PUBLIC FILE 36

Australian Government

Australian Customs and Border Protection Service

R E P O R T

INVESTIGATION INTO THE ALLEGED DUMPING OF QUICKLIME

EXPORTED FROM

THAILAND

VISIT REPORT - AUSTRALIAN INDUSTRY

COCKBURN CEMENT PTY LTD

THIS REPORT AND THE VIEWS OR RECOMMENDATIONS CONTAINED THEREIN WILL BE REVIEWED BY THE CASE MANAGEMENT TEAM AND MAY NOT REFLECT THE FINAL POSITION OF CUSTOMS AND BORDER PROTECTION

December 2011

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2 BACKGROUND

2.1 The application

On 31 October, the Australia Customs and Border Protection Service (Customs and Border Protection) initiated an investigation into the alleged dumping of quicklime from Thailand following an application by Cockburn Cement Limited (Cockburn Cement), an Australian manufacturer of quicklime.

The initiation of the investigation was publicised in *The Australian* on 31 October 2011. Australian Customs Dumping Notice No. 2011/53 provides further details of this investigation and is available at www.customs.gov.au.

There have been no previous anti-dumping investigations involving quicklime.

2.2 Purpose of visit

We explained to Cockburn Cement that the purpose of our visit was to:

- obtain general information about the Australian market for quicklime;
- gain a greater understanding of the company's manufacturing, marketing, sales and distribution processes;
- verify information provided in the application relating to the company;
- obtain additional financial data to assist in the analysis of the claimed injury to the Australian industry;
- give the company the opportunity to provide any further comments or raise any further issues it believed relevant to the investigation; and
- discuss and gather data relevant to establishing an unsuppressed selling price.

2.3 Contact details

Company:	Cockburn Cement Limited
Address:	Lot 242 Russell Road, East Munster WA 6166
Telephone:	(08) 9411 1116
Fax:	(08) 9411 1120
Date of visit	29 November 2011 to 1 December 2011

The following people were present at various stages of the interview.

Cockburn Cement	Drew Elsbury, Sales and Marketing Development Manager WA/NT, Brad Lemmon, General Manager Strategy and Business Development Vince Valastro, General Manager, Sales & Marketing WA/NT Martin Brydon, Executive General Manager, Cement & Lime Paul Kelly, Accounting Manager WA/NT Terry Linto, Business Improvement Manager
Consultants	Roger Simpson, Roger D Simpson & Associates Pty Ltd
Customs and Border Protection	John Bracic, Director, Operations 1 Lydia Cooke, Manager, Operations 1 Jason Farr, Supervisor, Operations 1

2.4 Investigation process and timeframes

We advised the company of the investigation process and timeframes as follows:

- the investigation period is 1 July 2010 to 30 June 2011;
- Customs and Border Protection will examine the Australian market from 1 January 2008 for the purpose of analysing the condition of the Australian industry;
- a preliminary affirmative determination may be made no earlier than 30 December 2011 - provisional measures may be imposed at the time of the preliminary affirmative determination or at any time after the preliminary affirmative determination has been made, but Customs and Border Protection would not make such a determination until it was satisfied that there appears to be, or that it appears there will be, sufficient grounds for the publication of a dumping duty notice;
- a statement of essential facts will be placed on the public record by 18 February 2012 or such later date as the Minister allows - the statement of essential facts will set out the material findings of fact on which Customs and Border Protection intends to base its recommendations to the Minister and will invite interested parties to respond, within 20 days, to the issues raised (submissions received in response to the statement of essential facts will be considered when compiling the report and recommendations to the Minister);
- Customs and Border Protection's report to the Minister is due no later than 3 April 2012 - should the Minister approve an extension to the statement of essential facts this would mean that the due date of the final report would also be extended - all interested parties would be notified and an Australian Customs Dumping Notice would be issued should an extension be requested and approved.

We explained to Cockburn Cement that we would prepare a report of our visit. The report will be provided to the company to review its factual accuracy and to identify those parts of the report it considered confidential. Following consultation about

confidentiality, we would prepare a non-confidential version of the report for the public record.

3 COMPANY BACKGROUND

3.1 Background

Cockburn Cement was established in Perth in 1955 for cement production and built the first lime kiln in Munster in 1979. In now operates three lime kilns, two at Munster and one at Dongara. In 1999 Cockburn Cement advised that it joined the Adelaide Brighton Group. Adelaide Brighton is a publicly listed company and its annual reports are available at http://www.adbri.com.au/.

Cockburn Cement supplies quicklime and cement to Western Australia's mining, agriculture and construction industries.

At the verification visit, Cockburn Cement provided us with a company presentation which is at **confidential attachment 1**.

3.2 Accounting

Cockburn Cement uses a [redacted] accounting system. It advised that it previously used [redacted]. The company also has a management reporting system that is generated out of [redacted].

Cockburn Cement uses [redacted] Profit centres are [redacted] and it use [redacted] reporting.

Cockburn Cement's audited financial statements are consolidated into Adelaide Brighton's annual report. It operates on a January to December financial year.

4 THE GOODS

4.1 The goods

The goods the subject of the application are quicklime. The applicant provided further details as follows:

Quicklime is also known as Calcium Oxide as this is the dominant chemical composition of quicklime (CaO). Other common names to describe this product are Burnt Lime and Unslaked Lime. Quicklime is a white to grey, caustic, crystalline solid at room temperature.

Tariff classification

Quicklime is classified to the tariff subheading 2522.10.00 (statistical code 26) of Schedule 3 to the *Customs Tariff Act 1995*. These goods are duty free.

4.2 Like goods

Cockburn Cement stated that the quicklime it produced was like goods to the quicklime imported from Thailand. The company explained that quicklime is predominately composed of calcium oxide. It noted that the calcium oxide content (referred to as the available lime content) of the imported quicklime was higher than the available lime content of its quicklime. Its quicklime has a content of approximately 74-84%, while the available lime content of imported quicklime is approximately 85-90%.

