4 October 2000

The HWA Review
The Allen Consulting Group
Level 3, 19 Pitt St
Sydney NSW 2000

Dear Sir

I am forwarding with this letter some statistical information on the generation and international trade of hazardous waste that you may wish to consider in your deliberations. The information suggests that:

- at this stage, the generation of hazardous waste in Australia is on the increase; and
- the joint impact of the Basel Convention and *Australia's Hazardous Waste Act (HWA)* has restricted transboundary movements of hazardous waste.

The Issues and Options Paper canvases, in general terms, potential benefits and costs that might flow from the operation of the *HWA*. However, there appears to be very limited information about the actual effects of trade restrictions on environmental amenity or community wellbeing. The Commission has not been in a position to undertake analysis of the issues, but there are two aspects that would warrant close examination by the Review Team.

- One relates to the tradeoffs in using trade restrictions as a means of attaining environmental or social goals, given their adverse effects on economic efficiency, including the diffusion of technology and the incentives to adopt better ways of working.
- The second concerns the provisions of the HWA that treat some (mainly developing) countries differently to others and whether alternative ways of meeting the treaty's objectives could be found that are more consistent with the general non-discriminatory (most-favoured-nation) provisions of the multilateral trading system.

I hope the attached material is of some assistance to the Review Team. If you have any queries about the information provided, I suggest you contact Paul Gretton (02 6240 3252) in the first instance.

Yours faithfully

Gary Banks

Attachment: Generation and trade of hazardous waste

Available information suggests that the generation of, and trade in, waste items has been on the increase and that the *Hazardous Waste (Regulation of Imports and Exports) Act 1989* (*HWA*) has restricted the level and pattern of trade. This attachment reviews these trends using available aggregate information.

Generation of hazardous waste

The Australian Waste Database compiled by the CRC for Waste Management and Pollution Control has information on the generation of hazardous waste for Sydney and Melbourne. The information is limited. First, it is available only for a few years in the early 1990s and, as such, does not necessarily indicate longer-term waste generation trends. Second, the definitions of hazardous waste reflect the hazardous waste management systems in each region and are not necessarily limited to controlled substances as defined under the Basel Convention. Third, changes in regulation could lead to changes in the level of industrial waste being defined as hazardous waste. In this situation, the recognition of additional materials as hazardous would lead to a statistical rather than actual growth in the reported level of hazardous waste generated. Finally, the information on hazardous waste generated excludes hazardous waste processed on site.

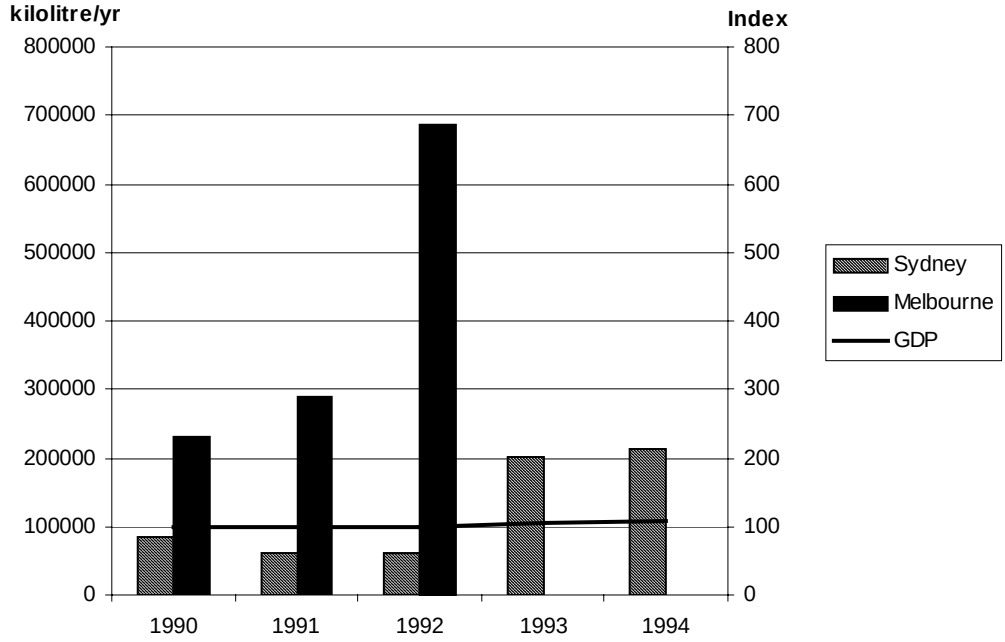
Noting these qualifications, the available information suggests that in the early 1990s the level of identified hazardous waste generated in Melbourne and Sydney increased at a greater rate than national output (figure 1.1). If this information is indicative of longer-term trends, demands for hazardous waste reprocessing, transport, storage and final disposal facilities are also likely to increase ahead of national output growth.

