

Refining Moments



A Message from QAL'S Managing Director



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Welcome to the first edition of Refining Moments for 2009, our quarterly community newsletter designed to keep you up to date with QAL operations.

Whilst this newsletter provides details of just some of our achievements in late 2008, we are now in a new year which has presented us and our owners with unprecedented challenges due to the global economic downturn. With the current state of the world's economy, we have seen a drop of nearly 60 per cent in the price of aluminium, with a similar decrease in alumina.

At the same time as world demand is falling, inventories have continued to increase. QAL is not immune to the economic downturn and like any business we need to remain cost competitive in the world market. While little has changed from a daily business at QAL we are increasing our cost control focus substantially.

Whilst there is significant uncertainty in the global context, and this will see "belt tightening" at QAL I remain confident about the future.

We will still place high priority to improving our safety performance, delivering environmental compliance and continuing our good relationships with the community.

In many respects, 2008 was a challenging year for QAL and whilst we did not meet all of our projected targets (which will be detailed in our Health, Safety, Environment and Communities Report) we remain committed to further improvements in 2009.

The completion of the \$244 million environmental improvement capital program has laid a solid foundation for QAL to head for a greener future. Taking five years to complete, the program has greatly reduced the environmental impact of our operations.

Throughout the project we have reported on many of the milestone projects as they have been completed and in this issue, we have provided a summary of the work carried out as well as details of how you can access more information about the projects on our website.

Caring for the environment outside the refinery's boundary is also a major focus for QAL and the Reef Guardian

Fund is a prime example of the difference we are making to increase environmental awareness in the wider community for our young leaders of the future.

A refinery the size of QAL can be a great place to learn and we are pleased to again have the next intake of apprentices commencing their careers with us. They will have access to some of the best mentors in the industry and we believe they will enjoy their time with us at QAL just as much as participants in the latest vacation student program have.

I trust you will enjoy reading more about these stories and others contained in this issue of Refining Moments.

Kind regards

Phil Campbell



Apprentices Commence New Career Path

In 2009, 17 new apprentices will be commencing their careers with one of the world's largest alumina refineries, QAL.

The apprentice program at QAL was established in 1967 and with over 200 applicants for the 2009 intake, the program has again proved to be very sought after.

This year QAL has employed eight mechanical fitters, two boilermakers, one refrigeration mechanic, four electrical/instrumentation fitters and for the first time, two electrical/power and high voltage systems apprentices.

Workshop Discipline Leader Brad Richardson said that when recently conducting large-scale high voltage projects on site it became increasingly difficult to find people who were qualified to work on high voltage projects.

"This year we've decided to train our own high voltage specialist apprentices to address the skills shortage in that area," Mr Richardson said.

"Employing in this discipline will provide these apprentices a sought-after electrical trade with high voltage specialisation, in addition to boosting the plant's high voltage knowledge and experience base."

After the apprentices complete their first

week of being familiarised with the plant and its safety policies, the group will then take to the workshop to begin their training.

Over the next six months the group will conduct basic exercises using hand tools and machinery, as well as undertaking theoretical work. Then, the disciplines will be separated to be trained in their trade skills, while the electrical apprentices will begin their field rotation.

Acting Senior Human Resources Specialist Kay Hunter said this year's apprentices come from a range of employment backgrounds and are all looking forward to beginning their apprenticeship.

"While the majority of our new apprentices are straight from school, some have been working and have now decided to attain a trade," Ms Hunter said.

"We have one apprentice who already has a trade and was working in the plant as a process operator but is now taking on a new direction to become a mechanical fitter."

"Our program is offering these apprentices new and exciting opportunities and giving them a great start to their working world."

QAL is the state's largest apprentice employer with 86 apprentices at various stages of their trade currently on site.

Mechanical apprentices Glenn Baldwin and Geordie Smith look over some of the large equipment they will work on at QAL.



Reducing Environmental Impact

With a vision to be the best corporate citizen in Gladstone, QAL is committed to reducing its impact on the environment and the local community.

In 2008, QAL completed a five year \$244m capital program to deliver an improved environmental performance with regard to offsite emissions.

Health, Safety, Environment and Communities Manager, Ross Greenhalgh said one of the major focus areas has been the reduction of fugitive dust emissions from the plant.

"Of the 1.5 million tonnes of coal per year received by QAL, five per cent is stockpiled, with the other 95 per cent transferred directly to coal silos in the plant via conveyer systems from the station."

