

PUBLIC REPORT 2008/9

Controlling Corporation

QMAG Ltd

Period to which this report relates

Start July 08

End June 09

Part 1 – Information on assessments completed to date

Table 1.1 – Description of the way in which the Corporate Group (or part of it) has carried out its assessments

Period 06/08: An assessment was conducted on all areas of the organisation. Meetings were held to review the operation in each area, and gather energy efficiency suggestions. Minutes of meetings were recorded. Supervisors, engineers, and other key personal were included in these meetings. Engineers, and other specialists in the company assessed the suggestions.
 Period 08/09: Review other EEO with key mining, engineering and production staff to determine new possible opportunities. (Note: Mining exhibitions, technical conferences for engineers and discussions about technical problems with vendors and specialists were helpful)

Table 1.2 – Energy use assessed

| Group member and/or business unit and/or key activity and/or site that has had an assessment completed by the end of this reporting period. | Period over which assessment was undertaken ¹ | Energy use per annum in GJ ² in the current reporting year |
|---|---|---|
| Queensland Magnesias Pty Ltd | (Start July 06 – June 08) July 2008 – June 2009 (12 months for the financial year 08/09) | 2745071.79 |
| | | |
| | | |
| Total energy assessed | | 2745071.79 |
| Total energy use of the group in the current reporting year | | 2745071.79 |
| Total energy assessed expressed as a percentage of total current energy use | | 100% |

1. This should be the start and finish date (month and year) for the assessment (planned assessment dates were nominated in Table 3.1 of the approved ARS).
2. Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule.



Part 1 – Information on assessments completed to date (continued)

| Table 1.3 – Accuracy of energy use data | | |
|---|------------|---|
| Entity | % achieved | Reasons for not achieving data accuracy to within $\pm 5\%$ |
| n/a | | Data is recorded from power and gas authority meters and is audited regularly |
| | | |
| | | |
| | | |
| | | |

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2A - New Assessments completed during the reporting period

Name of Group member or business unit or key activity or site: **QMAG Ltd**

Energy use of the entity during the current reporting period

| | |
|------------|----|
| 2745071.79 | GJ |
|------------|----|

Table 2.1 – Opportunities assessed to an accuracy of $\pm 30\%$ or better ($< \pm 30\%$)

| Status of opportunities identified | | Number of opportunities | Estimated energy savings per annum by payback period (GJ) | | | Total estimated energy savings per annum (GJ) |
|------------------------------------|--------------------------|-------------------------|---|---------------|-----------|---|
| | | | 0 – < 2 years | 2 – ≤ 4 years | > 4 years | |
| Outcomes of assessment* | Total Identified | 10 | 193.38 | | 36,853 | 37,046 |
| Business Response* | Under Investigation | 9 | | | 36,853 | 36,853 |
| | To be Implemented | Nil | | | | |
| | Implementation Commenced | 1 | 193.38 | | | 193.38 |
| | Implemented | Nil | | | | |
| | Not to be Implemented | Nil | | | | |

Name of Group member or business unit or key activity or site: **QMAG Ltd**

Energy use of the entity during the current reporting period

| | |
|------------|----|
| 2745071.79 | GJ |
|------------|----|

Table 2.2 - Opportunities assessed to an accuracy of less than $\pm 30\%$ ($> \pm 30\%$)

| Status of opportunities identified | | Number of opportunities | Estimated energy savings per annum by payback period (GJ) | | | Total estimated energy savings per annum (GJ) |
|------------------------------------|--------------------------|-------------------------|---|---------------|-----------|---|
| | | | 0 – < 2 years | 2 – ≤ 4 years | > 4 years | |
| Outcomes of assessment | Total Identified | Nil | | | | |
| Business Response | Under Investigation | Nil | | | | |
| | To be Implemented | Nil | | | | |
| | Implementation Commenced | Nil | | | | |
| | Implemented | Nil | | | | |
| | Not to be Implemented | Nil | | | | |

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2B - Update of assessments originally reported in previous reporting periods

