



RioTinto



# Sustainable development report 2017

## Iron Ore Company (IOC)

Our employees and key stakeholders made a significant contribution in 2017.



## A word from our President and CEO

Throughout 2017 we have been focused on becoming “Superior in Performance” and we are beginning to see the results. The growing focus on our core work is key to our vision of being the premier mining company in North America. This will help secure a stronger long term future and give us the ability to deliver value throughout the commodity cycle – for our employees, investors and our communities. We have made some real progress against our 5 priorities right across the business.

As always, the health and safety of employees and contractors is my biggest concern. Ensuring that no one goes home hurt or unwell is what I have first on the agenda in my discussions with leaders and employees.

While we recognize that our All Injury Frequency Rate (AIFR) is not where it needs to be, we are working hard to find ways to improve. We have celebrated a number of Health, Safety and Environment achievements and we are learning from incidents by investigating and talking openly about where things went wrong and how we can learn from these experiences.

By using the tools we have diligently for every task, and by challenging each other to think differently about how we can become safer in our own areas of the business, I am confident we will continue to improve.

A large part of our success depends on people joining us on our journey and being able to see the benefits a strong IOC can deliver - from the big picture, to the community and to their individual contributions.

In 2017 we launched a revised Community Investment Program which focuses on developing strong, long term partnerships within our communities, as well as supporting our employees who give their time and talents to the organizations that benefit our communities in such a positive way.

One of the biggest milestones in 2017 was receiving board approval to move forward with the Wabush 3 project. Wabush 3 is a new pit that will be developed within IOC’s existing mine operations to extend the life of the mine, reduce operating costs and sustain production of quality grade iron concentrates and pellets.

Our business is changing and evolving to ensure we are positioned to be globally competitive. Let’s continue to challenge ourselves to think and act differently, to strengthen our partnerships both internally and in our communities, and build a stronger IOC by working together.

Be Safe,

**Clayton Walker**

President and Chief Executive Officer

# Highlights of 2017

## Safety

- Critical Risk Management (CRM) – IOC achieved the Embedding Level of implementation for the CRM Program.
- Implementation of the new Railway Rio Tinto Group procedure which specifies the mandatory requirements for the management of hazards associated with Operating and maintaining owned and non-managed railway infrastructure and rolling stock.
- Development of online training course related to Railway security. All employees and contractors must complete that training to be allowed on site.
- Energized works deep-dive analysis (Kaizen) were completed with employees. From those, many improvement actions were generated to reduce the level of risk of different tasks.
- Hazard Identification training was implemented to assist with the recognition of hazards. The training in Labrador City includes the use of a “Park” that has exhibits related to equipment, gravity, electrical, mechanical, Environment and Health & Hygiene, and complements the CRM efforts as well.
- The All injury frequency rate (AIFR) for 2017 exceeded target (0.91 vs 0.67)
- Deployment of the initiative “The way we walk” in Plants. The intent of this initiative being the improvement of housekeeping.
- Structural inspections of guards, handrails, work platforms and others work at height protections for Port installations. Deficiencies are prioritised and teams are dedicated to repair/replacement.
- IOC was the winner of the Safety Award of the AQTr Railway section (Association Québécoise des transports) for the Ground hazards management system.
- IOC (in partnership with the National Research Council of Canada) was finalist for the Rio Tinto Pioneer Pitch for the new instrumented wheel set developed for continuous condition monitoring of the railway track.
- Development of tools / programs to reinforce the contractor management on site and improve their awareness of IOC requirements/expectations.

## Contractor Management

2017 IOC Contractor Management team were part of RIO Tinto's Contractor Management Excellence (CMX) diagnostic. From this process it was identified we have a solid contractor management team and structure. We have a well-defined tool with Cognibox that manages our link to gate training with our contractors, with room to grow. We have developed a clear strategy with a supporting steering team from across the business and will implement in 2018.

Some of the Contractor Management team highlights for 2017 are outlined below:

- Re-establishment of a Contractor Management department that has contract ownership for multiple site wide services (snow clearing, scaffolding, busing, and fuel management).
- Implementation of IOC Contact training courses for IOC leaders and contractors. This enables consistent application of Element 7 - Contractor Management and enables better planning of contractors and management while on-site.
- CRM - Contractor schedule and coaching session developed.
- CMX diagnostic completed and strategy developed
- Contractor Management HSE audit schedule established for top 10 contractors.
- New process for pre-qualification of contractors on Cognibox with new expectation on safety stats. With new rigid process around contractor managing their AIFR and safety stats, we enable ourselves to be the gate keeper to decide if the contractors are safe to come to our site in how they manage their safety systems and performance.

