustainable business is a responsible business. This includes responsibility to protect the health, safety and environment of the people and places where we work and live. It also includes how we manage our business fiscally to ensure we have a strong and sustainable future as a business that can support communities through meaningful partnerships.

Over the past 12 months, we have continued to work towards our goal of zero harm by engaging with both employees and contractors across our business. A key focus area in 2012 was identifying and eliminating key hazards through Job Hazard Analysis, a team-based risk assessment process. Also, in Q1 2012, a detailed risk analysis of 16 potential fatality causing scenarios was completed using the Semi Quantitative Risk Assessment (SQRA) process. Additionally, each GM was asked to identify the top five fatality risks for their area and determine how best to mitigate those risks. I am also very pleased to report that our All Injury Frequency Rate (AIFR) has continued to improve and in 2012 we achieved the lowest AIFR in 10 years with a final score of 0.75.

IOC continues to build on its commitment to diversity in the workplace, and in 2012 Julie Gelfand, VP of Environment and Social Responsibility was named our Diversity Champion to ensure the focus on diversity continues to remain a priority as we move forward. We currently employ a total of 535 females and Aboriginals, which represents 23% of the employee population. An additional 1.7% of the employee population is of a visible minority and 2.3% of employees are persons with disabilities. In addition, over the past year, we have been in active discussions with Aboriginal groups to negotiate agreements on training and employment, business opportunities, social involvement and consultation.

Our commitment to the communities where we work and live remains strong. We are extremely proud to have partnered with the Labrador West Child Care Inc. (LWCCI) to see the opening of Labrador West's first all day child care centre in May 2012 (Building Blocks Child Care Centre) and in September 2012 opened the After-School Zone on a full-time basis. Both programs are thriving and are currently filled to capacity. The Community Advisory Panel continues to address issues at a local grassroots level, while the Regional Taskforce is comprised of members who work to address issues at all three levels of government. Both groups continued to work throughout 2012 on several key priority areas which are further described in this report.



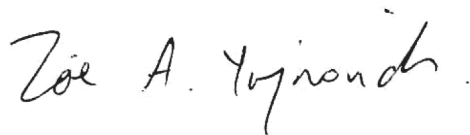
During the summer of 2012, a great deal of work was done by the Environment team to reclaim areas disturbed by exploration activities in the Labrador area. This work, along with many other projects and partnerships, which you will read about in this report, demonstrates our commitment to protecting the places where we live and work. We are taking this responsibility very seriously.

In 2012 we experienced volatility in the iron ore market unlike anything since the global financial crisis. Closer to home, we saw the impact that these types of developments can have with some of our competitors taking action to stop or postpone expansion activities that only 12 months ago were progressing at full steam. For IOC, however, the changes of 2012 have focused on delivering our expansions and harnessing the potential that this unlocks in our business.

This past year, we have seen the commissioning of CEP1 and the Parallel Ore Delivery System (PODS). As we move toward commissioning of CEP2 in 2013, it is critical that we set ourselves up for success to ensure we have a strong year and we accomplish our goals, especially around production. This means having a robust, deliverable and tested production plan in place and working hard to stay ahead of our targets.

Production costs for IOC have escalated in recent years, and within the current environment of market volatility and uncertainty the time has come for us to take action. In November of 2012, we contacted each of our key suppliers and contractors to ask for their support as we seek to reduce our total costs. Action such as this will ensure we not only deliver on our plan commitments, but also ensure that IOC remains a competitive, strong and successful business that is able to withstand any market conditions.

As I look back on the past year I can certainly say there have been challenges, but that being said, what I have gained from working through those challenges throughout 2012 is a continued focus on ensuring we are doing things the right way. We have to ensure that we are preparing this business to not only perform to the best of its ability right now, but that we are focusing on how we can ensure we have a sustainable business that is able to provide stability for employees and for the community over the long term. By focusing on our key priorities throughout 2013, I am confident we will continue to build capacity in our business, our people and our communities. I am proud to be part of IOC and I am proud to share our successes and our challenges with you in this report.



**Zoë Yujnovich**  
President and Chief Executive Officer



# Our Business

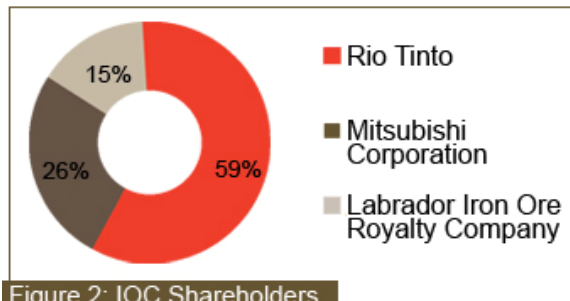
IOC is a leading Canadian producer of iron ore concentrate and pellets serving customers worldwide. The Company operates a mine, concentrator and a pelletizing plant in Labrador City, Newfoundland and Labrador, port facilities located in Sept-Îles, Quebec as well as a 418-kilometre railroad that links the mine to the port.



IOC currently employs 2,538 permanent full-time employees and has the capacity to produce approximately 22 million tonnes of iron ore concentrate per year.



IOC's major shareholder and operator is the international mining group Rio Tinto, which has activities in more than 40 countries throughout the world.



Iron is one of the most common elements on Earth, comprising about 5% of the Earth's crust. We extract iron ore from beneath the surface rock, crush it and concentrate it. We can then either transform it into iron pellets suitable for use in blast furnaces, or transport it directly by rail to our deep-water port

facility in Sept-Îles to be shipped to customers around the world. Iron is the key ingredient in the production of steel, one of the most useful and durable products for modern living.