Name of Group member or business unit or key activity or site: **QMAG Ltd**

Energy use of the entity during the current reporting period

| | |
|------------|----|
| 2745071.79 | GJ |
|------------|----|

Table 2.3 - Opportunities assessed to an accuracy of $\pm 30\%$ or better ($< \pm 30\%$)

| Status of opportunities identified | | Number of opportunities | Estimated energy savings per annum by payback period (GJ) | | | Total estimated energy savings per annum (GJ) |
|------------------------------------|--------------------------|-------------------------|---|---------------|-----------|---|
| | | | 0 – < 2 years | 2 – ≤ 4 years | > 4 years | |
| Outcomes of assessment* | Total Identified | 87 | 973 | 3888 | | 4861 |
| Business Response* | Under Investigation | 21 | 170 | 3755 | | 3926 |
| | To be Implemented | 2 | 1 | | | 1 |
| | Implementation Commenced | 1 | 0 | 0 | | 0 |
| | Implemented | 5 | 241 | 133 | | 373 |
| | Not to be Implemented | 58 | 562 | | | 562 |

Name of Group member or business unit or key activity or site: **QMAG Ltd**

Energy use of the entity during the current reporting period

| | |
|------------|----|
| 2745071.79 | GJ |
|------------|----|

Table 2.4 - Opportunities assessed to an accuracy of less than $\pm 30\%$ ($> \pm 30\%$)

| Status of opportunities identified | | Number of opportunities | Estimated energy savings per annum by payback period (GJ) | | | Total estimated energy savings per annum (GJ) |
|------------------------------------|--------------------------|-------------------------|---|---------------|-----------|---|
| | | | 0 – < 2 years | 2 – ≤ 4 years | > 4 years | |
| Outcomes of assessment* | Total Identified | | | | | |
| Business Response* | Under Investigation | Nil | | | | |
| | To be Implemented | Nil | | | | |
| | Implementation Commenced | Nil | | | | |
| | Implemented | Nil | | | | |
| | Not to be Implemented | Nil | | | | |
| | | | | | | |

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2C - Details of at least three significant opportunities found through EEO assessments

Table 2.5 – Description of 3 significant opportunities

Opportunity 1 - Replace Mining Fleet – Kunwarara Mine

Status: Implemented

Area: Mobile Fleet

Diesel: The objective of the project is to replace less efficient mining fleet vehicles with more efficient vehicles. The older vehicles reached mature age and new technology on later model vehicles increased the efficiency of engines. This achieved a saving in diesel consumption per tonne produced, equivalent to a total energy savings of 8.1 TJ annum. A related benefit of this project is the ability to reduce diesel costs for the new mining vehicles of up to 10% per year.

Opportunity 2 - Reduce Tailings Costs by Means of Training of Personal on Operations – KG1 & KG2

Status: Implementation Commenced

Area: Precon Operations

Electricity: Tailings pumping costs is one of the larger energy consumers on a Magnesite Mine. An investigation on possible energy savings has been undertaken to reduce tailings costs. Power factor correction units have been installed. Pumping efficiency has been investigated. The next phase of the investigation is to train mobile fleet operators to deliver more consistent product to the run of mine (ROM) which will in effect streamline the tailings system and result in energy savings. This achieves a savings in electricity Consumption per tonne of tailings, equivalent to a total energy savings of 2.294 TJ per year. This is proposed to result in an increased efficiency and reduces maintenance costs proportionally.

Opportunity 3 - Install a tripper to reduce double handling – KG1 Mine

Status: Under Investigation

Area: Preconcentration Loadout Stockpiles

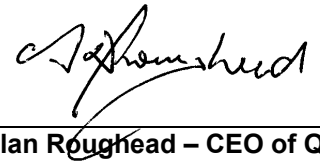
Diesel: The objective of this project is to reduce the double handling of material by increasing the stockpiling facility, hence dispatching of material in an orderly fashion. The current operations shift material multiple times before it is loaded for dispatch. This shifting of material results in inefficient energy usage. An installation of a tripper on an extended stockpile facility will result in energy savings of up to 3.38 TJ per annum. Further investigations are under way to reduce energy usage.

Part 3 - Voluntary Contextual Information – Not Provided

Part 4 - Declaration

Table 4.1 - Declaration of accuracy and compliance (mandatory information)

The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the *Energy Efficiency Opportunities Act 2006* and *Energy Efficiency Opportunities Regulations 2006*.



Alan Roughead – CEO of Queensland Magnesia Pty Ltd