2003 Review of the Mutual Recognition Agreement and the Trans-Tasman Mutual Recognition Agreement (MRA)

Executive Summary

Kmart operates a chain of discount department stores with outlets in Australia and New Zealand. Our normal supply chain operation involves shipping in excess of 1,000 containers of merchandise across the Tasman from Australia to New Zealand.

In the main this trade is restricted to non-food merchandise. Over time any items identified as a potential concern were identified, evaluated for risk purposes and if necessary removed from the range of products shipped to New Zealand eg honey.

The Mutual Recognition Agreement and the Trans-Tasman Mutual Recognition Agreement (MRA) can be considered a positive assistance to this trade inasmuch as we are aware of few difficulties or problems impeding the smooth traffic of goods. This observation represents a passive endorsement of the benefits delivered under the MRA.

There is one major exception to this statement: ceramic ware shipped from Australia into New Zealand. This category of goods is the subject of our submission to the review. [A second category of goods, paint sets subject to similar safety standard issues, will be addressed in a supplementary submission to the Review Committee.]

Kmart imports ceramic ware into Australia for distribution to its store network in both Australia and New Zealand. Some overseas origin ceramic ware is therefore shipped from Kmart Australia to Kmart New Zealand.

All ceramic ware imported into Australia must comply with the Australian safety standards. These regulatory arrangements designed to protect public safety are similar to New Zealand regulations. But ceramic ware currently falls into the Special Exemptions category of the MRA so that ceramic ware that satisfies the Australian standard and is shipped to New Zealand must be re-tested to satisfy the almost identical New Zealand health requirements unless a satisfactory certificate is unavailable.

Generally speaking, the safety testing arrangements in both countries operate via the import entry system whereby surveillance mechanisms identify and highlight goods by reference to profiles linked to tariff headings. Administrative processes then intervene to assess the level of safety based on laboratory analysis of heavy metal content against the prescribed standard.

We note from a comparison of the Australian and New Zealand regimes for testing ceramic ware that they share identical objectives. Furthermore, the basic standards for laboratory analysis of heavy metals are substantially similar. The main areas of divergence appear to be in respect to:

- The porosity test required by New Zealand authorities; and
- The administrative procedures ie surveillance, focus of the compliance regime, selection of samples, acceptance of valid certificates and testing frequency.

Our New Zealand experience over the past few years has revealed a number of issues in relation to approved test methods, acceptable laboratories, arbitrary rejection of certificates, ad hoc decision-making and a secretive attitude. These largely reflect institutional influences rather than a valid risk management policy.

We have also found the administrative arrangements in respect obtaining periodic approvals and other aspects of the New Zealand regulatory regime impractical. A critical control point in Kmart's risk management program is the manufacturer because in our view the post-importation identification of a risk is too late.

A major concern compounding our anxiety over these issues surrounds what is termed the porosity test and its management. Notwithstanding we find many aspects of this test methodology and its operation unsatisfactory the very requirement by New Zealand authorities that ceramic ware must satisfy a porosity test appears contrary to the legislation. Our reading of Regulation 267 suggests that a satisfactory result for heavy metal analysis overrides the porosity test requirement.

Unable to navigate the uncertainties, vagaries and obstacles represented by this system Kmart re-engineered its supply chain, at considerable cost, in order to continue shipping ceramic ware into New Zealand.

However, our experience and research leads us to conclude that whilst similar health risks are managed in both jurisdictions :

- Ceramic ware complying with Australia's *Customs (Prohibited) Imports Regulations* also complies with the standard set down in New Zealand's *Food Regulations,* therefore it is inappropriate not to grant ceramic ware mutual recognition status;
- All public health risks are adequately dealt with under the Australian compliance regime but the New Zealand system appears less efficient because of its focus on importers;
- The administrative management of the New Zealand surveillance and testing program appears uncertain, unnecessarily onerous, unreliable, discriminatory and costly.
- the New Zealand system involving the porosity test appears to involve an incorrect application of the Regulation 267, it does not reflect an objective assessment and potentially represents inadequate management of the public health risk.

We therefore recommend that ceramic ware should be removed from the category of Special Exemptions and the scope of the Mutual Recognition Agreement should be broadened to include ceramic ware. From the point of view of protecting public health and safety the regulatory requirements applying to each country are adequate, so that there is no material difference that warrants maintaining a duplicate regulatory impediment.

The Compliance Arrangements

Each country has identified a health risk in relation to ceramic ware and introduced measures to protect the public from articles that contain unsafe levels of lead or cadmium.

Australia: ***Customs (Prohibited Imports) Regulations 1956***
Regulation 4E prohibits the importation of glazed ceramic ware used in connection with the storage or consumption of food for human consumption if it exceeds the acceptable release levels of heavy metals. The required test method to determine compliance is British Standard 4860. This is outlined in schedule 7 of the Regulations along with a list of the type of goods subject to testing.

The release of lead and cadmium from the glaze or decoration of ceramic ware may be hazardous to human health if it exceeds 7.0 parts per million or more.