Exports and imports of hazardous waste

Sources of information on Australia's import and export flows of hazardous waste items include administrative records of import and export approvals granted under the *HWA* and international trade statistics. Administrative records are summarised in the annual reports on the operation of the *HWA*. However, because of changes in

approval requirements over the 1990s, these reports do not provide an appropriate indicator of transborder flows of hazardous waste substances.[1]

Figure 1.1 **Hazardous waste generation by major region, 1990 to 1994**[abc]
kilolitre/year (LH Scale), index 1990=100 (RH Scale)



a Hazardous waste, measured in kilolitres, refers to gross waste and includes fluids and other materials containing hazardous substances. **b** Data for Sydney refer to hazardous waste generated by all industries and trucked offsite for treatment. Data for Melbourne refer to hazardous waste generated by manufacturing industries only. **c** Data are available for Sydney for the period 1990 to 1994 and Melbourne for the period 1990 to 1992.

Data sources: CRC for Waste Management and Pollution Control, *AWD Hazardous Waste Report*, Australia Waste Data Base, Environment Australia web site, August 2000; ABS (Australian National Accounts 5204.0, data extracted from Econdata, August 2000).

On the other hand, a broad indication of recent changes in international trade involving hazardous wastes with commercial value is available from Australia's international trade statistics. Hazardous waste trade flows can be tentatively identified when there is a match between a hazardous waste item (defined according to the Basel Convention and OECD lists) and an Australian import and export

[1] From the commencement of the operation of the *HWA* in 1990-91 to 1995-96, permits were required for the shipment of waste for final disposal, with permits being granted only in the period 1990-91 to 1992-93, before a ban on the export of such material. However, prior to 1995-96, export or import permits typically were not required for cross border movements of hazardous wastes for recycling and reprocessing. Since 1995-96, permits have been issued for substantial export volumes and lesser import volumes of hazardous waste, mainly for recycling and reprocessing. Some import permits have been for waste for final disposal (eg sump oil and household waste from Antarctica).

commodity item.[2] Items that can be matched in this way are typically from the hazardous waste groups 'metal and metal bearing wastes' (group A1) and 'wastes containing principally inorganic constituents' (group A2) (see footnote to figure 1.2 for details). These items are typically intended for recycling or recovery, have a commercial value and a common unit of measurement (kilograms).

Australian import and export volumes for selected materials increased ahead of GDP from the late 1980s to the mid-1990s (figure 1.2). There was a clear trend decline in export volumes from the mid-1990s after a temporary, but very sharp rise in the mid-1990s. The import series became more erratic from the mid-1990s, with two substantial one-off increases occurring. The one-off rise in imports in 1994-95 was mainly due to the import into Australia of metals for secondary recovery from OECD countries and India (OECD hazardous waste item AB010, trade item 2610). The second increase — in 1997-98 — was due to higher imports of the same material from the OECD area.