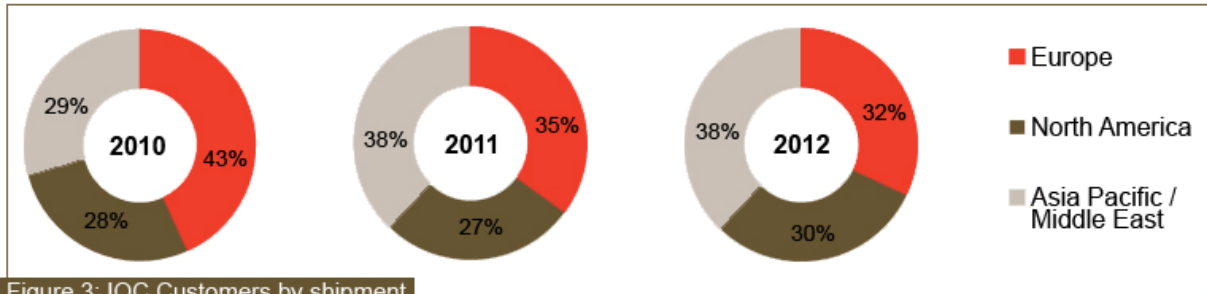
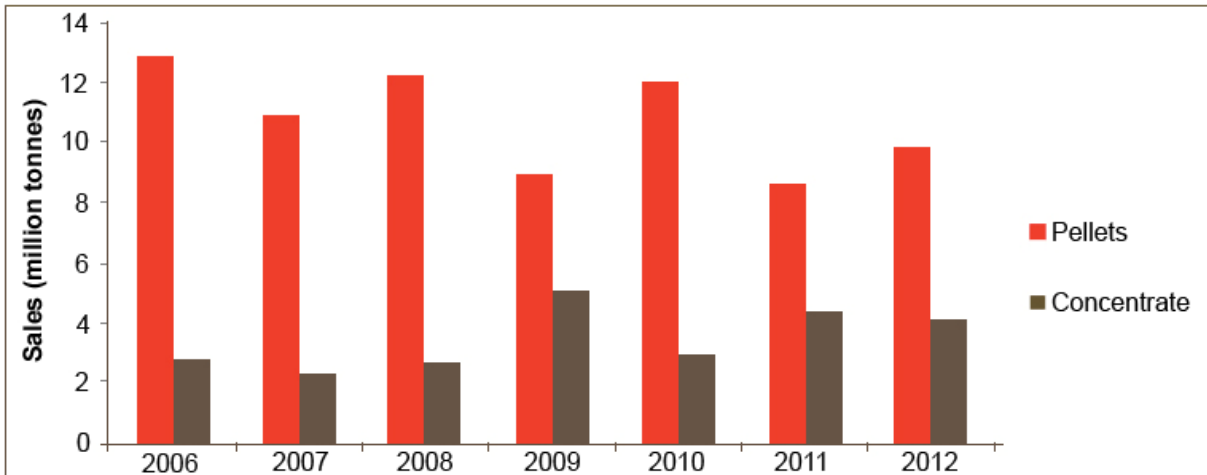


Figure 3: IOC Customers by shipment



NB: These figures only include IOC Sales (concentrate, pellets, utility pellets and chips) but not third party sales.

Figure 4: IOC Sales of Pellets and Concentrate



# Sustainable Development at IOC

Our approach to sustainable development is guided by Rio Tinto's global code of business conduct - *The Way We Work*, which addresses corporate social responsibility and sustainable development. Our focus on sustainable development — on economic prosperity, social wellbeing, environmental stewardship as well as strong governance and corporate ethics — provides the framework in which our business operates. To deliver on our sustainable development commitment, we make sustainable

development considerations an integral part of our business plans and decision-making processes.

In this report, you will find case studies and performance tables that attest to our commitment, presented under three broad headings:

- > Social Wellbeing;
- > Environmental Stewardship; and
- > Economic Prosperity.



# Social Wellbeing



At IOC, we recognize that our success is based on an engaged, safe, and healthy workforce, as well as a supportive community. Consulting with our stakeholders (employees, community groups, different levels of government, industry associations) is key to understanding expectations and adjusting our approach for a sustainable future together.

## Health and Safety

We continually strive to achieve and sustain a Zero Harm Culture through engagement with employees and contractors on our common vision and goals. Among the health and safety highlights for 2012, we worked with employees on a new tool to identify and eliminate hazards; identified the top five fatality risks employees face in their daily work; embedded the new HSEQ Management system across the organization, and achieved the lowest All Injury Frequency Rate (AIFR) in 10 years.

### Job Hazard Analysis

One area of focus for 2012 was hazard identification. We are encouraging both employees and contractors to use our Job Hazard Analysis (JHA) tool. The JHA is a team-based risk assessment process used to identify and eliminate hazards resulting in a safer workplace and improved

employee participation in hazard identification and awareness. In 2012, a total of 639 employees completed the training to lead a JHA, and an additional 608 unionized employees received JHA awareness training.

### HSEQ Management System

During 2012, we embedded the new HSEQ Management System across the organization. We have audited our system three times in the last year to ensure that identified gaps are closed.

### Semi Quantitative Risk Assessment Process

In Q1 2012 a detailed risk analysis of 16 potential fatality-causing scenarios was completed using the Semi Quantitative Risk Assessment (SQRA) process. Further analysis of the top five scenarios included the identification of critical controls and development of Critical Control Monitoring Plans (CCMP) to ensure that implemented changes are sustained over time.

### All Injury Frequency Rate

Our All Injury Frequency Rate (AIFR) has continued to improve and in 2012 we achieved the **lowest AIFR in 10 years with a final score of 0.75**.

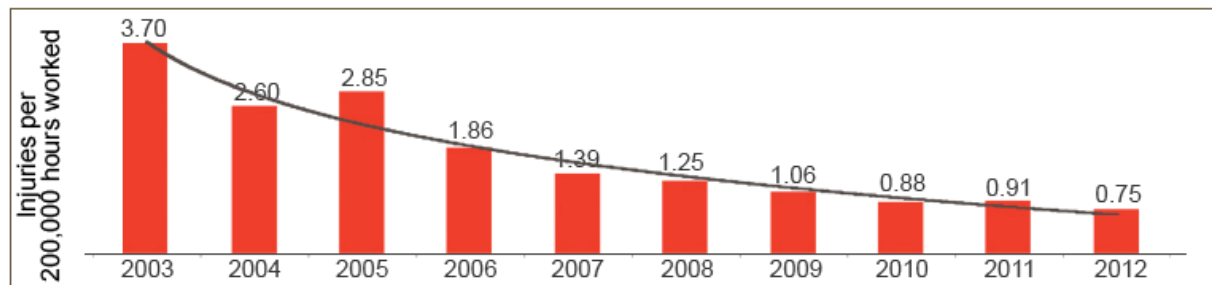


Figure 5: All Injury Frequency Rate (AIFR)

## Incident Statistics

Although IOC has had two additional lost time injuries in 2012, compared to the previous year, the severity and nature of the injuries has reduced. We have a robust incident investigation process that has assisted us to identify why incidents have occurred and how we can work towards preventing a recurrence.