Policy advice for this Regulation rests with the Safety Policy Unit of the Consumer Affairs Division of the Treasury Department but the Australian Customs (ACS) Service is responsible for compliance at the barrier.

The ACS sampling and testing arrangements are outlined in an Information Sheet[1]. The program is based on monitoring the source manufacturer of the product. The compliance program therefore disregards the number of individual importers who may ship a variety of a particular manufacturers products into Australia to focus on the actual goods. Under the Australian arrangements the source manufacturer is required to be tested at least once in any twelve month period.

New Zealand: ***Food Regulations 1984***
Regulation 267 subclause (1) prohibits the sale of containers in connection with food storage or preparation capable of imparting heavy metals or are *"not resistant to vinegar"*, subject to subclause (2). Subclause (2) prohibits the sale of glazed earthenware used in connection with the storage or preparation of food that fails to satisfy the test described in the Ninth Schedule.

The policy and administration rests with the Ministry of Health (MOH) and a surveillance program operates via the New Zealand Customs import entry facility.

The MOH has produced a publication entitled 'A Summary of Import Clearance Criteria for Ceramicware and Metal Food Containers, 1998'. (Summary Criteria) This document explains that the Regulations require importers of ceramic ware to provide evidence to satisfy the MOH that risks to public health have been controlled. The introduction refers to information from the United States indicating a history of failure for products from certain firms or countries.

The hazards identified in the criteria include not only lead and cadmium leaching into food but also "*adsorption of liquids making them difficult to clean"*.[2] The relevant criteria is that *"tested products do not absorb vinegar during the above analysis (with the exception of unglazed ovenware products)."* This is known colloquially as the porosity test, but the publication does not specify a test methodology or standard.

[1] Issued 14/11/96, copy attached.
[2] New Zealand Ministry of Health, 'A Summary of Import Clearance Criteria for Ceramicware and Metal Food Containers, 1998', page 6.

The MOH sampling methodology is also outlined in the publication although the operational administration of the testing rests with the local Public Health Service (PHS). Importers may opt to either provide certification from approved overseas laboratories (a shipment-by-shipment basis) or apply for a Multiple Release Permit (MRP). Products not covered under these options are subject to shipment-by-shipment sampling and analysis prior to clearance.

MRP's are issued in respect to specified products from specified overseas suppliers for a prescribed period of twelve months. To apply for a MRP importers must be able to identify the range and volume of products they intend to import from each manufacturer over the next twelve months. The MOH will then decide specific products to be sampled for analysis on a post-importation basis.

A comparison of the two compliance regimes

Laboratory analysis to detect heavy metals. Both jurisdictions protect public health by requiring imported ceramic ware to comply with identified safety levels in respect to heavy metal content. Similar standards and scientific testing methods are prescribed in both countries.

Compliance program. Both countries operate a surveillance program linked to tariff headings to monitor imports via the customs import entry system. However, the Australian basis for testing imported products is focussed on the **manufacturer**.

The New Zealand surveillance program considers all shipments regardless of manufacturer or importer ie it relies on a **shipment-by-shipment approach** and places emphasis on individual products whilst ignoring the manufacturer status.

Periodic approval scheme. Australia operates a risk management system to actively monitor manufacturer performance ie current importations, history, compliance records, etc. Manufacturers products are analysed on a rolling basis every twelve months to confirm continuing compliance. Thus if a manufacturers products satisfy the Australian standard further shipments from that manufacturer need not be sampled for testing for twelve months, all things remaining equal.

The Australian administrative arrangement is a pre-clearance regime ie samples must be analysed and satisfy the relevant standard before the risk is mitigated and the article is declared safe for release into home consumption.

The New Zealand MRP model concentrates on individual importers. It requires projections of product ranges, volumes, unique identification of products, and other information and then arranges a testing regime around this data.

The New Zealand analysis is post-importation ie inbound consignments are released and samples purchased from retail stores for analysis. If a sample fails the test the entire range must then be removed from sale and destroyed. There are a number of aspects of this program that Kmart considers impractical and these are discussed under the heading 'Accessing the New Zealand MRP scheme'.

Scope of laboratory analysis. The Australian standard for heavy metal testing is based on a risk analysis using the best available scientific evidence and risk management principles.

New Zealand regulations follow the same approach in respect to the actual heavy metal testing methodology but diverge to impose an additional test in respect to porosity. (See comments under the heading 'What is the issue with porosity?') It is not possible to evaluate the integrity of this test or the hazard to public health it purports to address because there is no available scientific or other data to aid verification. (See comments under the heading 'Porosity - a valid test for a genuine risk?')

Certificate lifespan. Under normal circumstances a certificate issued by a recognised laboratory is valid for twelve months. Australian authorities follow this protocol.