Cockburn Cement monitored the available lime content of its quicklime using an onsite NATA accredited laboratory. Cockburn Cement provided us with the general supply specifications that outline the physical and chemical characteristics for the quicklime produced with each kiln, see **attachment 2**. We requested that Cockburn Cement provide us with the results of laboratory testing with showed the actual available lime content over the investigation period (**confidential attachment 3**). Base on these laboratory reports we found that the Munster kiln 5 had an average of [redacted] % available lime content and kiln 6 had an average of [redacted]%. The Dongara kiln had an average of [redacted]%.

Cockburn Cement also noted that there may be some differences in what substances made up the remainder of the quicklime. However, it considered that these differences did not ultimately change the nature of the quicklime. It noted that both products were predominately calcium oxide. Both products were manufactured in a similar way, regardless of whether the raw material used was quarried limestone or shell sand as both raw materials have the same chemical composition, ie Calcium Carbonate ($CaCO_3$). Both products were used for the same purpose and both were used by the same customers.

Cockburn Cement argued that the difference in available lime content may result in a customer using slightly more or less quicklime. However, it had commissioned a

series of comparative laboratory trials in the past which indicate that available lime content did not necessarily effect the volume of quicklime required in gold processing. It provided us with a copy of the results of these tests (**attachment 4**).

Therefore, Cockburn Cement considered that the quicklime it produced was like goods to the imported quicklime.

4.3 Other products

Cockburn Cement advised during the visit that hydrated lime products were not quicklime and should not be considered as part of the investigation.

Cockburn Cement also noted that it produced and sold a small quantity (approximately [redacted] per year) of [redacted] quicklime product. It advised that this product had been excluded from the sales listing. We noted that this product did fit within the description of the goods under consideration. However, as it accounted for approximately [redacted]% of total sales and production we did not pursue this line of inquiry further.

5 THE AUSTRALIAN INDUSTRY

5.1 Introduction

Cockburn Cement advised that it operates three quicklime kilns, two at Munster and one at Dongara, in Western Australia. These kilns have the capacity to produce approximately [redacted] tonnes of quicklime per year.

Cockburn Cement advised that lime production is a capital intensive industry and it has invested heavily in its facilities at Munster and Dongara where the replacement costs associated with quicklime production at these operations likely to be in the order of $[redacted] million. Cockburn Cement stated that it [redacted] *[investment plans]*

5.2 Quicklime production process

Following is brief description of the manufacturing process as provided by Cockburn Cement:

> *Cockburn Cement dredge shell sand (Calcium Carbonate) from the seabed in Owen Anchorage, off the coast from Woodman Point, approximately 7 km from the Munster operation. The trailer suction barge carries the sand back to Woodman Point and deposits it alongside the Cockburn Cement jetty.*
>
> *The suction reclaimer pumps the sand into the washing plant at Woodman Point where oversized shells and soluble salts are removed. The washed sand is pumped in a fresh water medium to the shells and stockpile at Munster.*
>
> *Stockpiled sand is reclaimed by front end loader and conveyed to the kiln storage hopper. The hopper feeds the sand at a controlled rate to the kiln pre-heater tower. The sand cascading down through the cyclones of the pre-heater is mixed with the rising hot gases from the rotary kiln. By the time it arrives at the bottom of the tower, it is already at 800°C.*
>
> *The pre-heated sand slowly passes along the rotary kiln where it reaches its maximum temperature of 1100°C. At this temperature, the calcium carbonate is decarbonated to form calcium oxide or Quicklime. The quicklime is discharged through coolers to storage silos for distribution.*

Cockburn Cement gave us a tour of its facility and explained the production process, as outlined above. A diagram of Cockburn Cement's quicklime manufacturing process was included in the application at attachment A3.6.

5.3 Capacity, employment and annual turnover

Cockburn Cement estimated its capacity was about [redacted] mt per annum. It stated that it currently employs about [redacted] people, about [redacted] of which work in the production of quicklime.

Its total operating income in 2010 was $[redacted] million, of which $[redacted] million was from quicklime.

5.3.1 Conclusion

Customs and Border Protection is satisfied that there is an Australian industry producing quicklime.

6 AUSTRALIAN MARKET

6.1 Australian manufacturers

Cockburn Cement identified that it was the only manufacturer of quicklime in Western Australia. It observed that previous quicklime producers in Western Australia had closed down due to the capital intensive nature of the industry. Cockburn Cement had absorbed the extra demand from these closures.

It also stated that there were two other quicklime manufacturers in the Adelaide Brighton group, [redacted] These companies had a relatively small production capacity for quicklime, [redacted] and [redacted] respectively and produced the product from limestone.

The remaining three quicklime manufacturers and sellers in Australia are located on the east coast. Sibelco and Boral are located in New South Wales and Cement Australia is located in Queensland. In addition, there are several companies that produce quicklime for internal use.

In total Cockburn Cement advised that there were approximately 30 kilns in operation across Australia. It provided us with a copy of its calculations which estimated the size of the total quicklime industry (**confidential attachment 5**).

According to these calculations:

- [redacted] tonnes per annum were external sale by 4 major producers in 2010 and Cockburn Cement provided [redacted]kt or 60% of this volume;
- [redacted]kt was produced for internal use; and
- [redacted] tonnes per annum is produced internal production is included and Cockburn Cement provides [redacted]kt or 42% of this volume.

6.2 Imports

Cockburn Cement stated that dumped imports from Thailand first entered the market in about March of 2010. We asked Cockburn Cement why historically, there have not been many imports of quicklime. The company explained that large customers in the market are generally in [redacted] In addition, establishing the necessary infrastructure requires a level of capital investment that companies have not previously been willing to undertake. Finally, the cost of transporting the goods to Western Australia means that these goods were generally not competitive in the market.

6.3 Market size, condition and servicing of market sectors

Cockburn Cement outlined in its application that quicklime is used in a range of applications but the majority of it is used in the mineral processing industry, in

particularly alumina, gold and steel. Cockburn Cement is located near four large alumina refineries in Western Australia

Due to the continuous nature of mineral processing, the market has little variation throughout the year. However, Cockburn Cement advised that there has been an overall increase in demand for quicklime from its customers in Western Australia, but gold industry had remained relatively stable.