In volume terms, exports of waste hydrates of aluminium (OECD item AB090 and trade item 2818) to OECD and ASEAN economies are the main contributor to the Australian export of hazardous waste over the 1990s.[3]

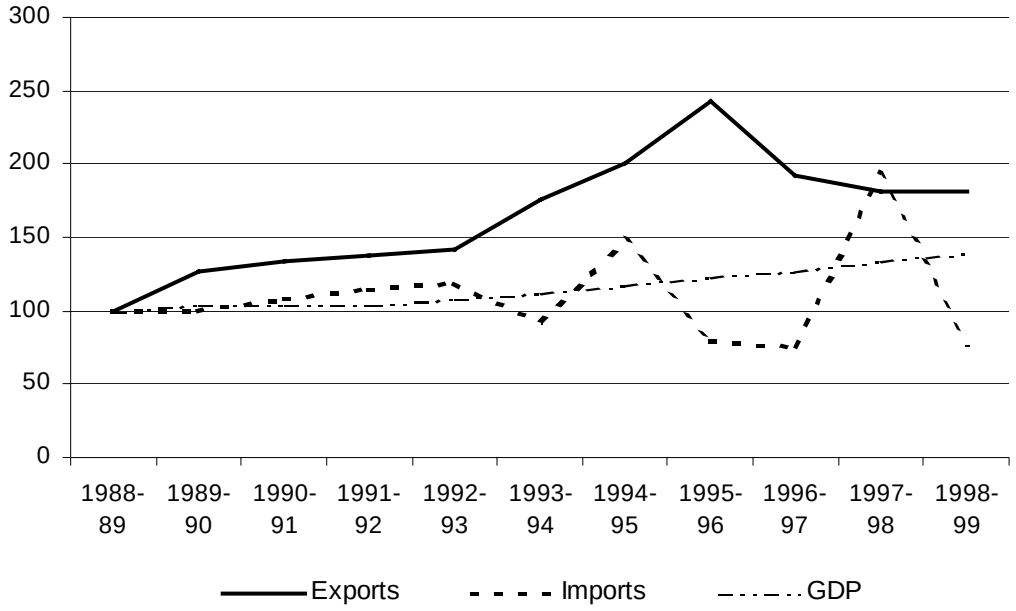
The reported growth in the level of exports to the mid-1990s and the subsequent decline was due mainly to changes in exports of waste hydrates of aluminium to countries within those groupings. The decline from the mid-1990s is consistent with a view that the Basel Convention has had a significant negative impact on the level of some trade flows.

[2] List A in Environment Australia 1998, 'Guide to controlled and other wastes under the Australian Hazardous Waste Act', prepared by the Hazardous Waste Section as a guide for the operation of the *Australian Hazardous Waste (Regulation of Exports and Imports) Act 1989*, Canberra.

[3] The ASEAN economies grouped together for the analysis were the members of ASEAN in 1992, when the Basel Convention came into force — Indonesia, Malaysia, Philippines, Thailand, Singapore and Brunei Darussalam. This group is referred to as ASEAN 6 in the text. The OECD group includes members of the OECD in 1992. This group is referred to as OECD 24 in the text.

Figure 1.2 **Trends in the volume of Australian imports and exports of selected hazardous waste materials,[ab] 1988-89 to 1998-99**