In many instances Kmart has arranged specific testing in relation to ceramic ware prior to shipping into Australia or New Zealand in an effort to satisfy MOH requirements. The general expectation is that a current NATA certification would be sufficient to cover imports for a twelve month period. But because the test certificate may be issued weeks or even

months before the product is finally shipped to New Zealand (For instance, whilst merchandise is in transit in Australia.) this is not the case. New Zealand authorities accept a certificate as valid only if issued within 90 days of importation into New Zealand.

Unequal treatment of Overseas and New Zealand Laboratories. Certificates issued by overseas laboratories are valid for importation into New Zealand for a maximum of three months only. According to the Summary Criteria the certificate date must be within 90 days of importation.

But certificates issued by a New Zealand laboratory are valid for 12 months. On the surface this differentiation appears discriminatory and may contravene WTO rules.

Unique identification. The MOH import clearance criteria specify that ceramic ware must be *"uniquely identified by their pattern type or base markings (or both)."*[3] This presents an enormous problem commercially because 'unique identification' is not normal to the trade. For instance, a sky blue coffee set may simply be called a sky blue coffee set on the order and invoice. This MOH requirement appears overly harsh considering the nature of the program. There is a strong motivation for importers and retailers to protect public health and ensure that nothing hazardous enters the market place ie the legal liability and bad publicity issues arising from an infringement or health incident would be extremely costly to a company.

Availability of Australian certificates. Because the Australian Customs risk management program is focussed on manufacturers individual shipments are not tested. But even when ceramic ware imported into Australia is selected for laboratory analysis the process is controlled by the ACS. The laboratory report and certificate is issued to the ACS not to the importer. The importer is only advised whether the product passed or failed.

If ceramic ware is shipped from Australia to New Zealand the MOH requires a NATA certificate as satisfaction that the product meets the required standard. In instances where ceramic ware was imported into Australia and passed by the Australian authorities Kmart will not possess a certificate and in this case is unable to furnish a certificate to the MOH - unless it submits the goods for a second test.

Consistent interpretation. The New Zealand system has a record of making ad hoc decisions. For example, at one stage overseas laboratory test reports were accepted by New Zealand authorities in respect to ceramic ware shipped to New Zealand via Australia. However, the authorities altered this procedure and challenged these reports in mid 2000. (This aspect is discussed in greater detail under the heading 'Issues with the New Zealand Compliance Regime'.) Over the following few months the New Zealand authorities rejected certificates issued in the name of Kmart Australia, certificates issued to Kmart suppliers, ceramic ware that satisfied Australia's risk management program ie the *Customs (Prohibited Imports) Regulations*, and products without a unique identification.

The Australian and New Zealand regimes for testing ceramic ware share identical objectives. Furthermore, the basic standards for laboratory analysis of heavy metals are substantially similar. The main areas of divergence appear to be in respect to:

- ***The porosity test required by New Zealand authorities; and***
- ***The administrative procedures ie surveillance, focus of the compliance regime, selection of samples, acceptance of valid certificates and testing frequency.***

[3] Summary Criteria, page 3.

Our New Zealand experience

What should be a simple and straightforward exercise to ship merchandise from Australia to our New Zealand stores has developed into a nightmare. We are faced with rising costs, trade diversion, uncertainty and strained relationships.

Kmart fully appreciates the importance of consumer protection and supports programs designed to ensure the maintenance of public health. Therefore the critical nature of a risk management program to detect any risk represented by ceramic ware ranks very highly in our priorities as a responsible retailer.

Our importing and clearance procedures appeared to operate reasonably smoothly for a number of years until the PHS notified a change in procedure because we were apparently not *"following National protocol"*, using unapproved laboratories for analysis and our products were not uniquely identifiable.[4]

The nature of the issues encountered from this point onwards and the official reliance on verbal remedies in some instances leaves importers in a constant state of uncertainty. For instance, according to the MOH the matter of 'pinholes' has arisen on more than one occasion.[5] It is far from inconceivable that these same or similar issues could re-emerge to further impede the flow of ceramic ware into New Zealand.

Our New Zealand experience over the past few years has revealed a number of issues in relation to approved test methods, acceptable laboratories, arbitrary rejection of certificates, ad hoc decision-making and a secretive attitude. These largely reflect institutional influences rather than a valid risk management policy.

We have also found the administrative arrangements in respect obtaining periodic approvals and other aspects of the New Zealand regulatory regime impractical. A critical control point in Kmart's risk management program is the manufacturer because post-importation identification of a risk is considered too late.

[4] PHS letter dated 2 July 2000.
[5] E-mail dated 5 December 2001.

Issues with the New Zealand Compliance Regime

Our experience shipping ceramic ware to New Zealand over the past few years provides substantial evidence on which to base an assessment of the unnecessary costs and loss of supply chain efficiency imposed due to New Zealand's Summary Criteria.

It appears that a number of features of the New Zealand surveillance and testing procedures (for example, the unique identification, refusal to recognise accredited laboratories, reference to Australian *"loopholes"*[6], reluctance to communicate openly with importers, etc.) have less to do with a standards compliance function and have more in common with a law enforcement framework.