Cockburn Cement stated that the Australian market is largely geographically segmented. The costs of transporting quicklime resulted in west coast and east coast markets. Cockburn Cement observed that it received interest from end users in the Eastern States, but due to the high transportation costs involved in shipping large quantities of quicklime they could not supply quicklime to them. Similarly, it was aware that some of its customers had explored the possibility of purchasing and transporting quicklime from the Eastern states but also found the price uncompetitive. It did note however, that it sometimes supplied quicklime to [redacted]

7 SALES

7.1 Introduction

As part of its application, Cockburn Cement provided Customs and Border Protection with a line by line sales listing for July 2010 to June 2011. At the visit we sought to verify the company's sales information to its financial accounts and source documents for selected sales in order to establish that the information provided was complete, relevant and accurate. Due to some errors with negative figures as outlined below, Cockburn Cement provided a revised sale list (**confidential appendix sales**) for the July 2010 to June 2011 period.

7.1.1 Customers and Level of trade

We counted [redacted] customers in the Cockburn Cement's sales list. Customers were identified by where they were located and therefore some customers had a number of listings depending on the location of the individual plant. For example, [redacted] is based in [redacted] and is identified as a separate customer for each of these locations.

Cockburn Cement confirmed at the visit that all its customers are considered 'end users'.

The company identified [redacted] as one of its major customers. [redacted] represents approximately [redacted]% of Cockburn Cement's actual sales (excluding credits and sales to Northern Cement), see **confidential appendix sales**.

Sales to [redacted] are based on [redacted] One other customer, [redacted] also purchases quicklime on this basis while all other customers purchase quicklime [redacted]

7.1.2 Related parties and arms length transactions

We identified from Adelaide Brighton's Annual Report that one customer, [redacted] appeared to be legally related to Cockburn Cement as it fell within the Adelaide Brighton group. We also identified that the price charged to [redacted] appeared to be significantly less than the price charged to other customers, see calculations at **confidential appendix sales**.

In response, Cockburn Cement advised that the price for [redacted] was based on [redacted] Cockburn Cement's revised sales list shows that it sold [redacted] tonnes to [redacted] during the July 2010 to June 2011 period, which represents just [redacted] of its total sales for the same period. The average ex-works price for [redacted] during the investigation period was approximately $[redacted] per tonne, compared to an average of $[redacted] per tonne for all customers. [redacted] was also identified as receiving the lowest sales price of $[redacted] per tonne. See working at **confidential appendix sales**.

Cockburn Cement advised that it considered sales to [redacted] to be intra company transfers, but still issued with an invoice and had essentially the same sales

documentation in place. We understand that due to the relationship between the parties there is no contractual documentation in place between the parties. Cockburn Cement advised that [redacted] was a separate legal entity.

We consider that [redacted] is related to Cockburn Cement and sales to [redacted] have not been made at arms length.

Therefore, we are of the view that only sales to unrelated parties may be relied upon in the assessment of the economic condition of the Australian industry.

7.1.3 Ordering, invoicing and delivery arrangements

[redacted]

[confidential sales information]

Distribution arrangements

[redacted]

[redacted]

[confidential sales information]

7.1.4 Pricing

[redacted]

[confidential pricing information]

Sales Date

Cockburn Cement advised that it considered the delivery date to be the date of sale.

Contractual arrangements

As mentioned above, Cockburn Cement generally enters into supply contracts with all its customers.

Supply contracts with the alumina customers, [redacted] Supply contracts with other customers are generally [redacted]

Under the contract terms, prices are [redacted]

7.1.5 Freight

We identified that freight costs made up a major component of some sales. Cockburn Cement confirmed that freight made up a considerable component of the costs per tonne, particularly for long haul deliveries of the quicklime.

As freight was based on distance, we were unable to calculate a meaningful weighted average inland freight cost. However, we verified freight costs as outlined below.

7.1.6 Rebates and discounts

[redacted]

[confidential sales information]

7.1.7 Exports

Cockburn Cement stated in its application that it does not export quicklime. We found no evidence of exports of quicklime during the visit.

7.2 Verification of domestic sales

7.2.1 Verification to financial accounts (completeness)

We sought to reconcile the sales data provided in the applicant to the company's management accounts to ensure completeness. Cockburn Cement advised that the data in the sales list provided in the application was based on a combination of its [redacted] accounting system and sales recording system.

Cockburn Cement advised that all the "reference document" numbers in its sales list that started with a 6 or an 8 were in fact returns of the goods and should be reflected as a negative value and consequently subtracted from the total sales listing. We accepted this was the case based on the source documents provided for [redacted] outlined below.

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Cockburn Cement subsequently provided us with a revised sales listing during the visit, which identified negative sales values that were previously included as a positive values in the sales listing, see **confidential appendix sales.**

The company provided us with the Adelaide Bright Sales Reports for Cockburn Cement for June 2011, December 2010 and June 2010 for the purpose of reconciling the sale list data to show completeness. The reports are at **confidential attachment SALES 2**.

In the Sales Reports, Cockburn Cement divided its sales data for quicklime into the following categories:

[redacted]

The Sales Reports divided sales of all products for Cockburn Cement into [redacted] main sections:

[redacted]

A summary of the revised sales listing and the Adelaide Brighton sales report for the investigation period is shown below:

	Quantity (Mt)	Nett proceeds
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]

The sales figures in the Sales Report for December 2010 and June 2011 are consistent with the revised sales listing. We consider the minor variance to be acceptable.

We were then shown how the total quicklime sales for January to June 2011 reconciled with Cockburn Cement's Executive Financial Statement contained within the [redacted] reporting system. A screen shot was provided to us following the visit, see **confidential attachment SALES 3**. The quicklime sales of $[redacted] reflected in the Sales Report for this period reconciled with the sum of the quicklime transactions in the financial statement for the same period. Quicklime transactions were identified with a 30 at the end of the account number. We were also provided with a screen shot of the figures from the financial statement in order to identify the negative figures, which were reflected in a code in the financial statement, see **confidential attachment SALES 4**.