**Table 1: Incident Statistics - Health, Safety or Environment**

	2011	2012
Lost time injuries	16	18
Medical treatment cases	23	22
Significant incidents	30	41
Significant potential incidents (also known as Near Miss incidents)	53	37

## Emergency Services

A new fire truck was purchased for the Labrador City site which means we are better placed to ensure our people and critical infrastructure are protected in the event of a fire. The new truck has technology that is designed to keep fire fighters out of harm's way and reduces the people resources required because it has the capacity to be operated by one fire fighter. The truck is outfitted with a robust winterization system to allow it to perform in temperatures of minus 40° C. The unit also allows IOC to manage fire events without external services.

As a part of our emergency preparedness we have undertaken a full review of our Business Resilience and Recovery Program (BRRP). This included running a desk-top scenario in Montreal Head Office along with on-site training at Sept-Îles for the BRRP team.



## Health and Wellness

We introduced a Health and Wellness education program in 2012 based on the demographic of our employee group and their health needs. Topics included diet and exercise, smoking cessation, heart disease, diabetes, and mental health. To further support the wellness program, we introduced a new Employee and Family Assistance Program (EFAP) designed to offer a vast array of support opportunities for our employees and their families across IOC.



## Facility Dust Control

In 2012, we worked to improve the control of dust in our Labrador City facilities. Our employees have protection from dust inhalation through the use of personal protection equipment (PPE). To ensure that this PPE is effective, we reviewed our Fit Testing program, which is designed to ensure that employees wearing dust masks are wearing them correctly. However, as it is always safer to work towards reducing the ambient dust levels in the facility, we have invested an additional \$1.3 million in dust control technology, such as additional containment skirts, covered conveyors and the ongoing crusher pit doors replacement program.

## Community Engagement

One of the requirements included in the Towards Sustainable Mining (TSM) protocol is Aboriginal and Community Outreach, which brings mining companies into communities to work directly with community partners ensuring a sustainable future together. Working with communities is an integral part of IOC's culture and is a responsibility we take very seriously. IOC has not only led the creation of Community Advisory Panels (CAPs) in both Labrador West and Sept-Îles, but these groups have evolved beyond expectations with meaningful impacts for the communities where we work and live. In Labrador West, the development of a Regional Taskforce, serving as a complementary function to CAP, brings together all three levels of government to address the cumulative affects of rapid growth in this area. In Sept-Îles, many ideas surfaced from the CAP and have resulted in concrete initiatives which we actively take part in. We currently participate in the *Table de concertation sur la qualité de l'air* as well as participated in the Railway ties disposal project, which has rolled out over the past two years in collaboration with Cliffs Natural Resources, the Town of Sept-Îles and the *Corporation de protection de l'environnement de Sept-Îles*.



## Community Advisory Panel (CAP) in Labrador West

In 2012, the CAP in Labrador West met on six occasions and was co-chaired by IOC and Cliffs Natural Resources. The following areas continue to be the top five priorities:

- > **Housing affordability and availability:** Increased activity at the mine has led to an influx of residents to the area, in turn, leading to pressure on available housing in Labrador West. The Labrador West Housing & Homelessness Coalition (LWHHC), of which IOC is a member, has been working tirelessly throughout 2012 to advocate for affordable housing and to provide a collective voice for those affected by the growth in our communities. The LWHHC actively participated in the Residential Tenancy Act consultation in Labrador West and have also been working diligently on an affordable housing project. In addition, a second Habitat for Humanity project has been initiated in Labrador West in 2012, with IOC contributing \$60,000 to the build.
- > **Healthcare service adequacy:** A collaborative effort between IOC, Labrador Grenfell Health and the RNC led to the streamlining of emergency services within Labrador West. IOC and Labrador Grenfell Health signed a Memorandum of Understanding to indicate mutual support and the provision of back-up ambulance services in the event of an emergency. IOC also partnered with the Royal Newfoundland Constabulary (RNC) to further promote the 911 emergency number. The CAP met with the CEO of Labrador Grenfell Health to discuss the recommendations from the Medical Services Review conducted in 2011, and initial plans are in place to work together to improve medical services in Labrador West.
- > **Childcare availability:** 2012 has been an especially significant year for the hardworking volunteers with Labrador West Child Care Inc. (LWCCI). In May 2012 LWCCI opened Labrador West's first all day child care centre, Building Blocks Child Care Centre and in September 2012 opened the After-School Zone on a full-time basis. Both programs are thriving and are currently filled to capacity. As well as participating in the project planning, IOC contributed \$100,000 to create an outdoor greenspace for Building Blocks Child Care Centre. Separately, IOC has been working on a second daycare project that will result in sixty new childcare spaces for IOC employees. Construction on the facility is ongoing, with IOC having initiated discussions with a potential third party operator who would manage and deliver the quality child care programming.
- > **Recruitment & Retention :** IOC partnered with Cliffs Natural Resources, the Town of Labrador City and Hyron to co-host a community event called *New to You!* in September 2012. The event provided an

opportunity for local groups to promote their organizations and for residents to learn about the groups and services within their communities. *New to You!* was a great success with 18 community groups participating and plans are underway to organize a similar event in Fall 2013.

- > **Community Infrastructure :** In September 2012 representatives from the Town of Labrador City, the Town of Wabush, IOC, Cliffs Natural Resources and Alderon Iron Ore Corp. visited the Regional Municipality of Wood Buffalo, Alberta. During their time in Alberta, the group met with municipal representatives to understand how Wood Buffalo has coped with the growth within their own region and how they plan to move forward. Much information was shared and the Town of Labrador City is moving ahead with collecting accurate regional data to develop a comprehensive Regional Growth Plan.

## New Regional Taskforce on Community Growth in Labrador City

Serving a complementary function to CAP, IOC hosted three meetings of the Regional Taskforce (RTF) in 2012. Where the Community Advisory Panel (CAP) addresses issues at a local grassroots level, the RTF is comprised of members who work to address issues at all three levels of government. The RTF includes senior executives from IOC and other mining companies in the region, the mayors of both Labrador City and Wabush, provincial government officials from Municipal Affairs, Natural Resources, Intergovernmental Affairs, the Aboriginal Affairs Secretariat and Labrador Affairs, and Federal representatives from ACOA. This multi-sectoral group of senior representatives works collaboratively to identify and address the cumulative effects of rapid growth within Labrador West and liaises with CAP to keep informed of community issues and priorities.

Through discussion and consensus, CAP and RTF share many common priorities (outlined below). These priorities are re-validated on an annual basis to ensure the activities of both groups remain focused on the areas that are most critical to the local communities.