We contend, however, that the Food Regulations were justifiably not designed as an anti-fraud device. It is common knowledge that the standard in respect to lead and cadmium levels is a public health measure and the risks associated with heavy metal poisoning are taken very seriously by industry. It is highly unlikely that reputable importers would attempt to circumvent the analysis regime given the natural deterrents of legal liability, adverse publicity and penalties. On the other hand an unscrupulous importer could easily bypass the regulatory compliance program altogether if that objective were pursued. Several of the issues confronted are listed below.

1. What is an approved test method?

In order to comply with MOH administration Kmart initiated a procedure to have specific ceramic ware tested and certified prior to shipment to New Zealand.

- The MOH requires that overseas testing be performed by a NATA registered laboratory.
- But because there is no standard or approved test for porosity NATA laboratories are not registered to perform this test and thus not able to endorse the results with a NATA stamp.
- Regardless, the New Zealand authorities will not accept a certificate that is not endorsed and a porosity test must be performed or articles are re-tested in New Zealand.

2. Which laboratories are acceptable?

In practice there appears to be a denial of the validity of the laboratory analysis conducted and the NATA certificate issued by Dunn Son & Stone laboratory in Melbourne. Somehow this report was accepted by MOH but only as 'representative'. The MOH stated that the *"laboratory test results cannot be accepted in lieu of surveillance…the results are representative of the products submitted for analysis."*[7]

This leaves importers in an impossible position facing ongoing uncertainty and additional costs and delays - even after going to the trouble of having ceramic ware tested prior to importation.

3. Arbitrary rejection of certificates.

The New Zealand authorities have refused to accept AGAL methods.[8] This appears to be an across the board and arbitrary decision because we have instances where AGAL certificates eg report No. RN148729 of 15 March 2000, were rejected notwithstanding they were from the AGAL laboratory approved on page 15 of the Summary Criteria.

[6] The nature of these "loopholes" were not revealed to Kmart. To the best of our knowledge there has been no effort to plug these "loopholes" or educate industry or enlist industry assistance to resolve the issue.
[7] MOH facsimile dated 6 December 2001.
[8] MOH facsimile of 27 February 2002 states: *"…the Australian Customs use laboratories that do not use standard methods (AGAL Sydney)..."*

4. Ad hoc decisions

At times the approach adopted by the authorities appears unduly bureaucratic. For example,

- The New Zealand authorities refused to accept certificates from a particular NATA accredited Australian laboratory because they were not on the approved list contained in the 1998 Summary Criteria[9]
- Overseas certificates were only considered valid for direct shipment to New Zealand.[10]
- Under the MRP 'agreement' promoted by MOH[11] Kmart would have to agree to withdraw product from not only its New Zealand stores but also its Australian network if it failed the New Zealand analysis. (At that stage around 5 % of Kmart product failed the porosity test - none failed the lead and cadmium analysis.)
- Certificates in the name of Kmart Australia were only acceptable as valid for importation into Australia.[12]
- PHS did not accept certificates issued to Kmart suppliers.[13] (Kmart requested suppliers obtain a certificate to satisfy New Zealand requirements before we finalised an order.)

5. Secretive attitude and administrative discretion

Kmart queried the reason for PHS rejecting an overseas certificate with the simple statement: *"the laboratory tests results cannot be accepted"*.[14] When contacted by telephone the PHS did not want to reveal the reason and complained that too many Kmart people were wanting information.[15]

Our interest is also drawn to an area where PHS officers may exercise professional judgement to exempt products from heavy metal testing. Among products that may be released without testing are *"products that are unable to retain the test liquid because of their shape such as a flat pizza plate or bread warmers."*[16]

A reasonable person is entitled to conclude that public safety has been sacrificed in this instance simply because the test is too difficult to perform. It is not apparent, from the material contained in the Summary Criteria, that there is any scientific analysis to support this approach. If the analysis methodology used on particular articles is purely discretionary then it is difficult to reconcile this approach with other highly intrusive and costly elements of the MOH testing arrangements outlined in the Summary Criteria.

Accessing the New Zealand MRP scheme. The MOH advised verbally that a number of the issues outlined above can be resolved if Kmart were to participate in the MRP system.

It appears that the MRP is designed with an orderly and predictable import scenario in mind where importers and therefore retailers operate in possession of perfect knowledge. Such an environment may fit nicely with textbook theory or bureaucratic orthodoxy but it is hardly

[9] This was also notified in the PHS letter of 2 July. Following a challenge by Kmart the MOH notified on 16 July 2000 that this particular laboratory would be accepted but re-enforced the 'uniquely identifiable' requirement.

[10] E-mail from PHS on 5 November 2001. Authorities later accepted Kmart approaches and verbally allowed shipment via Australia.

[11] Details communicated by MOH at a meeting on 22 May 2000. This appears to contravene WTO rules on extra-territoriality.

[12] E-mail from PHS on 5 November. Following discussions on 16 November PHS verbally accepted that Kmart Australia acts as buying agent for Kmart New Zealand.