7.2.1.1. Conclusion on completeness

We are satisfied based on the Sales Reports, financial statement for January to June 2011 and management accounts provided that the revised sales listing is complete.

7.2.2 Verification to source documents (accuracy)

Prior to the visit we selected the following transactions from the sales list for verification to source documents.

	Customer name	Reference Document	Delivery Date
1	[redacted]	[redacted]	[redacted]
2	[redacted]	[redacted]	[redacted]
3	[redacted]	[redacted]	[redacted]
4	[redacted]	[redacted]	[redacted]
5	[redacted]	[redacted]	[redacted]
6	[redacted]	[redacted]	[redacted]
7	[redacted]	[redacted]	[redacted]
8	[redacted]	[redacted]	[redacted]
9	[redacted]	[redacted]	[redacted]

For each selected sale, Cockburn Cement provided the relevant:

- commercial invoice (and/or adjustment note/credit note as applicable);
- delivery document (from Cockburn Cement's freight management system); and
- sales contract or agreement (or extract of) where applicable.

The bundles of source documents are at **confidential attachment SALES 5**.

Cockburn Cement did not provide purchase orders for the selected sales since we had details on price and tonnage and it was not realistic to identify the actual purchase order for all the selected sales due to the company's system and its approach to [redacted]

The reference document identified in the sales listing for particular transactions is based on the delivery document number in the bundle of documents provided. This number is the reference order number in the commercial invoices.

Cockburn Cement advised that the appropriate sales date is the delivery date. This is generally the invoice date. However, Cockburn Cement advised that the actual delivery date for some long haul deliveries would be different to the invoice date by a day or two. In addition, some larger customers, such as [redacted], was invoiced [redacted]

The customer, reference document number, delivery date, quantity, gross invoice price and gross proceeds reconciled with the source documents provided and therefore the sales transactions that do not include haulage may be considered fully verified to the source documents. This is transactions 2, 5,6 and 7.

We did not identify any issues to be considered in the form of anomalies, rebates, or inconsistencies in the sales contract and agreement extracts provided.

Freight costs

We were provided with separate print outs for freight costs and the underlying supply agreement between the freight company [redacted] and Cockburn Cement for transactions 8 and 9. There was a minor discrepancy of .02 between the value listed and that reflected in the documentation for transaction 8. We consider this to be very minor and therefore we are satisfied that the freights costs for these transactions are accurate. The freight cost documents and supply agreement are at **confidential attachment SALES 6**.

We advised that it was not necessary to provide source document for freight for the transaction 4 [redacted] since it was in fact a return of the goods.

Proof of payment

Prior to the visit we requested proof of payment for the 1st, 5th and 9th sales transactions. We were provided with proof of payment for the sales 5 and 9. As above, the first sale to [redacted] is considered to be an intra company transfer and therefore we were advised that this amount was reflected in the accounts and Cockburn Cement did not have proof of payment in the same form as sales to unrelated parties. Proof of payment is included in the bundles of sources documents at **confidential attachment SALES 5**.

7.2.2.1. Conclusion on accuracy

Based on the material provided we are satisfied that:

- the invoiced amounts and sales details in the revised sales listing are accurate;
- the invoiced amounts were paid by Cockburn Cement's customers;
- the net proceeds and net transaction amounts within the revised sales list are accurate.
- The quantity (in tonnes) is recorded accurately in the revised sales listing.

On this basis, we consider the revised sales data is reasonably accurate.

7.3 Conclusion on sales

We have verified the revised sales data to source documents and to Cockburn Cement's management accounts and we are satisfied that the data is accurate, relevant and complete.

8 COST TO MAKE AND SELL

We explained to Cockburn that we needed to be satisfied that the data submitted in the application was complete, relevant and accurate. We also explained that the company would have to demonstrate that the data could be verified and traced to financial statements and to source documents.

8.1 Production volumes

Cockburn provided production reports for each of the like products sold during the investigation period. The total volume identified in the reports reconciled to the amounts used to calculate the unit manufacturing costs included in Appendix A6.

8.2 Verification of cost to make

Completeness

In its application, Cockburn provided a copy of its profit and loss statement for the previous two calendar years. From [redacted], we were provided with a download of the company's financial statements which reconciled to the profit and loss statements. For all of the variable costs such as fuel, process utilities, process materials, material handling and packing materials, we were able to directly reconcile the [redacted] data to the profit and loss statement. This enabled the team to be satisfied that the dataset contained in [redacted] was the complete dataset used to compile the profit and loss statement.

We then requested Cockburn to demonstrate how the [redacted] dataset was used to compile the cost to make and sell information in its application. Cockburn provided reports from [redacted] showing costing breakdown for each of the cost centres relevant to Quicklime production. This included:

[redacted]

We were able to reconcile costs from these reports to management costing ledger reports. From these costing ledger reports, we were able to trace through to unit production costs. These unit production costs were then multiplied by the total tonnes produced in the various periods to calculate the total cost to make.

Documents relating to cost completeness are at **confidential attachment COST 1.**

Coal

[redacted] in Cockburn's production of quicklime. We requested and were provided with invoices for selected months of the investigation period. The

invoices identified the volume and value of the purchased coal. Cockburn also provided delivery reports showing the daily volume of coal delivered which reconciled to information contained on the invoice.

A vendor account ledger was provided showing payments throughout the investigation period and we were able to identify the corresponding payment amounts to the selected invoiced amounts.

Source documents relating to coal purchases are at **confidential attachment COST 2.**

Gas

We selected three months (January 2011, March 2011 and May 2011) within the investigation period to verify its gas purchases through to source documents. We were provided with copies of relevant tax invoices from the gas provider [redacted] and a vendor report from [redacted] showing the corresponding payments. We were able to reconcile the amounts invoiced to the amounts paid.

We also sought to reconcile the individual charges on the tax invoices to the supply agreement between Cockburn and [redacted] The gas consumption charges and the supply charges matched the unit charges set out in the supply agreement.

