

First Watch

Promoting health and safety initiatives in the resources sector

NOVEMBER 2009

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Alcoa

Project Summary

Housekeeping in the workplace is a fundamental factor in providing a safe and efficient environment in which to work.

The Mobile Maintenance department at Alcoa's Western Australian Mining Operations implemented the 5S method in its workshops to achieve the required housekeeping standard and deliver benefits in reduced incidents and injuries, along with increasing production efficiencies.

The 5S stability and improvement tool used by the Alcoa Business System consists of five steps:

1S Sort, 2S Set in Order, 3S Shine, 4S Standardise and 5S Sustain.

Location

The Mobile Maintenance department at both Alcoa mine sites (Huntly and Willowdale).

Number of employees

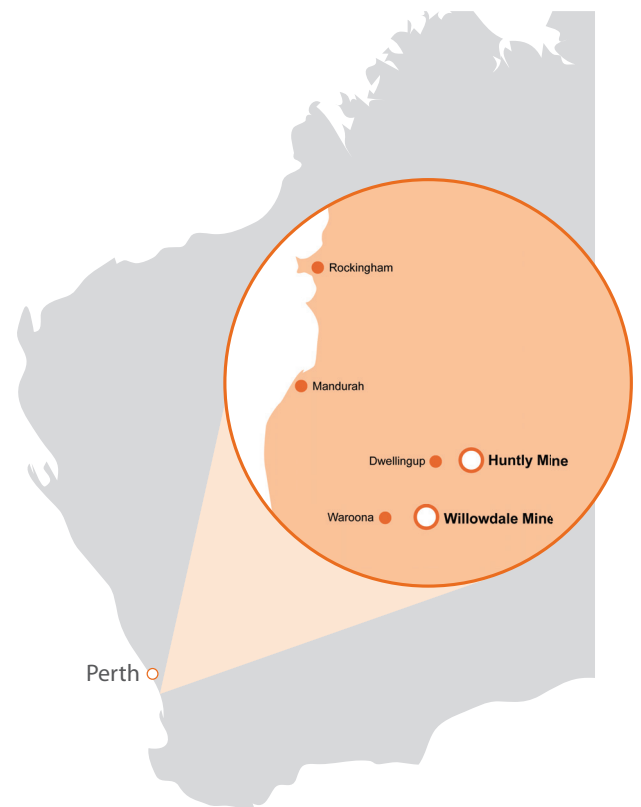
Huntly Mobile Maintenance has 147 employees and Willowdale Mobile Maintenance has 79 employees.

Key Learning

The Mobile Maintenance department at Alcoa's Western Australian Mining Operations deployed the 5S method in workshops and as a result, it has contributed to a dramatic reduction in injuries at both sites, along with reduced workshop running costs.



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FirstWatch case studies are produced by the Chamber of Minerals and Energy of Western Australia to highlight occupational health and safety innovation and best practice in the WA resources sector. For more information, or to nominate a project, contact the CME Executive Officer – Occupational Safety and Health on (08) 9325 2955. Find the complete collection online at www.cmewa.com.au



Before

The Challenge

Providing a work environment that is both safe, efficient and self-sustaining is a tough target to achieve.

Alcoa's Mobile Maintenance department at Huntly and Willowdale identified the need to develop a system that was self-sustaining and provided a method of keeping the workshops clean, with tooling and equipment in their correct location and in good working order.

The system should also provide a means of engaging employees and fostering ownership of the work area, along with ongoing support and focus from all management levels. Other key factors identified were the need for the system to lead to a safer workplace, be cost effective and provide a return on investment.

The Solution

Each workshop was split into smaller manageable areas with all tooling and equipment in that area sorted out, cleaned and given a home. An inspection sheet was developed to check the general area for cleanliness, that all items in the area are returned correctly and are in good working order.

A roster was developed for the entire workshop to be inspected at least once a week, with the more heavily used areas inspected up to three times a week. Each dayshift and nightshift crew performed two inspections every shift. Each inspection allocated no more than 30 minutes to perform.

Any problems identified during the inspection were recorded on the inspection sheet along with a 5S score, detailing the amount of tooling and equipment found to be in its correct location. Problems that could be fixed easily were completed at the time of the inspection, with the harder problems written on an Area Inspection Problem Board for follow-up by a designated person.

A database was developed to track the problems found during the inspections. The database was used to highlight problem areas, the amount of problems found and the total amount of inspections completed.

The Results

Since the introduction of the 5S system, both locations have seen a 60 per cent drop in injury rate, indicating a tangible link between a clean and tidy workplace and a safe workplace.

The workforce is more engaged, with a reduction in the frustration level with tooling and equipment that previously, was not returned to its correct location or was left in an unusable state. Another significant outcome was the reduction in operating expenditure for running the workshops at both locations.

Typically, the sustain part of 5S program is the hardest to achieve over an extended period of time. The development of a method for sustaining the workshops at 5S level has proved to be very successful and has been described as Best Practice by many people who have seen it work first hand.



After