[13] For example, order from Bambis accompanied by NATA laboratory analysis PO876 refused by authorities. In response to Kmart query MOH issued e-mail dated 16 July, 2000 explaining certificate should be made out in the name of Kmart.

[14] E-mail form PHS on 10 December 2001

[15] Notes of conversation communicated by internal e-mail dated 13 December.

[16] Summary Criteria, page 4.

relevant in the real world where practical considerations are governed by such things as unpredictable demand patterns, competition, just-in-time supply chain methodology, commercial ordering systems, etc.

These pressures all influence commercial import operations that are geared entirely around responding to consumer preferences in a cost and time efficient manner. For a large importer such as Kmart, the MRP arrangements are not viable because they do not recognise the commercial concepts underpinning modern trade and supply chain management principles.

Moreover, post-importation[17] testing to verify permits is a serious concern. The current shipment-by-shipment system provides a conditional release (subject to test) and the MRP program also relies on a post-importation sampling program. In our view post-importation testing is unacceptable because it:

- Exposes the public to a high and unnecessary risk. The risk should be isolated before merchandise is offered for sale.
- The process is unnecessarily costly to importers and retailers in the event there is a failure. (This leads to product recalls, further costs for testing and destruction and potentially adverse publicity.)

Kmart concentrates on minimising risk wherever possible and believes that an important contributing factor in this effort is the knowledge based application of an effective, scientifically accepted risk management methodology. In respect to ceramic ware manufactured offshore Kmart's internal risk management program specifies conformity with AS/NZS 437:1996.

A central plank of our risk management program is implementing a solution as close to the problem as possible ie the manufacturer, in order to minimise costs, avoid supply chain disruption and not jeopardise retail sales. In other words, identify and eliminate all risks before they reach the consumer. The Australian Customs compliance regime, which in turn relies on BS 4860, is a useful safeguard in this regard but obviously Kmart must have confidence that merchandise is risk-free at the time of purchase.

Any system other than unconditional clearance for sale promotes uncertainty and is irresponsible if it potentially places public health at risk.

For the reasons discussed above Kmart was unable to participate in the MRP scheme. As a result we were forced to alter the Kmart supply chain arrangements because

- The terms of the MRP agreement and its administrative arrangements are unrealistic.
- The costs involved with the MRP appear very unpredictable and potentially excessive.
- A post-importation regime poses unnecessary risk and cost to Kmart.
- Kmart simply cannot afford to risk interruption to supply or rely on inconsistent PHS interpretations.
- It is impossible for industry to comply with a compliance regime the details of which are 'secret'.

[17] PHS staff purchase product straight from retail shelves and submit it for testing. Retailers are uncomfortable ranging merchandise that may represent a risk to public health and whilst we are confident in our pre-import safety testing a health authority order to remove stock because, for instance it fails the 'porosity' test can lead to unnecessary costs and adverse publicity. Pre-import testing is a more responsible approach.

What is the issue with porosity?
One NZ laboratory[18] highlighted two possible different interpretations in respect to the requirement that ceramic ware will be rejected if not resistant to vinegar, as follows.

The term resistant to vinegar could mean:
1. Resistance to chemical reaction; or
2. Resistance to chemical reaction and resistance to physical absorption.

According to this laboratory the MOH instructed that the term *"is to be interpreted as meaning the ceramicware is resistant to absorption of vinegar into its surface, that is, the surface is porous."*

The same laboratory later admitted there was no defined test for porosity stating: *"the present test used within ESR has been developed from discussions between the New Zealand MOH and local laboratories providing this test."*[19] A copy of the testing procedure was also received by Kmart. (see attached)

At one stage the MOH explained that a the term pinhole meant *"consignment rejected because the test method could not be effectively applied."*[20] The same communication went on to say: *"Currently our legislation requires tableware to be impervious and laboratories are asked to comment where leakage or absorption of the test solution interferes with their analysis."*

Some of the comments on analysis reports are statements that a particular article 'fails' notwithstanding the same report indicates that the article contains safe levels of heavy metals as a result of analysis. One comment is particularly instructive: *"a porous vessel is unsatisfactory for food use in that food material adsorbed into the structure will not be removed during cleaning and is likely to provide an ideal environment for microbiological growth."*[21]

We note with some concern the similarity between this comment and the background statement of the ESR Methods Manual 6.3[22]: *"Food containers which are cracked or porous are difficult to clean and are therefore a potential source of bacterial contamination."* This preamble effectively establishes the purpose of the porosity test ie as a health measure.

Important clarification was provided by the MOH when it said: *"The New Zealand Food Regulations 1984, require articles to be resistant to the test solution. (vinegar) This requirement was not introduced as a health measure. To my knowledge there has no documented food borne illness associated with ceramic ware that has had pinholes or absorption features. I believe the requirement is simply to confirm that the article is "fit for the purpose" and that any leakage does not compromise the metals analysis."*[23]

[18] E-mail 18 September 2000.
[19] E-mail dated 25 September, 2001.
[20] Facsimile from MOH dated 6 December 2001.
[21] ESR job number AMC0191065 of 30 November 2001.
[22] The ESR version attached was created in September 2001, around the time of Kmart requests for access to the porosity test methodology eventually received a response. We do not have knowledge of earlier of later versions of this document.
[23] Facsimile from MOH dated 19 February 2002.