Source documents relating to purchased gas are at **confidential attachment COST 3.**

Shell sand

Shell sand is dredged from just off the coast near to Cockburn's manufacturing facility. [redacted] For one of the selected months within the investigation period, Cockburn provided a copy of a [redacted] which identified the volume of shell sand dredged, [redacted]

[redacted] for shell sand used in its production process, the State authorities conduct regular compliance audits of its shell sand inventory levels and production schedules. The company provided a copy of its most recent compliance report certifying the reliability and accuracy of its inventory tracking system.

Source documents relating to shell sand dredging are at **confidential attachment COST 4.**

8.3 SG&A expenses

Selling, administration, finance and other corporate overheads were allocated using the proportion of quicklime sales volume to the company's total sales of all products. We were able to reconcile the total cost pool for SG&A expenses to the profit and loss statement.

Source documents relating to SG&A are at **confidential attachment COST 5.**

8.4 Conclusion

We have verified the cost data provided in Appendix A6. We are satisfied the revised data is complete, accurate and reliable and only includes costs in respect of domestic sales of like goods.

9 INJURY AND CAUSATION

Cockburn Cement claims that since Chememan had entered the market all new contracts had been subject to longer negotiation times and reduced prices resulting in injury to the Australian industry. It argues that this injury was directly caused by the presence of low priced, dumped imports from Thailand.

9.1 Injury

Injury in the alumina sector

The alumina sector accounts for approximately [redacted] of Cockburn Cement's sales of quicklime. It's customers in this sector are [redacted] Cockburn Cement argues that it has suffered injury in regard to [redacted] It argues that due to the presence of dumped imports from Thailand in the market, it was not able to achieve the price in this supply agreement that it could have otherwise achieved.

Cockburn Cement explained that the previous supply agreement with [redacted] was for a term of [redacted] years. The price [redacted] was paying for quicklime at the end of the previous supply agreement was $[redacted] Mt. As previously mentioned, [redacted] pricing is based on a [redacted]

In the new price agreement the selling price was [redacted] Cockburn Cement originally proposed prices of:

[redacted]

[redacted]

[redacted]

The final price agreed upon between [redacted] and Cockburn Cement was:

[redacted]

[redacted]

[redacted]

Cockburn Cement stated that the price achieved [redacted] *[confidential pricing information]* We asked the company why it considered this price to be reasonable.

Cockburn Cement argued that it only had the opportunity to renegotiate the price with [redacted]. When the previous agreement was negotiated in [redacted],

there were other competitors in the market which put downwards pressure on the price. In addition, in the past [redacted], the company argues that costs have increased significantly. We noted that the price to [redacted] It should also be noted that [redacted]

Cockburn Cement also stated that it used [redacted] to determine what price was reasonable for sales to [redacted] It considered that [redacted] was currently around $[redacted]/Mt. As [redacted] was a large customer, it considered that it could achieve prices at the lower end of that scale. In its calculation of [redacted] Cockburn Cement stated that it considered factors including [redacted]

Cockburn Cement stated that it considered the final negotiated price of [redacted] *[confidential sales and pricing information]*

Cockburn Cement explained that [redacted] *[confidential pricing information]*

Accordingly, Cockburn Cement considered that it has experienced injury in this regard.

Cockburn Cement provided us with the previous and current [redacted] contract at **confidential attachment INJ 1**.

Injury in the non-alumina sector

Cockburn Cement asserted that it had also experienced material injury in the non-alumina sector. This sector accounts for approximately [redacted] of the company's sales by volume.

It argues that Chememan has approached the majority of its customers and offered them lower prices. As opposed to the sales contract with [redacted] where it was unable to achieve what it considered to be a realistic price increase, in the non-alumina sector it was actually required to lower its prices to retain the customers. The company provided us with evidence to support these lowered prices in the application.

Cockburn Cement argues that prior to Chememan entering the market it set the price according to [redacted]. Price [redacted] with its existing customers are usually based on [redacted] *[confidential pricing information]*

9.2 Causation

Cockburn Cement argues that the injury it has suffered is caused by competition from dumped imports. It argues that Chememan has approached the majority of its customers and offered them lower prices. This has resulted in Cockburn Cement either not achieving price increases it considers to be reasonable or needing to lower its price to retain the customers.

We asked the company if there were any other factors that may have caused the injury. The company argues that there were no other factors which caused injury.

The company acknowledged that the issue of the quality difference between the quicklime provided by itself and Chememan had been raised. Quicklime sold by Chememan has a higher available lime content than Cockburn Cement's Quicklime. In addition, the quicklime provided by Chememan contains less sulphur. Cockburn Cement did not consider that the quality difference to be the cause of the injury because:

- if quality was important, customers would be willing to pay more for Chememan's product and it believed the Chememan product was being purchased at a lower price; and
- customers only referred to the quality of Cockburn Cement's product when pricing negotiation were underway but no mention of it was made at other times;
- Cockburn Cement had conducted tests which indicated that the available lime quantity in quicklime did not effect the volume of quicklime required in gold processing.

We also asked the company whether customers may prefer to have two suppliers of quicklime for security and therefore may prefer to purchase product of Chememan regardless of price. Cockburn Cement argued that it provided a secure source of supply of quicklime. The company operated three different kilns and always had several weeks worth of quicklime in silos on site. In addition, while it was less efficient and more costly, it was able to use its clinker kilns to produce quicklime if necessary. It noted that it had plants to increase quicklime capacity in the future in line with market growth. Therefore, it considered that the argument that customers may prefer to have two sources of supply for security was erroneous. In addition,

Cockburn Cement observed that it had been accused of making super profits on the sale of quicklime. However, it argued that the level of profits it achieved was necessary as quicklime was a capital intensive business and it required significant assets and incremental capital. This was demonstrated by the fact that the other producers of quicklime in the Western Australian market had folded. Other Australian

producers were unable to compete competitively in the market due to the transportation costs. In addition, it argued that its large production capacity offered economies of scale.

Cockburn Cement also observed that it had been accused of taking this anti-dumping action to protect against competition in the WA market place. It stated that it has no problem with competition, it considers competition healthy and a fact of commercial life. However, it stated that this assumes that the competition is fair, which competition from dumped exports is not, and this is why it has exercised its right to seek anti-dumping protection against these dumped exports from Thailand.