Priority Area	CAP	RTF
Affordable Housing & Housing Availability	✓	✓
Childcare	✓	
Health & Emergency Services	✓	✓
Recruitment & Retention	✓	✓
Community Infrastructure	✓	✓
Environment	✓	
Land Availability		✓
Education & Training		✓

### Dialogue Tour

Accompanied by her team of senior executives, Zoë Yujnovich, IOC President and Chief Executive Officer, along with members of the executive team, toured all operations and offices to hold both one-on-one and group dialogue sessions with employees to discuss operations, the potential benefits and impacts of the expansion projects, and to listen to concerns.

### Aboriginal Engagement

IOC has been a member of the community for over 50 years and deeply believes in the mutual benefits of good relations with First Nations groups in both Quebec and Labrador. Over the past year, we have been in active discussions with Aboriginal groups to negotiate agreements on training and employment, business opportunities, social involvement and consultation. In 2012 IOC engaged aboriginal groups by supporting their efforts to meet procurement registration requirements in the Cognibox Contractor Management System and hosting job fairs directly in two aboriginal communities. While there have no doubt been complexities as we work through our relations with First Nations groups, we are committed to working through these and continuing to build on the progress we have made to date.

### Opening of Splashpad in Labrador City

As part of Labrador City's 50<sup>th</sup> Anniversary celebrations in 2011, a splashpad project was announced which seemed the perfect fit as it is a gift that will be enjoyed by future generations who will continue to grow this wonderful community. The installation of the splashpad was completed in July 2012 with the Opening Ceremony taking place on July 18<sup>th</sup>, 2012.

### IOC Celebrates 50<sup>th</sup> Anniversary of Hospital in Sept-Îles

IOC partnered with the *Centre de santé et de services sociaux* (CSSS) de Sept-Îles to help commemorate their 50<sup>th</sup> anniversary. Among many other things, IOC's involvement and participation

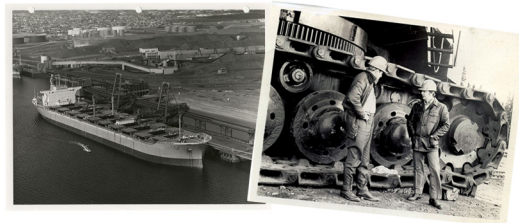
allowed the organization to hold a series of events such as a Family Day for their employees and the presentation of a crooner for those who are living in the hospital. IOC also contributed by offering prizes to the winners of the two contests organized in the community, and helped the Hospital Foundation organize its annual fundraising golf tournament which raised \$100,000 - the highest amount ever raised by this activity.

### Women in Mining (WIM) Forum and Luncheon

A Women in Mining forum and luncheon was held in October 2012 in conjunction with Newfoundland and Labrador's Mining Week. This unique forum, moderated by Heather Bruce-Veitch, IOC's Director of External Relations, was designed especially for future generations of women leaders and included an impressive lineup of women panelists who shared their stories, insights, and experiences about working in the dynamic minerals and metals industry. IOC was proud to have Nicole Slade, the Manager of our pellet plant, as one of the presenters.

### Mining Week Employee Trivia Contest

Employees at IOC were put to the test during the 2012 Mining Week Trivia contest. Each day a question was posted for employees to answer and prizes were awarded. The contest not only generated some great discussion around the workplace, but also got people digging through old photos and newspaper clippings demonstrating their engagement in the activity.



## Community Donations

IOC actively supports a wide range of activities that benefit the communities in which we operate, such as health, social and cultural initiatives. Donations this year amounted to over \$1.6 million in cash and in-kind for projects that address the critical needs of our host communities, notably:

- > Harrie Lake Greenspace (\$61,000)
- > Habitat for Humanity (\$60,000)
- > Centraide (\$52,000)
- > CSSS de Sept-Îles (\$60,000)
- > Canadian Red Cross (\$25,000);
- > Labrador Grenfell Foundation (\$25,000)
- > Mothers Against Drunk Driving (\$10,000)
- > Labrador West Ground Search & Rescue (\$10,000)

**Table 2: Community Donations for Labrador West, Montreal, Sept-Îles and St. John's**

Aboriginal	\$65,150.00
Arts & Culture	\$77,250.00
Education & Youth	\$109,378.00
Environment	\$223,676.00
Health & Safety	\$323,219.00
Mining, Processing, Rail & Maritime	\$172,179.00
Social & Welfare	\$251,360.00
Sports & Recreation	\$742,601.00
<b>Total</b>	<b>\$1,675,897.00</b>

## Employee Contributions

Employees at IOC are known for their generosity. Throughout 2012, employees in both Labrador City and Sept-Îles not only demonstrated their giving nature, but also their commitment to the environment by using the money collected from recycling throughout the year and donating it back to the communities where we work and live. In Sept-Îles, employees from all over the site contributed \$51,023 to the United Way Campaign, which IOC matched afterwards as per our agreement with this organization. Recyclables were also collected throughout 2012 and over \$1,200 were donated to Operation Enfant Soleil and the Scouts. Employees from the Concentrator and Tailings in Labrador City collected recyclables throughout 2012 and by December had raised just over \$6,000, which they gave to the 12 Days of Christmas employee giving campaign for the local Ministerial Association. Other funds collected by employees for the Ministerial Association totaled nearly \$17,000, which, when combined with IOC's matching contribution, came to more than \$33,000.



## Employee Hiring Statistics

In 2012, we hired 369 new employees. The distribution is as follows:

	Number	Percentage
Newfoundland	260	70.5
Quebec	13	3.5
Maritimes	16	4.3
Other	4	1.1
Not specified	37	10
Other areas in Canada	39	10.6
<b>Total</b>	<b>369</b>	<b>100</b>

## Our Commitment to Diversity

In addition to our community partnerships, Rio Tinto is a progressive and innovative organization in many other ways, and one that is certainly a place that empowers people to build exciting and successful careers. Rio Tinto today has approximately 77,000 employees working in more than 40 countries. An organization of this size relies on employing people from all walks of life. It is our diversity of experience, background and opinion that is a major factor in our success. IOC currently employs a total of 535 females and Aboriginals, which represents 23% of the employee population. An additional 1.7% of the employee population is of a visible minority and 2.3% of employees are persons with disabilities.