In our experience it is not uncommon to have test reports state that *"this sample fails to meet the requirements of the Food Regulations 1984 with respect to porosity"* or similar wording. Vague statements unsupported by specific reasons or scientific fact are unhelpful, to say the least.

Examples highlighting inconsistent nature of Porosity Testing

Associated with the porosity test is the issue of unprofessional sampling and testing practice. Over a period of time a particular New Zealand laboratory failed Kmart samples for a variety of reasons. Official results typical of the inconsistent nature of the porosity testing regime include.

- Keycode 37606589: *"DO NOT comply with requirements …as they were not resistant to the leach solution ie they were porous."* 14 August 2001.
- Keycodes 37443177 & 37606534: *"Both failed the porosity test."*
- Keycode 37442736: *"the leaching solution leaked through the ceramic vessel through multiple cracks near the base."* 17 August 2001.
- Keycode 36925230: *"the leaching solution leaked through the ceramic vessel through four long cracks at the bottom of the cup."* 4 September 2001.
- Keycode 37793852: *"a small volume of the solution leached into two small pinholes in the glaze of two of the vessels….The solution also leached into one crack in one vessel…and flowed through the vessel onto the bench."* 30 November 2001.
- Keycode 37387761: *"This sample fails to meet the requirements of the Food Regulations 1984 with respect to porosity…the leaching solution leaked through a large crack in the sidewall of the jug."* 3 October 2001

During this period approximately 5 % of Kmart samples failed the porosity test.

A professional approach recognises that damaged or faulty product is not representative. Moreover, only undamaged product should be tested or, at a minimum, we would expect a professional and responsible approach to note the damaged or faulty product. The commercial ramifications are also relevant: the outcome of this subjective test performed on an apparently damaged product caused an entire range[24] of product (including stock previously imported) to be withdrawn from sale and destroyed.

During this period of high uncertainty and great difficulty Kmart made several attempts to resolve matters with the health authorities. Some of the problems associated with performing analysis on damaged articles was discussed with MOH in December 2001 and outlined in a letter.[25] This resulted, we understand, in the MOH advising laboratories to adopt procedures whereby only sound, undamaged product is sampled for analysis. Nevertheless it is of serious concern that

- An obviously flawed operating procedure was employed in professional laboratories by trained scientists;
- The porosity test method appears subjective in nature;
- There is need to use a microscope to detect obvious absorption;[26]
- The New Zealand health authorities accepted these results until challenged by Kmart.

[24] The range may include many lines such as dinner sets, individual cups, saucers, mugs, plates, etc.
[25] Letter to MOH from Coles Myer Ltd dated 24 December 2001.
[26] Refer ESR Methods Manual 6.3 methods 2 and 3.

This experience has severely undermined our confidence in the New Zealand porosity test and the professionalism of the testing procedures. Early in 2002 the MOH summarised the position[27] as follows.

- *"… there is not a validated laboratory method to test for porosity of ceramic ware…and an assessment cannot be applied consistently"*
- *"testing ceramic ware that are damaged and cracked does not provide valid results to assess the compliance of the products"*
- *"there is no scientific basis…that identifies a public health risk related to porosity"*
- *"there is no specific legislation relating to porosity although there is a requirement that ceramic ware will be resistant to vinegar in Regulation 267…"*
- *"porosity does become an issue when the test liquid drains or is absorbed into the ceramic ware compromising the cadmium and lead analysis."*
- *The Ministry of Health reserves the right to test products imported into New Zealand from Australia as the Australia Customs use laboratories that do not use standard methods (AGAL Sydney), the surveillance programme applied by Australia has identifiable "loopholes" and is open to abuse."*

From the above we draw the following conclusions.

1. The porosity test serves no public health function. This being the case there is no reason for it to be subject to the exclusion schedules of the MRA.
2. The porosity test applied in New Zealand laboratories is subjective, non-scientific and inconsistent. There are a number of worrying aspects involved in the test, such as obvious absorption being detected by microscopic examination, lack of definitions, etc.
3. If an article is not *"fit for purpose"* then logically it should not be tested, but the New Zealand system prefers to test the article and issue a 'fail' result.
4. It is difficult to understand how the heavy metal analysis can be compromised if samples get a 'pass' for lead and cadmium levels yet a 'fail' for the porosity test. The New Zealand reports consistently demonstrate this outcome.

The New Zealand test methodology and its application is central to any effective program to safeguard public safety. It is inconceivable that public health may be jeopardised due to an inappropriate test methodology or administrative inadequacies.

[27] Facsimile from MOH dated 27 February 2002.

Porosity - a valid test for a genuine risk?
Given the high level of importance attaching to issues of public health retailers, importers and consumers are entitled to expect the development of adequate standards. Laboratory analysis and compliance must be approved by the scientific community in order for a specific danger to be accurately assessed and dealt with.