We noted that the majority of quicklime sold by Cockburn Cement was used in alumina processing – largely for caustic regeneration, ie, recovering caustic soda from waste material. We asked the company whether the price of caustic soda could therefore effect the price of quicklime as it is only economical to recover caustic soda in this way when the price of caustic soda is sufficiently higher than quicklime. Cockburn Cement stated that caustic soda prices did not effect the price of quicklime as the price of caustic soda was always significantly higher. We also asked the company whether the price of alumina, or a drop in the price, put downward pressure on the price inputs and reagents such as quicklime. The company stated that while this point may be raised in negotiations, its costs remained the same and it did not change its prices in response to this argument.

Cockburn Cement therefore considered that there were no other injury factors and that the market demand was strong for quicklime.

10 UNSUPPRESSED SELLING PRICE

Unsuppressed selling price and non-injurious price issues are examined at an early stage of an investigation and, where possible and appropriate, preliminary examinations are made during the application consideration period for the purpose of assessing injury and causal link and therefore the appearance of reasonable grounds for the publication of a dumping duty notice.

Customs and Border Protection generally derives the non-injurious price by first establishing a price at which the applicant might reasonably sell its product in a market unaffected by dumping. This price is referred to as the unsuppressed selling price.

Customs and Border Protection's preferred approach to establishing unsuppressed selling prices observes the following hierarchy:

- industry selling prices at a time unaffected by dumping;
- constructed industry prices – industry cost to make and sell plus profit; or
- selling prices of un-dumped imports.

Having calculated the unsuppressed selling price, Customs and Border Protection then calculates a non-injurious price by deducting the costs incurred in getting the goods from the export free on board point (or another point if appropriate) to the relevant level of trade in Australia. The deductions normally include overseas freight, insurance, into-store costs and amounts for importer expenses and profit.

Cockburn Cement advised that it will provide a further submission on the USP and injury in due course.

11 ATTACHMENTS

Confidential attachment 1	Company presentation
Attachment 2	Supply specifications
Confidential attachment 3	Laboratory tests – available lime content
Attachment 4	Gold processing tests – available lime content
Confidential attachment 5	Market size calculations
Confidential attachment SALES 1	Daily RCTI Report
Confidential attachment SALES 2	Sales reports
Confidential attachment SALES 3	Financial statement
Confidential attachment SALES 4	Credit sales report
Confidential attachment SALES 5	Sales documents
Confidential attachment SALES 6	Freight documents
Confidential attachment CTMS 1	Cost completeness documents and spreadsheets
Confidential attachment CTMS 2	Coal purchase documents
Confidential attachment CTMS 3	Gas purchase documents
Confidential attachment CTMS 4	Shell sand dredging documents
Confidential attachment CTMS 5	SG&A source documents and spreadsheets
Confidential attachment INJ 1	[redacted] sales documents

GENERAL SUPPLY SPECIFICATION

AS1672.1 (1997) Classification

Physical Properties

Residue by Rotap

6.7 mm	%	0	0	0		
2.36 mm	%	0	0.8	1.7		
0.6 mm	%	3.3	4.5	7.8		
0.3 mm	%	15.8	24.5	34		
0.15 mm	%	59.4	67.6	76.1		
0.045 mm	%	84.5	90.3	95.8		
Loose Bulk Density		kg/l	0.9	0.95	1	AS4489.10.1

Chemical Properties

CaO		%	78.7	81.7	84.7	AS4489.5.1
SiO_2		%	6.3	8.5	11.5	AS4489.5.1
Al_2O_3		%	0.7	0.85	1.05	AS4489.5.1
Fe_2O_3		%	0.3	0.35	0.41	AS4489.5.1
MgO		%	5	5.1	5.5	AS4489.5.1
SO_3		%	1	1.1	1.7	AS4489.5.1
Loss on Ignition		%	0.2	1.2	2.2	AS4489.7.1
CO2		%	0.1	1	2.2	≤5 AS4489.5.1
Available Lime		%	71.3	75.3	79.3	≥60 AS4489.6.1
Slaking						
Total temperature rise		°C	30	34	36	AS4489.3.1*
Total active slaking time		min	3.5	5	7	AS4489.3.1*

* modified methodology using 0.188 mol/l NaOH solution (7.5g/l) at 50°C initial temperature

Reference to AS1672.1 limits relate to the 1997 edition

Performance ranges based on 95% population coverage for last 12 months manufacture. Individual results may fall outside the stated ranges

Revised: 09/09/09

AS1672.1 (1997) Classification

Physical Properties

Residue by Retap						
	6.7 mm	%	0	0	0	
	2.36 mm	%	0	0.1	0.4	
	0.6 mm	%	1.1	3	4.9	
	0.3 mm	%	8.1	15.8	23.5	
	0.15 mm	%	45.3	53.3	61.4	
	0.045 mm	%	66.5	76.3	86.1	
Loose Bulk Density		kg/l	0.79	0.84	0.89	AS4489.10.1

Chemical Properties

CaO		%	80.3	82.6	85	AS4489.5.1
SiO_2		%	6.1	8.2	10.2	AS4489.5.1
Al_2O_3		%	0.5	0.7	0.8	AS4489.5.1
Fe_2O_3		%	0.25	0.3	0.34	AS4489.5.1
MgO		%	5	5.1	5.3	AS4489.5.1
SO_3		%	1.1	1.2	1.3	AS4489.5.1
Loss on Ignition		%	0.1	1.1	2.1	AS4489.7.1
CO2		%	0.1	0.9	1.7	AS4489.5.1
Available Lime		%	75.6	79.4	83.2	≥60 AS4489.6.1
Slaking						
	Total temperature rise	°C	41	46	50	AS4489.3.1
	Total active slaking time	min	3	5.5	8	AS4489.3.1

References to AS1672.1 limits relate to the 1997 edition

Performance range stated is based on 95% population coverage for last 12 months manufacture - individual results may fall outside the stated ranges

Revised: 09/09/09

AS1672.1 (1997) Classification:

Physical Properties

Residue by Retap

	6.7 mm	%	0	0	0	
	2.36 mm	%	0	0	0.1	
	0.6 mm	%	0	0.6	1.6	
	0.3 mm	%	1.5	7.1	12.7	
	0.15 mm	%	43.5	54.8	66.1	
	0.045 mm	%	82.7	89.7	96.8	
Loose Bulk Density		kg/l	0.72	0.76	0.79	AS4489.10.1

Chemical Properties

CaO		%	83.4	87	90.5	AS4489.5.1
SiO_2		%	1.8	5.1	8.4	AS4489.5.1
Al_2O_3		%	0.2	0.3	0.5	AS4489.5.1
Fe_2O_3		%	<0.1	0.11	0.18	AS4489.5.1
MgO		%	4.8	5	5.2	AS4489.5.1
SO_3		%	0.6	0.7	0.8	AS4489.5.1
Loss on Ignition		%	0.2	1.2	2.1	AS4489.7.1
CO2		%	0	0.8	1.7	≤5	AS4489.5.1
Available Lime		%	79.2	83.6	88.1	≥60	AS4489.6.1
Slaking							
	Total temperature rise	°C	43	48	53		AS4489.3.1
	Total active slaking time	min	3.5	6	9		AS4489.3.1

References to AS1672.1 limits relate to the 1997 edition.

Performance range stated is based on 95% population coverage for last 12 months manufacture. Individual results may fall outside the stated ranges.

Revised: 09/09/09

PUBLIC FILE 4

COCKBURN CEMENT LIMITED

Available Lime as a Measure of Performance in the Gold Process

It has become the tradition in the gold industry to rate the quality of quicklime according to its content of "*available lime*". The prevailing assumption is that higher available lime equates to higher quality. Hence, the expectation is that higher available lime will give a reduction in consumption. This paper presents a summary of research results that challenge that assumption.

During competitive plant trials in the gold industry, some anomalies were observed. Quicklimes of lower available lime content appeared to perform as well as those deemed to be of high quality in some cases. Comparative information available from five sites[1] where a "higher grade lime" had been trialed showed a small improvement in consumption at two sites, an increase in consumption at two sites and no conclusion could be drawn at one. Anecdotal evidence from other sources also supported these observations. Cockburn Cement Ltd commissioned a series of comparative laboratory trials to test the "*available lime vs consumption*" relationship under controlled conditions.

The test program involved comparing the performance of 8 quicklimes in the leach tests of 4 gold ores. pH of the pulp was controlled using each of the limes under test. All test work was performed at "arms length" by a commercial testing laboratory and all samples were treated under identical conditions. Cockburn Cement's role was to source and deliver samples only.

Table 1 - Analysis of Quicklime Samples Used in Trial.

	A	B	C	D	*Method*
Feed Type	Limesand	Limestone	Limestone	Limesand	
Kiln Type	Rotary	Vert. Shaft	Fluid. Bed	Fluid. Bed	
% Available Lime	**83.5**	**92.0**	**90.9**	**85.4**	*AS4489*
% MgO	5.02	1.59	1.51	5.02	*XRF*
Reactivity Temp. (°C)	45.5	53.5	53.5	47.5	*ASTM C110*
Reactivity Time (mins.)	6	4	1	5	*ASTM C110*

	E	F	G	H	*Method*
Feed Type	Limesand	Limesand	Limestone	Limestone	
Kiln Type	Rotary	Rotary	Rotary	Vert. Shaft	
% Available Lime	**80.8**	**86.0**	**88.8**	**81.6**	*AS4489*
% MgO	5.61	5.16	0.84	0.49	*XRF*
Reactivity Temp. (°C)	41.0	45.5	40.5	38.0	*ASTM C110*
Reactivity Time (mins.)	8	9	10	8	*ASTM C110*

Gold ore and process waters were supplied from the Yilgarn, Murchison, Eastern Goldfields and Northern Goldfields regions. Each region was tested with each lime sample in a 8 x 4 matrix of tests. Prior to dosing, each quicklime was hydrated with the process water from the gold plant. This maximised the quicklime's ability to perform its function in the test work. The resultant hydrates were analysed for composition and particle size distribution. Each round of samples comprised 4 ore/water types being tested with lime from a single source. Lime consumption is expressed as both the raw quantity added[2] (as Quicklime in ***Table 2***) and as kg/tonne added CaO (***Table 3***), ie corrected for available lime content.

Data

Table 2 - Lime consumption as kg/tonne added Quicklime.

Product / Site	A	B	C	D	E	F	G	H	
YILGARN	4.93	4.95	5.79	5.78	6.90	5.62	6.34	6.40	*kg/Tonne*
E. GOLDFIELDS	1.16	1.15	1.03	0.98	1.24	1.42	1.59	1.20	*kg/Tonne*
N. GOLDFIELDS	1.18	1.12	1.25	1.13	1.34	1.23	1.35	1.49	*kg/Tonne*
MURCHISON	0.62	0.54	0.55	0.57	0.66	0.47	0.59	0.55	*kg/Tonne*

Table 3 - Lime consumption as kg/tonne added CaO.

Product / Site	A	B	C	D	E	F	G	H	
Yilgarn	4.12	4.55	5.26	4.94	5.57	4.83	5.63	5.22	*kg/Tonne*
E. Goldfields	0.99	1.06	0.94	0.84	1.03	1.31	1.45	1.03	*kg/Tonne*
N. Goldfields	0.99	1.03	1.14	0.96	1.12	1.13	1.22	1.27	*kg/Tonne*
Murchison	0.52	0.50	0.50	0.49	0.55	0.43	0.54	0.47	*kg/Tonne*

Results

The data in tables 2 and 3 indicate that there is no clear pattern of performance among the limes tested on the basis of either quicklime or actual CaO added. The pattern at the highest dose rate actually shows at least one lower available lime material giving superior performance. This trend varies region by region at the lower dose rates. The outcome is consistent with earlier work[3].

The comparison of limes A and B is of particular interest as these provide the greatest contrast of composition. The benefits of B's much higher available lime were not delivered in the leach tests. This matches the outcomes seen in plant trials, the conclusion of which was that the extra cost for higher purity offered no benefit and was therefore not cost effective.