# Environmental Stewardship

Mining cannot take place without environmental impacts. The key for IOC is to minimize those impacts during the active life of the mine and ensure that as pits are closed, the land is returned with viable eco-systems for the future. A great deal of work was completed throughout 2012 highlighting IOC's continued commitment to the environment, including increased communication and consultation relating to air quality in both Labrador West and Sept-Îles, restoration of Labrador exploration sites, Caribou studies, and disposal of railway ties.



## Clean-Up of Spill on Wabush Lake

During the summer of 2012, IOC received a request for assistance from the NL Department of Environment and Conservation and Environment Canada to respond to what appeared to be an oil spill in Wabush Lake, which was migrating towards the IOC property. IOC immediately initiated its emergency response plan with the aim of minimizing any further impacts to IOC's shoreline and to assist with the protection of known migratory bird and fish habitat outside of IOC's property.

With the assistance of the Labrador City Fire Department and the local NL Department of Natural Resources, a total of 400 feet of booms were deployed in Little Wabush Lake to prevent further migration of the oil. The efforts by all involved proved worthwhile as the contamination was successfully contained and cleaned up.

## Nalcor Partnership for Block Heaters

A partnership between IOC, Cliffs Natural Resources, and Newfoundland and Labrador Hydro produced an exciting new program for residents of Labrador West aimed at reducing energy usage in the winter months. The "TakeCHARGE!" Block Heater Timer Program saw the distribution of 250 free block heater timers to residents with additional timers being available for purchase at local retailers with an instant rebate from NL Hydro.

The timers are pre-programmed and cut in only 3 hours before the vehicle is to be started, which is all the time needed for the vehicle to warm up, even on the coldest days. Use of the timers will allow residents to reduce energy use, help protect air quality, save money and reduce the wear and tear on their vehicle.

## Restoration of Labrador Exploration Sites

During the summer of 2012, areas disturbed by exploration activities in the Labrador area were reclaimed. Reclamation activities for the drill sites included the removal of all drill-related waste (i.e. drilling muds), leveling and contouring of the top soil, capping of any remaining drill casings and re-seeding of the area. Any areas impacted by sump development were also in-filled and re-contoured. A total of almost two full acres was successfully reclaimed.



## Disposal of Rail Ties

In an effort to reduce the amount of waste rail ties being stored on-site in Sept-Îles, over 161,000 rail ties were disposed of or re-used in 2012. Labrador Iron Mines assisted with the effort as almost 13,000 rail ties were re-used on their project.

The remaining rail ties were sent for disposal via incineration with energy recovery. This modern disposal process allows for a more environmentally-friendly method of disposal as energy is captured and re-used.

IOC continues its partnership with Cliffs Natural Resources, the Town of Sept-Îles and the *Corporation de protection de l'environnement de Sept-Îles* to encourage community members to dispose properly of their ties. While the Town reserved a specific space to collect all the ties, IOC contributes financially to the program in order to cover the related fees to the transportation.

## Caribou Studies

A new baseline environmental study of woodland caribou along the QNS&L railway was successfully completed by IOC in partnership with New Millennium Iron. The study aimed to understand if and how railway modifications might impact caribou herds living in close proximity. Other goals of the study were to establish winter distribution and population of the herd, identify calves within the herd and to identify and describe other human presence (i.e. cabins) in the area.

The study confirmed that woodland caribou occupy areas around the railway and, though they do tend to avoid roads and railways, human intervention remains the greatest threat to the animals.



## Air Quality

**Labrador City** - IOC has been working on an Air Quality Improvement Plan (AQIP) for many years to address community concerns, plan for new government standards for iron ore facilities in Canada, and meet our own commitment to reduce our environmental impact and improve social well-being.



A community open house was held in March to publicly review the improvements that were made to the ambient air data monitoring system, present the data collected to date, and outline what IOC has planned for the future. Each of the various engineering firms involved in the study were also available to answer questions related to their particular area of expertise.

A further update on air quality was provided to the Community Advisory Panel and the Town of Labrador City in September. IOC committed to provide regular updates on air quality to the community every six months. Results of recent studies indicate that air quality in Labrador West is similar to many communities in the Atlantic Region, such as St. John's, Corner Brook, Moncton, and Fredericton.

In addition to changes in ambient air monitoring, IOC is also in the final stages of a study aimed at determining the optimal solution for reducing emissions from the Pellet Plant stacks.

**Sept-Îles** - In June 2012, IOC agreed to participate in a new committee named *Table de concertation sur la qualité de l'air* in Sept-Îles along with the Town of Sept-Îles, the *Corporation de protection de l'environnement de Sept-Îles*, the *Comité de défense de l'air et de l'eau*, and other stakeholders such as major companies and various government departments.

A committee agreement was reached to focus on two issues pertaining to air quality: the first is obtaining an accurate overview of the current air quality in Sept-Îles and the second is to ensure that air quality information is shared with residents of Sept-Îles on an ongoing basis.

Discussions have progressed well and a series of meetings are already planned for 2013.

## Greenspace Projects

Numerous greenspace projects were completed or initiated in 2012 within our communities through partnerships with the Town of Labrador City, the Labrador School Board, and IOC:

- > A.P. Low Greenspace
- > Harrie Lake Greenspace
- > Building Blocks Child Care Centre Greenspace

These spaces allow the children of our communities to learn and grow while having a space in which they can safely enjoy fresh air, play games, and continue to develop a healthy lifestyle.

## Clean Up in Labrador City

During the months of August, September and October, Operational Engineering coordinated an extensive clean-up effort on site in Labrador City. The clean up included the Main Road leading into the plant operations, outside the Crusher, Pellet Plant South End, and Power Distribution Yard.

The clean-up was completed by Allard Industries Ltd. Using the 5S Lean principals, the project resulted in a more effective and efficient set up for organizing and retrieving items needed to complete work tasks. There was a total of 220 metric tonnes of scrap equipment, old dirt, stone, clay etc. removed from site and there were no health and safety incidents recorded.

The clean-up was championed by Barry Hillier of Power Distribution and has not only created a cleaner, safer work environment, but has instilled a sense of pride in the work areas for employees and visitors entering the site. The challenge now will be to remain focused on ensuring the clean-up efforts are sustained into the future.



# Economic Prosperity



Being a sustainable business is all about the long-term view. Is there demand for our product into the future? Are there adequate resources to keep producing? Can we produce efficiently, competitively and profitably while maintaining a healthy workforce and vibrant community and minimizing our environmental impact? In other words, does the business case make sense?