"There have been a number of dust suppression systems implemented for coal handling including the use of water-based fog jets during unloading, the installation of a new coal chute transfer system, improved chute seals in the screening towers, sealing the ground surface area to improve housekeeping and revegetation of the surrounds." Mr Greenhalgh said.

"QAL's emergency stockpile of 120 000 tonnes of coal is also sealed to minimise dusting and the live stockpile has extensive water sprays which can be altered to suit weather conditions."

Mr Greenhalgh said that whilst the major projects in relation to control coal dust have been completed, work is still continuing.

"Detailed engineering is currently being undertaken to develop a wagon wash facility to ensure empty wagons are free of residual dust prior to leaving the site."

"An added environmental benefit of the project is that all of the water used in the washing process will be filtered prior to recycling within the refinery, saving valuable water resources." Mr Greenhalgh said.

"Work to reduce the potential for coal dust has also been a focus offsite, with QAL and our supplier, Anglo Coal working on a



SAFER. CLEANER. BETTER.



First Response Team Prepared for any Situation

The QAL First Response Team is now even more prepared in the case of an emergency on site, with the arrival of a new fire appliance.

The Mills-Tui built 4x2 Type Two Pumper Tanker is based on an Isuzu FTR900 crew cab with a medium pumper tanker body. It is the fourth fire appliance that has been on site over the years and replaces the International which was commissioned in 1983.

The new appliance seats six people including the driver and is fitted with lockers to protect equipment from the elements. Other features include a larger capacity pump and water tank, electric rewind hose reels as well as an integral foam tank.

First Response Team Coordinator Craig Drew said the new fire appliance would be

used for a variety of tasks on site including responding to emergencies and training purposes.

“Our team undergoes extensive training throughout the year so that they are prepared at all times for a variety of potential incidents that may occur on site. The addition of the new appliance means that we will be able to have a more efficient and coordinated approach to responding to situations should they arise.” Mr Drew said.

The first response team consists of up to 45 employees from across all sections of the refinery and as well as carrying out their normal duties on a daily basis, the team are the first to respond in the event of an incident or emergency situation.

HSEC Manager Ross Greenhalgh (left) and members of the QAL Response Team with the new fire appliance.



project to spray a chemical membrane on the coal wagons prior to transportation. Initial trials have proven to be very successful in reducing fugitive dust during transit from Boundary Hill to Gladstone.”

Other work completed includes the upgrading of alumina loading systems (\$2.9m), installation of baghouses on the seven coal fired boilers (\$48m), outsourcing of lime (\$2.5m) and the demolition of rotary kilns in the Calcination section.

Mr Greenhalgh said the installation of the \$175m gas suspension Calcination units to replace the 40 year old rotary kilns had additional environmental benefits.

“The new Calcination unit has seen our particulate emissions from this area of the plant reduce by 95 per cent and we have also increased our energy efficiency with a reduction of around 250 000 tonnes of carbon dioxide (CO₂) emissions – the equivalent of taking 60 000 cars off the road per annum.”

Another key area for improvement has been odour, generated from the Digestion section where decayed organic matter in the bauxite is broken down during the refining process.

At a cost of \$3.5m, a thermal oxidiser was installed to eliminate non condensable gases to reduce odour from the section by around 40 per cent. Work recently completed includes the capturing of gases from the Evaporation heaters and piping them to the thermal oxidiser for destruction as well as the installation of flapper valves to contain emissions from the Causticiser tank.

Mr Greenhalgh said that QAL recognises its responsibility to manage resources and refining activities in a sustainable way.

“We aim to minimise the environmental impacts of our operations and where we can, to make a positive difference to the environment and community in which we operate.” Mr Greenhalgh said.

Whilst the five year improvement plan is complete, work is now focussing on a number of projects to further reduce emissions throughout the refinery. A detailed summary of the projects can be viewed at the environment page on the QAL website www.qal.com.au.

Boosting Local Blood Supplies

QAL's Electrical/Instrumentation Department employees have commenced a regular blood donation program to assist Gladstone's Red Cross Blood Service in maintaining vital blood supplies.

The Department has set aside the fourth Wednesday of each month for volunteers to visit the Centre and donate. More than 50 people have volunteered to participate in the program – many for the first time – and these include apprentices, tradespeople, engineers, supervisors and contractors.

Electrical/Instrumentation Supervisor and drive coordinator Greg Neville, said that the Department's commitment to donating blood will help the region immensely.

“We're really happy to have such a great turnout with volunteers, particularly new donors, as the recent months with school

holidays and increased traffic on the roads unfortunately tends to increase the demand for the blood stocks,” Mr Neville said.