It is very apparent that other factors are at work. While this paper does not attempt to prove causes, some contributing factors can be explored.

Sizing

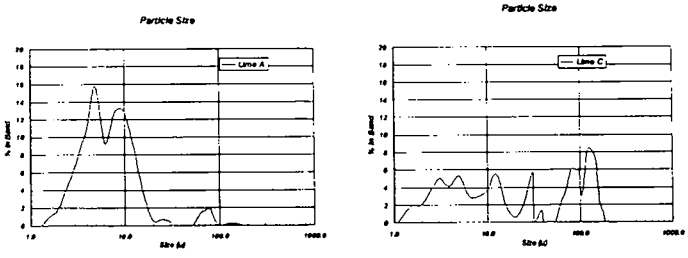

***Fig. 1** - Samples of limes A & C made with Yilgarn Water contrasting particle size distribution.*

Particle size analysis[4] carried out on each of the hydrates after slaking, revealed the fact that fineness was one of the few variables that actually showed any correlation with consumption. This suggests that water quality may play a significant role in the physical condition of the resultant product, as well as simply consuming the lime by magnesium hydroxide/gypsum precipitation. During preparation, the quicklimes appeared to react in the expected manner except that some were quite coarse at the completion. The particle size distribution examples shown above (***Fig. 1***) for limes A and C indicate marked differences in fineness despite being slaked under identical conditions. Lime A was close to 100% passing 45μ while Lime C had a significant portion greater than 45μ and even 100μ. A finer hydrate can be expected to disperse and function better in a given process or reaction. Coarse

particles of hydrate are at risk of being lost to tails. ***Table 4*** shows the relationship between water quality and hydrate fineness.

Table 4 - The relationship between TDS and % passing 10μ.

Product / Site		A	B	C	D	E	F	G	H
	TDS	% <10u	% <10u	% <10u	% <10u	% <10u	% <10u	% <10u	% <10u
Yilgarn	110500	59.1	49.0	38.3	66.0	76.3	89.2	41.7	49.1
E. Goldfields	45000	80.0	51.3	33.8	78.5	82.2	86.5	51.9	68.8
N/E Goldfields	21400	90.3	76.2	60.4	90.0	83.9	87.8	60.7	75.9
N. Murchison	445	91.8	76.9	68.6	88.2	92.6	88.8	51.8	77.5
Correlation		*-0.989*	*-0.847*	*-0.767*	*-0.979*	*-0.932*	*0.134*	*-0.764*	*-0.968*

It can be seen in nearly all cases that improving water quality tends to give finer product and that some limes respond better than others. Lime B, C, G and H were the most sensitive to water quality, particularly from the E. Goldfields sample, giving consistently coarser hydrate. Limes A, D, E performed reasonably well. The slight positive value for F is because water quality had little or no impact on fineness for this material. Fineness usually worked as a predictor for any individual lime but not as a universal predictor for all limes.

Other factors

Losses To Tails

- The presence of extractable calcium hydroxide in the leach test tails was investigated as a separate exercise[5]. The conclusion of this work was that calcium hydroxide was found in tails though there was no strong pattern between the lime types. There was a weak trend however, that related to the amount added in the first place. The water sample from the Eastern Goldfields region gave a disproportionately high level of recoverable $Ca(OH)_2$ in tails.

Table 5 - % of $Ca(OH)_2$ added found in tails.

Product / Site	A	B	C	D
Yilgarn	0.5	0.3	0.3	0.4
E. Goldfields	2.2	1.4	1.9	1.9
N. Goldfields	1.0	0.9	0.9	0.9
Murchison	1.2	1.7	1.7	1.5
MEAN	*1.2*	*1.1*	*1.2*	*1.2*

Process water

- Limes B, C, G and H also produced disproportionately poor hydrate with E. Goldfields water. The testing laboratory (Lakefield Oretest) noted the presence of "Prussian Blue" which suggests the presence of spent process liquor. The interactions of the chemistries are numerous, varied, very complex and beyond the scope of this work. Barren eluate is one substance however that is known to severely suppress lime reactivity[6] for up to 13 minutes.

Reactivity

- Reactivity of the quicklimes did not predict consumption performance. The highest and lowest reactivity limes also generally gave the poorest performance. The best consumption rates were generally by those limes in the middle band.

MgO Content

- Neutralisation curves for pure calcium oxide and magnesium oxide[4] show that MgO is a neutralisation agent in its own right yet it is not detected in the available lime test. The significant

MgO content of some limes is probably contributing to the process without being taken into consideration. This serves to further blur the available lime/consumption relationship.

Process Sensitivity

- The significant buffering effect of some process waters due to the magnesium hydroxide precipitation serves to de-sensitise the process to lime addition in the region of the target pH end-point. Variations in the amount added result in little change to pH values.

Carbonate Source

- A significant grouping was achieved when the limes were ranked according to consumption rate for each region and the raw material noted. In all cases, quicklimes made from limesand occupied the top four positions, ie gave the lower consumption rates. The reason for this is not apparent. It may be related to MgO content and/or porosity of the raw material.

The results of the test work to date indicate the following:

- The relationship between % available lime and lime consumption in the gold process is poor.
- Lower available lime appears not to impede the performance to any significant degree.
- There is a relationship between water quality and the effective hydration of quicklime.
- Lime types vary in their response to water quality.
- Variation in the amount of lime lost to tails is relatively minor.
- All the influences on lime performance in the gold process have not yet been accounted for.

Conclusions

- **There was no significant difference in the metallurgical performance of any of the limes tested on the basis of the available lime content.**
- **Many factors other than simple available lime content impact significantly on quicklime performance.**
- **The only good measure of lime performance presently is by a carefully monitored comparative plant trial.**
- **Further investigation is required to identify specific influences on lime consumption.**

References

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4. "*Available Lime as a Measure of Performance in the Gold Process*", H.C. Fairhurst and R.F. Bolton, Cockburn Cement internal report.
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Hans Fairhurst/Dick Bolton **Cockburn Cement Ltd.** **(08) 9411 1033**
Technical Service Dept.