## Market Outlook

Global growth is expected to strengthen in 2013, albeit at modest rates, as emerging economies and the US drive improved economic conditions while production and employment continues to contract in Europe. China will be the dominant driver of global crude steel production growth as significant infrastructure investment is deployed and strong urbanization growth continues. In the medium term, shale gas developments could lead to lower production costs in the North American steel industry, increasing its competitiveness in the global market, and iron ore demand growth in this region. Iron ore price volatility is forecast to continue throughout 2013 and new supply sources face delays due to elevated capital costs and financial constraints.

## Concentrate Expansion Program (CEP)

In response to the improved global economy and increased demand for iron ore from traditional and new markets, IOC re-launched its three-phased Concentrate Expansion Program (CEP) that will increase capacity from 18 million tonnes of iron ore concentrate per year to 22 million in 2013.

The first stage of IOC's Concentrate Expansion Program (CEP1) is comprised of an overland conveyor to remove bottlenecks in the current ore delivery system, a fourth autogenous grinding mill to increase primary grinding capacity, and associated mine and rail equipment. This phase went into operation in Q4 2012.

The second phase (CEP2) sees IOC invest \$289 million to expand its magnetite processing facility and add new spiral lines to its gravity separation circuit by mid-2013. It also includes purchase of additional mining equipment, railway cars and a locomotive as well as upgrades at the Wabush terminal sub-substation, at which time our annual concentrate production capacity will be 23.3 million tonnes.

## Iron Ore Reserves for the Future

Reserves of crude iron ore located on IOC land are approximately 1.3 billion tonnes, which will produce approximately 0.6 billion tonnes of saleable product (pellets and concentrate), as indicated in the table below. At a planned production rate, the estimated

reserves of crude iron ore will provide approximately 26 years of production. In addition, there are also estimated Resources as indicated below.



	In-situ/As -mined		Saleable Product	
	Tonnes	Average Iron Ore Grade	Tonnes	Average Iron Ore Grade
	(in millions)	(Fe %)	(in millions)	(Fe %)
Proven Reserves	763	38%	320	65%
Probable Reserves	557	38%	235	65%
<b>Total Mineral Reserves</b>	<b>1320</b>	<b>38%</b>	<b>555</b>	<b>65%</b>

Measured Resources	590	38%	245	65%
Indicated Resources	1672	38%	698	65%
<b>Total Measured and Indicated Mineral Resources</b>	<b>2262</b>	<b>38%</b>	<b>943</b>	<b>65%</b>

Inferred Resources	825	38%	352	65%
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### Notes:

1. Mineral Resources exclude Mineral Reserves.
2. Reserves and resources have been estimated by Tim Leriche, Mark Blake and David Blechynden, who meet the criteria for being Qualified Persons, as defined by Nation Instrument 43-101 and who are all full time employees of IOC.
3. Reserves and resources comprise all mineralised material within the Middle Iron Formation of the Sokoman Formation, except limonitically altered material. No cut-off grade has been applied within the Middle Iron Formation, since all mineralised material is economically viable (above 20% weight yield). Current operating practice at IOC is to process all mineralised material from the Middle Iron Formation.
4. Mr Blake is responsible for the development of the orebody models used to estimate the above reserves and resources. In this capacity, he has verified the data used to develop the reserve and resource estimates. Most of the assays and density determinations used in the reserve and resource estimates have been carried out by the IOC laboratory. QA/QC protocols have been in place since 2004. Assay standards are inserted after each 12<sup>th</sup> sample and duplicate assays are carried out on every 50<sup>th</sup> sample. A limited number of twinned holes have been compared to valid the assays from holes drilled before the commencement of the QA/QC program. Mr Blake has reviewed the sampling protocol and validated the chain of custody of samples on an ad-hoc basis, although this is not part of the routine QA/QC process. Reconciliations of modelled ore tonnes and qualities against measured tonnes and qualities are carried out monthly, to validate the reserve models.



## The Quebec North Shore and Labrador Railway



IOC also generates revenue through its wholly owned rail company, Quebec North Shore and Labrador Railway (QNS&L), which hauls not only IOC's iron ore production to our port facility in Sept-Îles, but also carries iron ore production from other mines in the Labrador and Schefferville areas through to the Sept-Îles Junction. Use of the railway is set to increase significantly in the next few years as a result of our own expansion projects, junior mining start-ups in the area, and increased haulage for current QNS&L clients. QNS&L is also hauling one million tonnes of freight per year to Northern towns. This includes food, equipment, oil and fuel, bulk products, and general goods.

### Iron Yield Improvements

With the pellet plant not producing at full capacity, IOC's flotation equipment for removing silica from concentrate was under-used. Since the flotation plant is more efficient at removing silica than the concentrator, and less iron ore is lost in the process, some of our production flow was switched to flow through the flotation plant. So, while our pellet product still meets the silica concentrate limits required by our customers, we are able to produce these products with improved weight recovery.

### Investing in our Plant Equipment

While pellet production was at a lower capacity, we used the opportunity to improve the structural integrity of our assets, some of which date back to our 1961 start-up. By using a priority schedule, we were able to remove equipment from service, restore its integrity and place it back into production, ready for another fifty years of service.