The practice of testing for porosity appears to unique to New Zealand and has raised some serious issues for Kmart New Zealand.

The virtues of the test and the risk it attempts to address are therefore relevant considerations. From a public health perspective if the risk is genuine then consumers in other countries could expect their governments to introduce similar safeguards in the form of specific legislation and surveillance. But there appears to be no scientific basis for this action and no international standard for reference. The legal status of the test, under these circumstances, is also suspect resulting in serious concerns regarding its validity.

Identifying the risk

- There is no standard porosity test method recognised by NATA, HOKLAS, etc. We are unable to find any similar international standard in relation to porosity testing. Without a standard an importer is unable to provide adequate instructions for laboratory testing.
- There appears to be no hard data to substantiate the nature or incidence of any risk to public health posed by porous ceramic ware. Certainly Kmart is not aware of any health risks where ceramics with 'pinholes' or other surface imperfections are held responsible as a source of bacterial contamination.[28] Kmart also has a responsibility in relation to public health in Australia but porosity of tableware is not identified as an area of risk by the Australian authorities. In the past a number of shipments of Kmart ceramic ware have failed the New Zealand porosity test but those same articles passed the lead and cadmium tests. They were directed to be destroyed by the authorities.
- The porosity tests performed by one New Zealand laboratory[29] appeared to be very subjective leading to discrepancies in the result, depending on interpretations applied by different laboratories. For example, there is no clear definition of 'pinholes'. Furthermore important phrases used in the 2001 ESR Methods Manual are not clearly defined, as in the case of *"obvious absorption"* and *"if the liquid can be visibly seen to be absorbed by the surface"*. And yet microscopic examination is required.
- The porosity test, such as that documented by ESR[30], is subjective and has been inconsistently applied. Furthermore, the testing of damaged or faulty product by certain New Zealand laboratories is considered unprofessional resulting in unreliable findings.
- MOH claims the presence of holes compromises the laboratory analysis. But there is no evidence that 'porosity' causes a problem for NATA approved overseas laboratories when conducting tests for lead and cadmium.

[28] ESR Methods Manual 6.3 'Porosity of Ceramicware'.
[29] Procedures were developed in consultation with MOH.
[30] ESR Methods Manual 6.3 'Porosity of Ceramicware'.

If it is correct that porosity factors compromise satisfactorily conducting a test for lead and cadmium then it is difficult to understand how the New Zealand laboratories are able to provide an accurate analysis of lead and cadmium levels when porosity tests prove positive.

An objective view holds that porosity tests do not fall within the category of risk outlined in the Summary Criteria booklet, wherein it states: *"These criteria and procedures have been developed to reduce the public health risk posed by ceramic ware and metal food containers which allow heavy metals to leach out and contaminate food cooked or stored in them."*[31]

Regulation 267 appears to support this view by not requiring a porosity test for articles that do not leach heavy metals.

- The direction restricting articles that are *"not resistant to vinegar"* is contained in subclause (1) which begins with the statement: *"Except as provided in subclause (2)…"*
- Subclause (2) states that articles must *"satisfy the test described in the Ninth Schedule to these regulations."*
- Thus an article that satisfies the Ninth Schedule test for lead and cadmium is exempt from subclause (1). That is, it does not require to be resistant to vinegar.

Our experience, outlined above, and reading of the New Zealand legislation suggests porosity testing does not contribute in any proven way to the consumer protection function. We note also that the MOH admits the porosity test is not a health measure. Furthermore, when combined with the administrative procedures underpinning the testing regime the porosity test acts as an impediment to the flow of trade into New Zealand.

[31] Summary Criteria, page 1

Impact on the Kmart Supply Channel

The current Kmart supply chain strategy involves: the purchase and direct delivery to store of New Zealand origin merchandise; and, the bulk purchase of non-New Zealand origin merchandise from sources in Asia and Australia. This bulk merchandise is shipped to central locations in Australia for cross-docking and packing for delivery according to store requirements.

The second aspect of this strategy yields economies of scale due to the larger size of the Australian market and the lower shipping costs from Asia. Transhipping goods to Kmart New Zealand is more efficient because it is integrated into the Kmart direct to store supply channel. There are two aspects to this strategy: merchandise ordering and supply channel delivery.

Merchandise ordering.

Kmart New Zealand stores order ceramic ware using an automatic stock replenishment system known as SIMS. Generally speaking, this system sources stock electronically either from a Kmart Distribution Centre in Australia or directly from a supplier. (SIMS is similar to a 'Just in Time' system rather than an advance purchase system, which requires long lead times.)

To be available in SIMS the merchandise must have already passed all Kmart quality control checks – including the Australian Prohibited Import requirements. This means that there is no 'post customs clearance' system specially designed to intervene and flag ceramic shipments to New Zealand.

Supply Channel Delivery.