## Environment

A new data management program called MonitorPro 5 (used by many Rio Tinto business units) was implemented in both Labrador City and Sept-Iles. Its main aim is to assist with compliance and data management. This software is accompanied by a tablet application for field values, and sends preventative communication alerts to our team and/or operators regarding requirements related to our permits, approvals and various regulations.

Development of our 5 Year Contaminated Sites Strategy. Removal of three old rail cars at Ross Bay.

### Sept-Iles

Dredging was completed for No. 2 wharf in Sept-Iles. All authorizations and consultations were obtained and conducted before November 2017. The work was done in compliance with the various governmental authorizations. The dredging allowed for a safe passage to our wharf facilities.

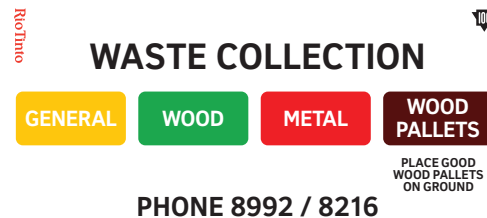
Vibration measures at Monaghan beach were taken at the beginning of 2017 following public complaints received from a citizens' committee in the area. The complaints were related to our railway operations in Sept-Iles. As a result, improvements to the rail infrastructure were completed in the summer of 2017, which according to the citizens, helped reduced the vibrations significantly. Subsequently additional vibration measures were taken and revealed that the corrective measures applied were effective in reducing the vibrations in the community. This work validates the importance of a good railway maintenance programme.



## General Waste Collection improvements

Asset Management, Transport and Environment Team worked together to obtain new general waste bins and a compacting truck. Criteria for improvement; Safety and Environment, reduce collection and hauling costs, discourage scavengers/predators and wildlife interactions, prevent windblown debris, reduce labor costs, increase life of IOC's landfill and improve housekeeping in operational areas. New signage was also allocated at all collection stations.

## Waste Collection Point New Signage



## Labrador City

A collaboration between environment and asset recovery led to the development of a fuel system implemented to better track our fuel usage and distribution. All systems, delivering and receiving fuel are now tagged with a chip. If the chip is not present on a piece of equipment, the delivery truck cannot dispense fuel. All chips are logged in SharePoint and has a PO attached to it. If the PO is expired the chip is also deactivated.

## Wabush 3 preparations

IOC completed Cycle 5 of Environmental Effects Monitoring (EEM) studies as required under the Metal Mining Effluent Regulations and Plume Delineation Study. A plume delineation study was undertaken in June 2017 to assist in understanding the magnitude and extent of environmental and biological effects downstream of our mining operations.

Field work was completed as part of the Wabush Lake Fish Habitat Compensation Plan.

Completion of our Semi-Annual Groundwater Monitoring Program and installation of additional wells in suspect areas.

Annual Bathymetric survey, paired with LiDAR was completed as part of the Tailings Lease Line Monitoring Campaign; deliverables detailing underwater tailings

placement confirmed the deposition remains within the boundaries of the Federal Lease Line.

Installation of a Portable Weigh Scale at the IOC landfill and serves as checkpoint to measure volumes of various waste streams. Metrics are being developed using digital monitors to record and track various waste streams, help establish a baseline for generation rates and more robust waste reduction targets.

Cowboy Creek Offset reached successful milestones established on stream reconstruction and is now near completion, preserving 2 objectives which are;

1. Restore the temperature regime of the stream,
2. Provide instream features to increase the productivity of habitats

As part of IOC's Progressive Rehabilitation and Revegetation Campaign, 49 hectares were rehabilitated in 2017.

Leila Wynn Dolomite Quarry production facilities, located approximately 18 km east from IOC Labrador City underwent approximately 17 hectares of successful revegetation of which 8 hectares were hydroseeded and 10 hectares broadcast seeded.