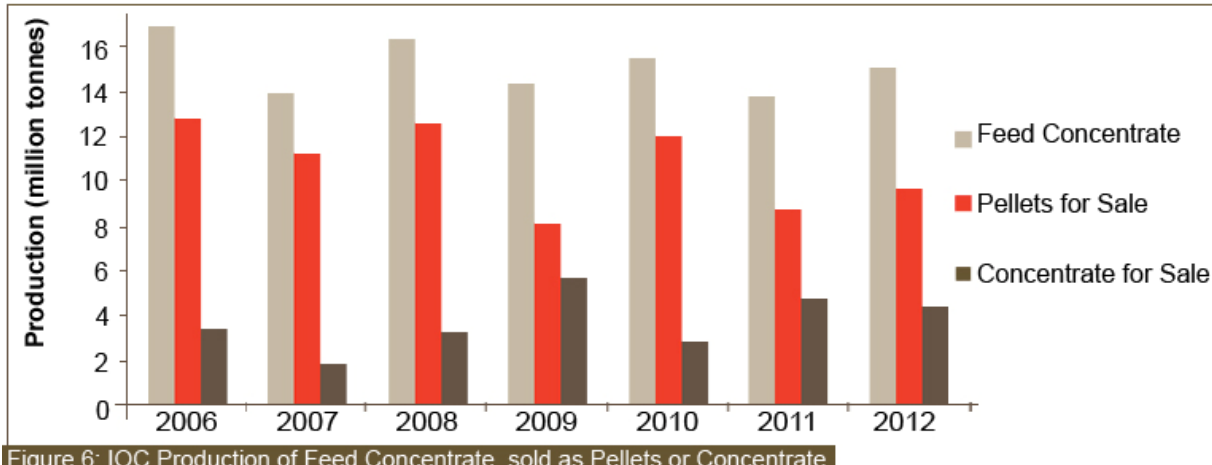


Figure 6: IOC Production of Feed Concentrate, sold as Pellets or Concentrate

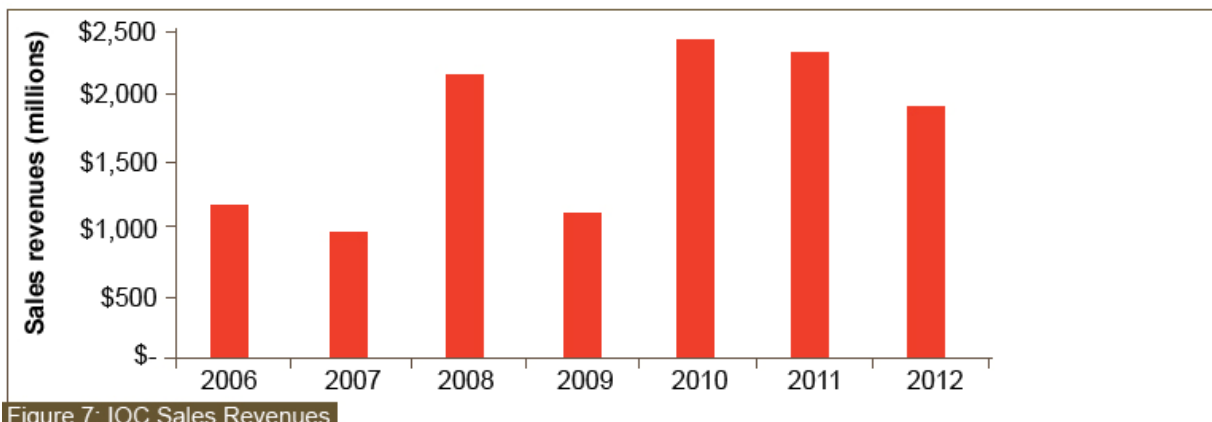


Figure 7: IOC Sales Revenues

### Payload Management – Into the Green

In 2012, the Payload Management system at IOC underwent a 13-month project contributing to significant overall mine performance improvements and a reduction in variability through the mine to pocket supply chain.

Payload Management, a production monitoring tool, is used to increase productivity and enable safer loading practices. The system works by communicating truck weight to the loader operator, enabling employees to maximize every load.

The improvements made to the Payload Management system since the project commenced in September 2011 have resulted in a more than \$20 million value gain and, after a challenging year, has seen IOC move into the green production zone in 2012. Previously, 60 per cent of loads were consistently less than the target load range and less than 80 per cent of loads were being captured. In addition, a high variability between crews with regards to performance also needed to be addressed.

“The ultimate goal was to reduce variability between operators and deliver the right load, ensuring that every load is good for the truck, good for the driver

and therefore ultimately good for the business,” said Steve Campbell, Manager Mine Operations.

Significant results have been observed by following the five guiding principles for the successful implementation of a Payload Management system including: System Maintenance and Validation; Target Setting; Loading Management; Data Capture and Reporting; and Monitoring and Feedback.

By the end of 2012 greater control in over and under loading had been achieved, with 80 per cent of loads now falling within the targeted load range and with low variability between crews. The project achieved improvements to the value of \$20,283,727 in 2012, thanks to the combined efforts and dedication of the project team, which consisted of members from Technology and Innovation Australia, Technology and Innovation USA, and local IOC team members including supervisors, shovel operators, and maintenance team members.

Adrian Third, Superintendent Mine Operations, said “It’s fair to say that the global standing of IOC at the beginning of this project was the lowest of all tracked Iron Ore sites. Now we are up with the rest of the pack, we’re in the green zone, and that feels really good. Everyone involved should be really proud of this accomplishment.”

# Awards and Recognition

## Our RT Heroes

Two IOC employees were among the winners of the Rio Tinto Heroes Programme. **Lee Preziosi**, Director, Environment and Social Responsibility, in Labrador City, and **Yannick Belley**, Maintainer/Operator - Electrical Department in Sept-Îles, were among the top 75 candidates who received a package for two to attend the 2012 London Olympics.



Sonya Flynn, Senior Advisor, Environment at IOC, submitted the nomination for Lee. As Sonya describes, "The Rio Tinto values are undoubtedly embodied by Lee. He's a great leader, mentor and all of us who follow in his footsteps are very grateful for his accomplishments". Julie Gelfand, Vice President, Environment and Social Responsibility who supported Lee's nomination adds: "For more than 30 years, Lee has promoted sustainable development. Lee works tirelessly to champion sustainability at IOC and his award winning Tailings to Biodiversity program is one of the many reasons why IOC has remained a trusted company in Canada".



Judith Marcotte submitted the application for Yannick. "Because of his common sense and integrity, he is a confidant for all his colleagues as well as for his superiors. Workers' safety and equipment are a top priority and he quickly notes the elements that could pose a risk in any situation. When a problem occurs, he

knows how to stop and take a step back but also exerts an influence on others by involving them in finding solutions. Yannick is a leader, not because he seeks recognition, but because he is an example to follow."

Both winners exemplify the quality and dedication of our people. Three other representatives of IOC were among the 37 finalists selected from the iron ore business units: Benjamin Aldous, Donna Carroll and William Patterson. To be eligible, employees had to embody the Rio Tinto values of accountability, respect, teamwork and integrity and had to be nominated by another IOC employee.

## QNS&L railway stands for safety

The Quebec North Shore and Labrador railway (QNS&L) received a Safety Award of Excellence from the Railway Association of Canada, recognizing their contribution to safe transportation. The team was recognized for identifying a portable device which uses an ultrasonic sensor to detect air leaks, including brake release interferences and failure, in train wagon brake systems during routine inspections. Mobile Equipment Maintenance superintendent Adriano Catino was present at the awards ceremony saying: "This device will eventually be used by many railroads operating in similar weather conditions facing the same challenges as we face at QNS&L. We are proud to be a pioneer in this area." A team of employees from workshops, transportation and traffic tested a variety of devices before selecting this device, which is now a fixed piece of equipment for all IOC circuit train teams to assist in the detection and repair of air leaks.



