

Case Study.

Rio Tinto Alcan, Inc.

Rio Tinto Alcan Major Projects Group: A Dramatic Improvement In Safety Culture

Rio Tinto Alcan, Inc. (RTA) is a global leader in aluminum production. RTA was created in 2008 when Rio Tinto acquired Alcan Inc. The RTA global head office is located in Montreal, Canada. The Major Projects Group division (MPG) focuses on construction services for large-scale projects within Rio Tinto Alcan. Since 2000, Alcan had been steadily improving its safety performance on its construction projects. As an example, in 2008 Alcan had completed its latest project with an all injury frequency rate in the range of 4.0 versus the construction industry average in Québec of greater than 20.0. Following the acquisition by Rio Tinto, RTA wanted to accelerate Alcan's performance improvement. MPG approached dss+ in late 2008 to assess MPG's newly combined contractor safety management system..

dss+ completed safety assessments at three of RTA's MPG project sites in Canada. The dss+ team gauged MPG's current safety management system against industry best safety practices, and in early 2009 issued its recommendations for improvements. Shortly after in May 2009, one site experienced a series of safety-related incidents and shut down construction activity for three days. Following the site's Safety Stand Down, dss+ provided coaching and short-term assistance to project line management at two sites since both sites were using some of the same contractors.

Pursuing Industry Best Practices

The initial assessment included comparing RTA's MPG current construction safety management system and resources to dss+ proven 12 Essential Elements of Safety Management, the dss+ 6-Step Contractor Safety Management Process reference model, and to Rio Tinto's



own 17 element HSEQ MS (Health, Safety, Environment and Quality Management System). The dss+ and RTA Safety Management System reference models each emphasize leadership, structure, processes and actions.

Based upon the comparative assessment, dss+ reported the degree of competency in each process, and then provided MPG with initial coaching and counselling at both the corporate and project site levels.

The dss+ recommendations for transforming RTA's MPG contractor safety management system included:

- Create an overall safety management structure (an HSE Council and Process Improvement Teams) in which top leadership actively manages the key safety activities required to achieve world-class safety performance.
- Engage all management and both MPG and contract employees in the Rio Tinto HSE Interaction Process (safety observations and discussions) and in Take 5 (risk identification and management for workers).
- Strengthen the company's incident investigation process and create a field guide (focused on what to do when

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an incident occurs), and implement a training process to improve the skills of local line management personnel.

- Develop a Construction HSE execution manual, specified within the terms of all contracts, ensuring enforceable performance standards to which all contractors must comply.

Creating A "Playbook"

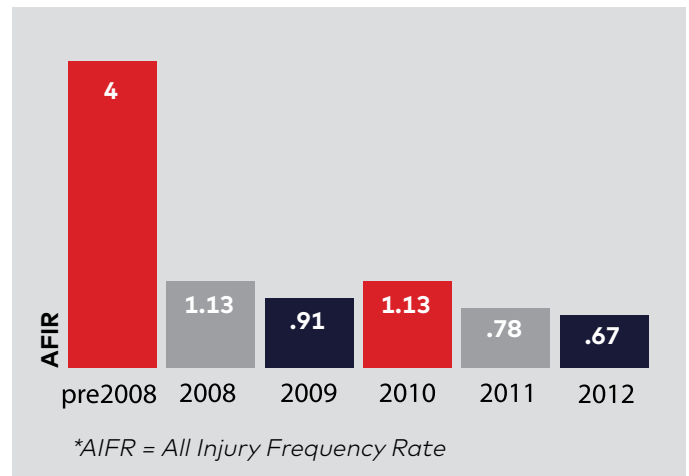
As part of the transformation, dss+ recommended appointment of Project Directors to lead the Process Improvement Teams (PITs). The teams are composed of representatives from each project with a mandate to identify best practices, develop processes and systems that are acceptable to all and to support the implementation of these tools on their respective projects. The identification and use of these best practices and safety management tools help create robust safety standards and a MPG project playbook for future projects. The primary objective is to create a usable reference model that will eliminate reinventing processes and standards whenever a new project starts.

Transformative Results

Major Projects Group has undergone a remarkable safety transformation by implementing the Rio Tinto HSEQ management system supported by dss+ best practices and consultants. The step-change for MPG was a clear philosophical shift from a pure EPCM (Engineering, Procurement & Construction Management) model to one where the owner is actively engaged in setting the safety standards.

The change happened progressively and the desired results were achieved.

Some of the most significant changes were improvements in incident investigations, the development of clear, uniform standards, and the use of behaviour-based safety interactions as a tool for cultural change. In addition, a much more robust contractor preselection process was established, with enforceable HSE requirements built into the contract templates.



Safety Performance Improves

Since working with dss+, the safety performance at all MPG sites has improved dramatically. In 2011, RTA achieved an impressive 31% improvement in AIFR over the prior year (0.78 v. 1.13).

Moreover, of particular significance, beginning at the end of May, 2010, the company's Shipshaw project experienced 26 consecutive months representing over 850,000 man hours without a single recordable injury

In addition, under the strong safety leadership of its director Mr. Alain Gaboury, the site went from the worst performing MPG project site to the best, and their achievement was recognized by receiving the Rio Tinto CEO Safety Award.



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Success Story:

A True Cultural Shift

One year into the Shipshaw project, a few of the contractors' employees had a three week hiatus before starting the next portion of another contract. While on site with the project director conducting a regular safety observation, the dss+ consultant participated in a conversation with two workers.

They told him that during the hiatus, they were hired at a local industrial establishment on a maintenance turnaround that was supposed to last over a week. However, after two days, they quit because they said that it was so unsafe compared to the MPG construction site that they decided to quit rather than risking injury. This is just one example of the positive impact that a cultural shift can bring to all employees, regardless of industry.



About Rio Tinto

Rio Tinto is a leading international mining group headquartered in the UK, combining Rio Tinto plc, a London and NYSE listed company, and Rio Tinto Limited, which is listed on the Australian Securities Exchange. Rio Tinto's business is finding, mining, and processing mineral resources. Major products are aluminium, copper, diamonds, thermal and metallurgical coal, uranium, gold, industrial minerals (borax, titanium dioxide and salt) and iron ore. Activities span the world and are strongly represented in Australia and North America with significant businesses in Asia, Europe, Africa and South America.

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dss+

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