## Health & Hygiene

- Compliance with periodic medical surveillance program remains strong with a total of over 1860 medicals conducted throughout the year. Employees are supported through this program to maintain physical and mental wellbeing and fitness for work specific to their roles.
- IOC Occupational Health participated in a pilot project with two other Rio Tinto sites in Canada to develop an e-learning mental health awareness training programme for leaders and employees. The anticipate roll out of this e-learning program will be in mid-2018. Included in the pilot are training session to develop resilience at work and developing a peer support network at IOC.
- IOC continues to support and facilitate involvement in the community as a co-chair member of the Labrador City Mental Health Coalition Committee formed in 2017.
- 2017 Wellness program focused on raising awareness of our existing Employee Family Assistance Programme to highlight the Life Smart Coaching module which includes career counselling, financial or legal advisory services and childcare or parenting services.

## Additional Highlights

### Light Vehicle Fleet

- Work on the custom speed limit zone feature in ORCA was completed allowing us to track and identify speeding events. System generated E-mails are sent to the areas informing them that a speeding event has occurred, this gives the supervisor the ability to follow up on speed events as they occur. Since this feature has been activated we have seen a 60% reduction in speeding across site. The custom speed zones also allow us to identify and address aggressive driving behaviour. All invoices are reviewed to identify the nature of the repair as well as the mechanism of damage for follow up. Reports are generated for any vehicle with suspect damage, any vehicle with multiple speed events in the Pit area is flagged for follow up. Costs are resettled back to the areas and feedback is provided to each area's Management Team for follow up on their end.
- Our Light vehicle Inventory was reviewed to identify extreme use vehicles, by definition any vehicle in use 24-7 was classed as Extreme Use. Service intervals for the vehicles in this class was tightened to a 6 week interval. This permitted us to conduct more frequent inspections with the goal of identifying defects before any catastrophic failure occurs. Changing components before they fail catastrophically will give us the opportunity to not only reduce maintenance costs but down time as well.

### Asset Disposal

Collaborated with environment department to improve General Waste Collection process saving both time and money –see Environment Waste Collection initiative.

### Information Technology

CR

- Installation of the new Mine Digital Radio System will support the operation of Wabush 3.
- Supporting community relations with indigenous people by assisting with the installation of the Naskapi telecommunications fiber.
- Continued support of the A&IO project through the development of the operations center and remote operation of loading pockets.
- Numerous infrastructure improvements related to business resilience/redundancy, i.e., new generator for administration server room backup power source, and new/upgraded fiber networks.

## Economic

During 2017 IOC contributed C\$203 million in total payments to federal, provincial and local governments, mainly through corporate income tax, municipal and payroll taxes, as well as custom duties.

The company also contributed approximately \$650,000 through our community investment program.

The economic breakdown for 2017 is:

- Wages and salaries (including benefits) C\$382m.
- Net ore sales revenue C\$2,158m.
- Total revenue C\$2,200m.

## Community Engagement

IOC actively supports a wide range of activities that benefit the communities in which we operate.

- A revised Community Investment program was launched in 2017 focusing on the following five priority areas: Health & Wellness, Safety & Environment, Innovation & Technology, Inclusion & Diversity and Education. The program focuses on identifying mutually beneficial ways to partner with our key stakeholder groups. Our programs, including sponsorship/partnership, the Dollars for Doers and Team IOC, encourage employee and community involvement and allow us to give back to our communities in a meaningful way. The 2017 Community Investment Program resulted in more than 50 community partnerships in both Labrador West and Sept-Îles including Canada 150: The Great Canadian Life Project through Gateway Labrador in Labrador City, and Station recreotouristique Gallix in Sept-Îles.



## Sept-Iles

We continued our work to strengthen our relationships with our stakeholders as these are key to our license to operate. Also, our community investment committee (CIC) ensured community investments are aligned with the following priorities: inclusion et diversity,

health and well-being, safety and environment, innovation and technology, education, and have a positive impact on the key community challenges. Here are some examples:

- We continued to focus on strengthening partnerships with employees, unions, key community stakeholders, and government through the Community Advisory Panel, Regional Taskforce, and Joint Planning.
- The Community Advisory Panel (CAP) in Labrador West met quarterly as an opportunity to discuss mutual priorities including: Health Services, Affordable Childcare; Community Infrastructure, Affordable Housing, Environment, Recruitment/Retention, Regionalization, Coping with Change, Wabush Rec Centre and Seniors.
- The Labrador West Regional Taskforce, a collaborative forum of regional stakeholders, government and industry, met quarterly and revalidated priorities for 2017 and beyond to align with the changing priorities in the region.
- IOC's Executive team held a business update breakfast with community leaders in both Labrador West and Sept-Iles to express appreciation of ongoing stakeholder support and to outline the business priorities for 2017.
- IOC continued to be represented on community boards (Housing & Homeless Coalition, Habitat for Humanity, Chamber of Commerce, Labrador West Gateway, Sept-Iles regional hospital foundation, and Sept-Iles Air Quality committee).
- Community Social Performance (CSP) targets have been established for employment, procurement and community incidents/complaints. IOC will make a demonstrated effort to meet the following targets by 2020: increase the number of employees

in traditionally underrepresented groups by 2% of the total IOC workforce; increased procurement opportunities with Indigenous businesses in each of the provinces in which we operate by 10%. Decrease repeat and significant complaints by 25%.

- IOC, in collaboration with Rio Tinto, developed an Indigenous Relations Strategy.
- IOC's Inclusion & Diversity Committee focused on aligning our priorities with Energy & Minerals and building stronger networks across the broader Rio Tinto group, as well as engaging with senior leaders to continue to create truly inclusive and diverse workplaces. Some highlights of our work include a partnership to create an online Indigenous Cultural Awareness training package, participating in the Labrador West Pride week while raising the Pride Flag at both of our operating sites, and educating leaders on our Communities & Social Performance objectives as they relate to diversity. Similar to previous years, we also continued to recognize National Aboriginal Day, International Women's Day, and Awareness for Violence Against Women through participation in community events and activities with employees on site.
- Family Day was held in Labrador City and Sept-Iles. The theme for this event was "Pioneers of the Future Shaped by the Pioneers of the Past". The event included many fun activities including mine and railway tours. IOC thanks the many volunteers and employees for helping ensure the success of Family Day 2017.

- Inclusion and diversity: L'Envol-Maison de la famille, Club Richelieu, Festival Innu Nikamu;
- Health and Well-Being : Station récréotouristique Gallix, Relay for Life, APAME, Greffe toi à nous, Centraide Duplessis;
- Safety and environment : Association de protection de la Rivière Moisie, Observatoire de la baie de Sept-Iles, table de Qualité de l'air de Sept-Iles;
- Innovation and technology : Naturalia, CIM, Minex Conference ;
- Education : Bursaries (secondary and post-secondary studies), Salon du Livre de la Côte-Nord, Grand rassemblement des diplômés;

In addition, initiatives to recognize and encourage employee engagement in the community had success in 2017, with 6 Small Gift, Big Lift projects during the holiday season, more than 18 organizations benefitted from financial assistance through IOC's employee programs "Dollars for Doers" and « Team IOC »; an example is Les Givrés de Sept-Iles – a team of canoers on ice which includes a number of IOC employees.

# Performance Data

**Table 1: Performance Data**

	2011	2012	2013	2014	2015	2016	2017	
Environmental Stewardship	Energy Use MWh	4,394,000	4,795,000	4,654,865	4,419,514	4,517,959	5,252,372	4,967,222
	Greenhouse Gas Absolute Emissions (Scope 1 and 2) tonnes CO <sub>2</sub> e	1,028,000	1,141,000	1,046,289	986,730	1,113,358	1,075,331	1,175,055
	Emission Intensity * Tonne CO <sub>2</sub> e / tonne total saleable product	-	-	-	0.066	0.0613	0.0587	0.0618
	Land rehabilitated ha	36	50.3	41	49.4	14.88	22.6	49
Social Wellbeing	All Injury Frequency Rate (per 200,000 hours worked)	0.91	0.75	0.62	0.66	0.74	0.73	0.91
	Lost time injuries	16	18	8	11	10	11	20
	Medical treatment cases	23	22	12	11	13	11	11
	New cases of occupational illness **	9	0	0	0	2	5	5
	Number of employees exposed to an 8-hour noise dose above 85 dB(A)	573	510	391	483	452	492	230
	Community Advisory Panel or similar community meetings	Labrador West: 6 Sept-Îles: 0	Labrador West: 6 Sept-Îles: 0	Labrador West: 4 Sept-Îles: 0	Labrador West: 4 Sept-Îles: 0	Labrador West: 4 Sept-Îles: 0	Labrador West: 3 Sept-Îles: 0	Labrador West: 3 Sept-Îles: 0
Economic Prosperity	Number of employees	2,361	2,538	2,509	2,425	2,258	2,350	2,318
	Community Investments ***	\$5.7M	\$6.17M	\$7.6M	\$7.1M	\$8.0M	\$9.9M	\$4.0M
	Municipal, provincial and federal taxes ****	\$492M	\$280M	\$280M	\$154M	\$45M	\$41M	\$203M
	Total Ore Sales	\$2,335M	\$1,907M	\$2,094M	\$1,599M	\$1,474M	\$1,682M	\$2,359M
	Sales including QNS&L Railway	\$2,483M	\$2,073M	\$2,307M	\$1,801M	\$1,629M	\$1,729M	\$2,401M
	Salaries and benefits	\$296M	\$345M	\$371M	\$364M	\$349M	\$360M	\$380M