# Performance Data

Table 3: Performance Data

		2007	2008	2009	2010	2011	2012
Environmental Stewardship	Energy Use	4,720,000 MWh	5,457,000 MWh	4,694,000 MWh	4,884,000 MWh	4,394,000 MWh	4,795,000 MWh
	Greenhouse gas emissions (Scope 1 and 2)	1,056,000 tonnes CO <sub>2</sub> e	1,173,000 tonnes CO <sub>2</sub> e	1,018,000 tonnes CO <sub>2</sub> e	1,201,000 tonnes CO <sub>2</sub> e	1,028,000 tonnes CO <sub>2</sub> e	1,141,000 tonnes CO <sub>2</sub> e
	Land rehabilitated	34 hectares	35.5 hectares	26 hectares	78.5 hectares	36 hectares	50.3 hectares
Social Wellbeing	All Injury Frequency Rate (per 200,000 hours worked)	1.39	1.25	1.06	0.88	0.91	0.75
	Lost time injuries	8	17	9	7	16	18
	Medical treatment cases	25	20	16	20	23	22
	New cases of occupational illness	8	12	36	16	9	0
	Number of employees exposed to an 8-hour noise dose above 85 dB(A) <sup>1</sup>	248	272	322	347	573	510
	Community Advisory Panel or similar community meetings	2	6	4	Labrador West: 4 Sept-Îles: 3	Labrador West: 6 Sept-Îles: 0	Labrador West: 6 Sept-Îles: 0
Economic Prosperity	Number of employees	1,964	2,094	2,027	2,206	2,361	2,538
	Community Investments <sup>2</sup>	\$3.4M	\$3.6M	\$3.2M	\$3.8M	\$5.7M	\$6.17M
	Municipal, provincial and federal taxes	\$141M	\$115M	\$379M	\$448M	\$492M	\$280M
	Sales	\$973M	\$2,156M	\$1,095M	\$2,421M	\$2,335M	\$1,907 M
	Sales including QNS&L Railway	\$1,015M	\$2,200M	\$1,144M	\$2,521M	\$2,483M	\$2,073 M
	Salaries and benefits	\$202M	\$237M	\$229M	\$258M	\$296M	\$345 M

<sup>1</sup> The health and safety related statistics included here reflect the fact that in 2012 expansion was well underway and there was a significant increase in contractor numbers on site, this impacted our numbers for medical treatment cases and employees exposed to noise. Our AIFR was lower due to the higher number of contractor hours recorded in 2012 than the previous year.

<sup>2</sup> Includes health and post secondary education taxes (NL)

# Towards Sustainable Mining

Towards Sustainable Mining (TSM) is a program developed by the Mining Association of Canada (MAC) to improve the industry's social and environmental performance. As a member of MAC,

IOC adheres to its guiding principles and is committed to the implementation of extensive management processes in the MAC TSM performance areas.

**Table 5: TSM Performance Indicators**

	IOC Labrador West				IOC Sept-Îles			
	2009	2010	2011	2012	2009	2010	2011	2012
	☑	☑	✓	✓	☑	☑	✓	✓
<b>Energy &amp; Greenhouse Gas Emissions Management</b>								
Energy use management system	AA	AA	AA	AA		AA	AA	AA
Energy use reporting system	AAA	AAA	AAA	AA	AAA	AAA	AAA	AA
Energy intensity performance targets	AAA	AAA	AAA	A	AAA	AAA	AAA	A
GHG use management system	AA	AA	AA	AA	AA	AA	AA	AA
GHG emissions reporting system	AAA	AAA	AAA	AA	AAA	AAA	AAA	AA
GHG intensity performance targets	AAA	AAA	AAA	A	AAA	AAA	AAA	A
<b>Tailings Management</b>								
Tailings management policy and commitment	C	B	AAA	AA	N/A	N/A	N/A	N/A
Tailings management system	B	B	A	AA	N/A	N/A	N/A	N/A
Assigned accountability and responsibility	B	A	AAA	AA	N/A	N/A	N/A	N/A
Annual tailings management review	C	B	AAA	AA	N/A	N/A	N/A	N/A
Operation, maintenance and surveillance manual	B	B	AAA	AA	N/A	N/A	N/A	N/A
<b>Aboriginal Relations and Community Outreach</b>								
Community of interest (COI) identification	AAA	AAA	AAA	AAA	AAA	AA	B	AA
Effective COI engagement and dialogue	AAA	AAA	AAA	AAA	AAA	AA	AAA	AA
COI response mechanism	AA	AA	AAA	AAA	AA	AA	AAA	AAA
Reporting	AA	AA	AAA	AA	AA	AA	AAA	AA
<b>Safety &amp; Health</b>								
Policy, Commitment & Accountability			AAA	A			AAA	A
Planning, Implementation & Operation			AAA	AAA			AAA	AAA
Training, Behavior & Culture			AAA	AAA			AAA	AAA
Monitoring & Reporting			AAA	AAA			AAA	AAA
Performance			AA	AA			AAA	AA
<b>Biodiversity</b>								
Corporate Biodiversity Conservation Policy, Accountability & Communications			C	B			C	B
Facility-Level Biodiversity Conservation Planning & Implementation			C	C			C	C
Biodiversity Conservation Reporting			C	C			C	C

✓ Self-assessed  
 ☑ Externally verified  
 AAA Excellence and leadership.  
 AA Integration into management decisions and business functions.

A Systems/processes are developed and implemented.  
 B Procedures exist but are not fully consistent or documented; systems/processes planned and being developed.

C No systems in place; activities tend to be reactive; procedures may exist but they are not integrated into policies and management systems.

**Table 7: Crisis Management**

	Labrador City				Sept-Îles				Montreal			
	2009	2010	2011	2012	2009	2010	2011	2012	2009	2010	2011	2012
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Preparedness	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
Review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Training	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

✓ Self-assessed  
 Externally verified



## Tell Us What You Think



We are committed to operating our business in a sustainable way to secure our future, and the future of the communities where we work and live.

Feedback from stakeholders is a key part of improving our social, environmental and economic performance as well as our sustainable development reporting.

Please feel free to email us to let us know how you think we're doing in this regard, and help us identify areas where we can improve.

Sincerely,

**Julie Gelfand**  
**VP, Environment and Social Responsibility**

Email: [julie.gelfand@riotinto.com](mailto:julie.gelfand@riotinto.com)