Australian Red Cross Blood Service Liaison Officer Tracy Marshall agreed with Greg's sentiments.

“It is great to have the support of the QAL Electrical/Instrumentation Department. Especially as they aim to make giving blood a regular occurrence. This is such an important point as we encourage all our donors to give blood regularly.”

“Blood and blood products are needed on an ongoing basis by many patients, such as those with cancer and blood disease,” Ms Marshall said.

“Each time you give blood you help save three lives. It's a great feeling and only takes about an hour.”

To make an appointment at the Gladstone Blood Donor Centre call 13 14 95 or visit www.donateblood.com.au/

Students Undertake Working Holiday



Richard Nagle has enjoyed being part of the QAL Research and Development Team as a vacation student during his University holidays.

Whilst the majority of students enjoyed a break from study over summer, some were fortunate to have an experience of a lifetime, working at QAL.

Coming from all over Australia, the 18 university students studying in areas of engineering, science, health, business, information technology and human resources were provided with practical paid experience in a real-life work environment.

QAL Managing Director Phil Campbell said the vacation program had been going for over 30 years and provided students with the opportunity to work alongside professionals in their field.

"In twelve weeks the students start and finish a project which contributes to the refinery operations in some way. The project may be stand alone or subset of a larger project, though either way the outcome benefits both the student and QAL," Mr Campbell said.

University of Queensland Chemical Engineering student Richard Nagle is working in process engineering, assisting the Research and Development department in finding a suitable flocculent for Clarification's neutralisation.

"I have been testing four types of flocculent and monitoring the effects from caustic in the laboratory so it's been a really interesting and practical experience," Mr Nagle said.

Adelaide University student, Kavita Devaharan made the journey to Queensland after her friend recommended QAL as a great place to be employed as a vacation student. As a student of Mechanical Engineering, Kavita has been working with the Major Maintenance Team, assisting with asbestos removal strategies as well as drawing construction specifications for pipes in Digestion.

"The main reason I really wanted to do my placement at QAL is because I know that the work is practical and I liked the idea of being able to be hands on with a project as opposed to just being in an office," Ms Devaharan said.

"Every time I go out into the plant I notice something new or different, it's a very exciting place to work. It's also great to see in person what I'm actually working on."

Although the major focus of the Undergraduate Vacation Employment Program is on engineering disciplines there are also opportunities within science, chemistry, commercial, business, human resources and accounting.

The Australia wide selection process is undertaken in the last quarter of the year and advertised through university campuses. Further information is available from the QAL website. www.qal.com.au.

Fund Creates a Greener Future

Ref Guardian Schools in the local region will be able to continue to make a real difference to the environment, thanks to another round of funding through the QAL Reef Guardian Fund.

Annually providing \$10 000 of support to local Reef Guardian schools, the fund was established by QAL in 2006 through a partnership with the Great Barrier Reef Marine Park Authority (GBRMPA). The fund's primary purpose is to encourage the development of environmental projects that benefit both schools and the greater community.

QAL Health, Safety, Environment and Communities Manager, Ross Greenhalgh said the fund had proved to be very successful with a number of schools throughout the region taking advantage of the opportunity to improve their surrounding environment.

"The Fund encourages innovation so the majority of projects supported to date have had sustainable outcomes for the long term as well as an educational benefit," Mr Greenhalgh said.

"We are looking forward to the next round of applications and we hope that the projects that are developed through the fund will go towards making a real difference to the environmental awareness and education of our future leaders."

The GBRMPA's Director of Communication and Education Karen Vohland said that the QAL Reef Guardian Fund was a fantastic partnership between government, schools and industry.

"We are all working together to improve the local environment and achieve positive outcomes for communities and ultimately for the Great Barrier Reef," Ms Vohland said.

"It's terrific that even the youngest members of our community are doing their bit to help the environment in the face of climate change."

Applications for the next round of funding close on 30 March and Reef Guardian Schools in the Gladstone Regional Council area are encouraged to apply.

Reef Guardian Schools were introduced in 2003 and have been steadily expanding ever since, with the majority of Reef Guardian Schools located along the coast adjacent to the Great Barrier Reef Marine Park.

Schools benefit from their involvement in the program by being recognised as leaders in sustainable living and the environmental management of the Great Barrier Reef. More information on the Reef Guardian Schools Program is available on the GBRMPA website - <http://www.reefed.edu.au/>

For more information about the QAL Reef Guardian Fund, please contact QAL Community Relations on 4976 2448.