\* 2014 Emission Intensity Target of 0.0578 t CO<sub>2</sub>-e/ t product \*\* Updated reporting definitions for Occupational Illness to include noise induced hearing loss, musculoskeletal and repetitive strain illness among other health conditions. \*\*\* Includes community controlled payments \*\*\*\* Includes grant in lieu of taxes to Town of Labrador City.



# 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 2: Towards Sustainable Mining**

	IOC Labrador West					IOC Sept-Iles				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
	√	√	√	√	√	√	√	√	√	√
<b>Energy and Greenhouse Gas Management</b>										
Energy use management system	AAA	AA	AA	AA	AA	AAA	AA	AA	AA	AA
Energy use reporting system	A	AA	AA	A	A	A	AA	AA	AA	A
Energy intensity performance targets	B	B	B	B	B	B	B	B	B	B
GHG use management system	AAA	AA	AA	AA	AA	AAA	AA	AA	AA	AA
GHG emissions reporting system	A	AA	AA	A	A	A	AA	AA	AA	A
GHG intensity performance targets	B	B	B	B	B	B	B	B	B	B
<b>Tailings Management</b>										
Tailings management policy and commitment	AAA	AAA	AAA	AAA	AAA	N/A	N/A	N/A	N/A	N/A
Tailings management system	AAA	AAA	AAA	AAA	AAA	N/A	N/A	N/A	N/A	N/A
Assigned accountability and responsibility	AAA	AAA	AAA	AAA	AAA	N/A	N/A	N/A	N/A	N/A
Annual tailings management review	C	AAA	AAA	B	AAA	N/A	N/A	N/A	N/A	N/A
Operation, maintenance and surveillance manual	A	AAA	AAA	AAA	AAA	N/A	N/A	N/A	N/A	N/A
<b>Aboriginal And Community Outreach</b>										
Community of interest (COI) identification	AAA	AAA	AAA	AAA	AA	AAA	A	AA	B	AA
Effective COI engagement and dialogue	A	AAA	AAA	AAA	B	AAA	B	AA	B	B
COI response mechanism	A	AAA	AAA	AAA	AA	AAA	A	AAA	AA	AA
Reporting	AA	AAA	AAA	AAA	AAA	AAA	AA	AAA	AA	AAA
<b>Safety &amp; Health</b>										
Policy, Commitment & Accountability	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
Planning, Implementation & Operation	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
Training, Behavior & Culture	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
Monitoring & Reporting	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
Performance	AA	AA	AA	AA	AA	AA	AA	AA	AA	AA
<b>Biodiversity</b>										
Corporate Biodiversity Conservation Policy, Accountability & Communications	B	B	C	C	B	B	B	C	C	B
Facility-Level Biodiversity Conservation Planning & Implementation	C	C	C	C	C	C	C	C	C	C
Biodiversity Conservation Reporting	C	C	C	C	C	C	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.

# Crises Management

**Table 3: Crises Management**

	IOC Labrador West					IOC Sept-Iles				
	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Preparedness	√	☑	√	√	☑	√	☑	√	√	☑
Review	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Training	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 at [IOCFeedback@ironore.ca](mailto:IOCFeedback@ironore.ca) to let us know how you think we're doing in this regard, and help us identify areas where we can improve.