Index 1988-89 =100

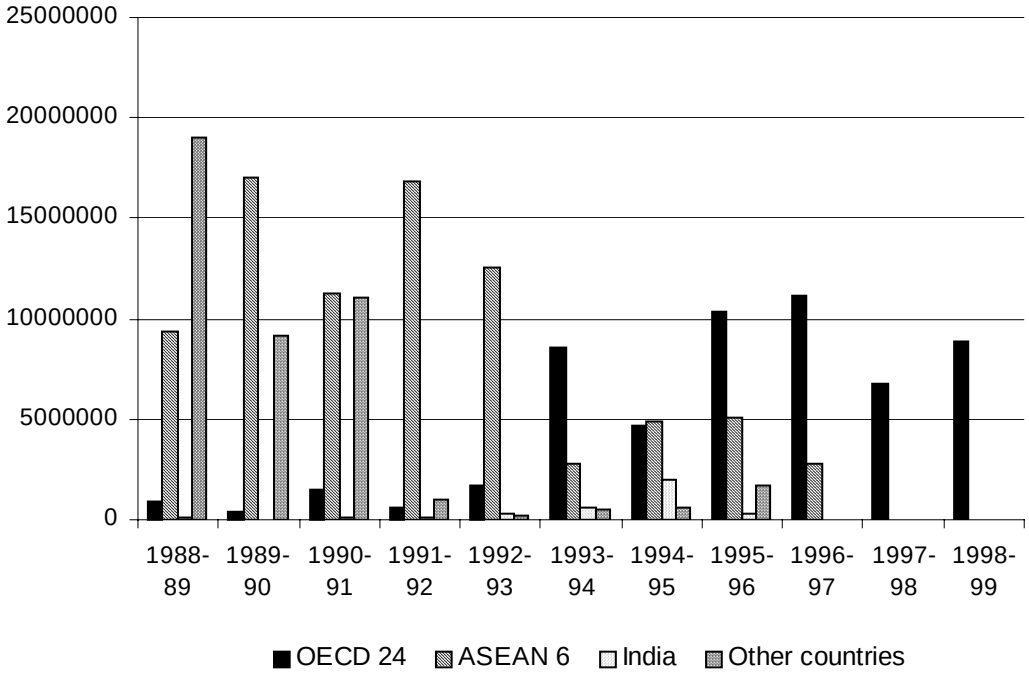


[a]Data for hazardous waste items measured in kilograms. [b]The hazardous waste items included in the analysis and associated international trade items are: Waste lead acid batteries (Basel item 1160, OECD item AA170; associated trade item 78020010 to 1995-96 and 8548 thereafter); Wastes in the form of ash, residue, slag, dross, skimming, scaling, dust powder, sludge and cake nec (Basel item [none], OECD item AB010, trade item 2621); Waste hydrates of aluminium and waste alumina and residues nec (Basel item B2100, OECD item AB090, trade item 2818); Used blasting grit (Basel item [none], OECD item AB130, trade item 2517.49).

Data sources: Environment Australia (1998), 'Guide to controlled and other wastes under the Australian Hazardous Waste Act', prepared by the Hazardous Waste Section as a guide for the operation of the *Australian Hazardous Waste (Regulation of Exports and Imports) Act 1989*; ABS (*International Trade Data* Cat. no. 5664.0).

There is also evidence that the Basel Convention and the operation of the *HWA* have influenced the level and destination of exports of used lead acid batteries. From the mid-1990s, export permits for lead acid batteries were only issued for export to OECD destinations. Since then, exports of used lead acid batteries for recycling and recovery to the ASEAN 6 countries have declined dramatically (figure 1.3). At the same time, exports of the same items to the OECD have increased substantially. The changed pattern of trade flows can be reasonably attributed directly to the introduction of export permit requirements for waste destined for recycling/recovery in the mid-1990s.

Figure 1.3 Exports of waste and scrap primary cells (including lead acid battery waste), 1988-89 to 1998-99[ab]
kilograms



[a]Data to 1995-96 relate to the Australian Export Commodity Classification (AECC) item 78020010 Lead battery waste. For later years, data relate to the composite item 8548 Waste and scrap of primary cells; primary and electric accumulators; spent primary cells, spent primary batteries and spent electric accumulators. This item subsumes lead battery waste and is inclusive of hazardous waste item B1160 (Basel Convention) AA170 (OECD list) Waste lead acid batteries, whole and crushed. [b] ASEAN 6 economies include Indonesia, Malaysia, the Philippines, Thailand, Singapore and Brunei Darussalam which were the members of ASEAN in 1992 when the Basel Convention came into force. OECD 24 includes members of the OECD in 1992.

Data sources: Environment Australia (1998), 'Guide to controlled and other wastes under the Australian Hazardous Waste Act', Prepared by the Hazardous Waste Section as a guide for the operation of the *Australian Hazardous Waste (Regulation of Exports and Imports) Act 1989, Canberra*; ABS (*International Trade Data* Cat. no. 5664.0).

The information, albeit limited, on trade flows lends support to the view that, without restriction, cross border flows of hazardous waste for recycling/recovery would increase. Since the mid-1990s, however, there has been a halt in the growth of exports and there has been substantial changes in the patterns of some exports. In addition, since the mid-1990s, the level of imports of waste-type items has been erratic relative to the early 1990s. These changes lend support to the view that the *HWA* and associated regulations have influenced both the volume and composition of that trade. Available information does not indicate that less waste is being generated at this stage.