The Kmart direct to store supply channel means packing shipping containers with the merchandise order (That is, replenishment and advertised sale requirements.) specific for a store. It involves, for example, shipping a quantity of dinner sets advertised for sale on a particular date packed in a container destined for say Auckland Kmart along with toys, shoes, books, lampshades and other merchandise. (It also means the same ceramic product may be shipped to one or many Kmart stores at the same time. This may happen several times over the course of a year.)

Separate containers are similarly packed and delivered to the each Kmart store in New Zealand. The advantage of this delivery system is elimination of supply chain costs such as storage and double or triple handling of stock.

A just-in-time stock replenishment system is driven by point of sale data and programmed specials. But without a periodic release arrangement, such as the MRP in New Zealand, each separate container may be subject to intervention for testing purposes thus multiplying the cost incurred. For instance, diversion, inspection, delivery, sampling as well as delaying delivery to store.)

It is important to note that the consequences of this intervention are significant. If a ceramic ware article is held for testing under the shipment-by-shipment arrangement then the entire container of toys, shoes, books and lampshades is also held. Any delay may result in empty shelves or a store missing an advertised sale date for other merchandise in the container, which translates to lost sales and excess stock on hand.

In an effort to comply with the MOH requirements Kmart has been forced to re-engineer its supply channels. The risk of interrupting the direct to store supply channel is so great that separate arrangements have been initiated to have ceramic ware shipped direct to New Zealand from Asia, at extra cost, and separately also ship ceramic ware from Australia to a holding warehouse in Wiri for storage, again at extra cost, until clearance is obtained.

Although direct shipment to New Zealand is organised wherever possible it is clearly an inefficient practice and incurs much additional cost. (Shipping costs increase because we are unable to extract the efficiencies of co-loading and bulk rates to Australia ie volume discounts. Also, our lead times are extended, ordering procedures are corrupted, stockholding costs in New Zealand increase significantly and we must duplicate existing Kmart arrangements because under the original Kmart logistics model full containers of specific store packed merchandise, including ceramic ware, is delivered direct to store in time to meet replenishment and advertised specials requirements ie there is no storage or cross-docking/repacking in New Zealand. (Normally, direct shipment to New Zealand is only considered where a full container load of merchandise justifies the additional shipping expense.)

Many of these costs are unnecessary because the porosity test (A major cause of concern.) and the manner of its administration are outside the scope of the lead and cadmium testing regime. We are also of the opinion that the Kmart risk management program supplemented by the Australian Customs compliance and testing regime delivers an effective standard of public health management. These arrangements should satisfy New Zealand requirement in a more flexible MRA environment.

Indicative Costs

Kmart costs fall into two broad categories: direct and indirect. The indirect costs are difficult to quantify but nevertheless very significant and crucial to our business.

Our costs are mounting. Below is a general indication.

- Samples taken from sets for testing make the remaining set unsaleable
- The total value of stock that failed the ESR porosity test and was either destroyed or earmarked for destruction in December 2001 alone was in excess of $10,000. In addition there are transport, storage, clearance and destruction costs that come into play.
- Lost sales due to delayed product missing advertised sale dates.
- Kmart has lost sales on failed ceramic ware which has subsequently been destroyed or is awaiting destruction.
- Management time. The time taken by Kmart Head Office and Auckland office staff in following through queries relating to test reports and attempting to resolve issues that are not clearly explained. Much of this has only been necessary because overseas laboratory test reports for deliveries via Australia were deemed unacceptable.
- Collateral costs in terms of recalling ceramic ware that have failed is very wide ranging. Kmart's risk management program is both comprehensive and stringent. Failing a MOH test constitutes a public health risk and triggers an automatic Kmart recall of that particular keycode. (That is, all stock is removed from sale.) This recall covers the entire keycode including stock from previous shipments that may have been passed. The impact on Kmart is therefore not confined to one particular shipment or store. This reinforces the significance of focussing the surveillance regime on manufacturers rather than individual consignments.
- In addition Kmart's original recall program has, because of the importance of the issue, mandatory application across all Kmart stores including those in Australia. Therefore, if there is a recall due to a 'porosity' test Kmart must institute manual intervention to quarantine the Australian stores from the fallout. This is an inefficient, difficult and time consuming activity. We are currently rewriting our systems to isolate the New Zealand recall program, again at significant expense.
- The cost of laboratory re-testing in New Zealand of overseas orders shipped via Australia imposes additional cost and time delays. (The goods are currently already being tested by the overseas suppliers and must meet the Australian Prohibited Import requirements. On top of that we arrange specific NATA tests to comply with New Zealand MOH lead and cadmium requirements.)
- Re-engineering the Kmart supply channel specifically for ceramic ware. Extra costs include freight of merchandise shipped direct to New Zealand from Asia, duplicate inventory management, warehousing and storage, handling and New Zealand sample and analysis costs. These are considerable.
- Once in possession of the porosity testing procedure Kmart explored having the porosity test performed overseas. Inquiries revealed cost to be significant: US$260 per dinner set and US$510 handling charges.

Kmart Australia Ltd

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