



MOVEMENT OF CONTROLLED WASTE BETWEEN STATES AND TERRITORIES

Impact Statement

for the

Draft

**Movement of Controlled Waste
between States and Territories
National Environment Protection
Measure**

January 1998

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1. Executive Summary

1.1 Background

The National Environment Protection Council (NEPC) had its origins in the Special Premiers' Conference held in October 1990. At this conference the Prime Minister, Premiers, and Chief Ministers agreed to develop an Intergovernmental Agreement on the Environment (IGAE). The IGAE came into effect on 1 May 1992.

The IGAE includes provision for the establishment of a national body with responsibility for making National Environment Protection Measures (Measures) with the objectives of ensuring:

- a) that the people of Australia enjoy the benefit of equivalent protection from air, water and soil pollution and from noise, wherever they live;
- b) that decisions by businesses are not distorted and markets are not fragmented by variations between jurisdictions in relation to the adoption or implementation of major Measures.

Complementary legislation establishing this national body, the NEPC, has now been passed in all jurisdictions.

The NEPC is a statutory body with law making powers. Members of Council are Ministers, not necessarily environment Ministers, appointed by first Ministers from each participating jurisdiction (Commonwealth, State and Territory Governments).

The NEPC has two primary functions:

- to make National Environment Protection Measures (Measures); and
- to assess and report on their implementation and effectiveness in participating jurisdictions.

At its fifth meeting in November 1997, the NEPC considered a proposal to make a Measure for the Movement of Controlled Waste Between States and Territories. The NEPC accepted the proposal and:

- resolved to prepare a draft Measure for the movement of controlled wastes across State/Territory borders.
- resolved to give notice of its intent to do so, and
- determined the scope of the draft Measure.

1.2 Controlled Wastes

The objective of the draft Measure is to reduce potential adverse impacts on the environment resulting from the movement of controlled wastes from one State or Territory into another by establishing a nationally-consistent system for tracking the waste.

Use of a system to facilitate the movements of controlled wastes would ensure that the waste leaving a State or Territory reaches a facility licensed or approved to receive it. It would also facilitate minimum requirements for transporters and vehicles. Where accidents or incidents occur the information provided under the Measure would assist regulatory agencies and emergency services in dealing with leakages and spillages. It would also assist industry and transporters in complying with one nationally agreed model when transporting controlled wastes across State and Territory borders.

The Measure is designed to contribute to the following objectives:

- to ensure that controlled wastes reach licensed or approved facilities for treatment, recycling, or storage and/or disposal;
- to gather comprehensive and detailed information on controlled wastes; and
- to minimise environmental impacts to the air, marine, estuarine, freshwater and land environments.

The core elements of the Measure are:

- the development of a list of controlled wastes;
- guidelines for consistent and compatible tracking systems;
- consultation between interested parties; and
- the mutual recognition of licences, permits for transporters.

1.3 The draft Measure

1.3.1 Commencement

The Measure will commence in each State and Territory on dates to be announced.

1.3.2 What are controlled wastes?

The issue of waste definition is a major component of the draft Measure. For the purposes of clarity and consistency a definition for waste and controlled waste is given in the Measure. Quantity and threshold limits are not applied in the Measure.

Care must be taken in defining controlled wastes as, given the appropriate circumstances, virtually any substance could be considered controlled. The definition of controlled waste must be tempered by an assessment of the likelihood or probability that a given substance, being handled with an appropriate level of caution is likely to be of risk to the environment, particularly if it exhibits a sufficient degree of hazard.

The implementation of the Measure will require jurisdictions to provide guidance to parties on the methods they can use to determine whether a waste is controlled within the meaning of the definition.

For the purposes of this Measure the definition of controlled wastes is given as any waste in List 1 provided the participating jurisdiction of destination considers that the waste possesses one or more of the characteristics in List 2. List 1 is comprised of waste categories recognised as hazardous under international agreements, waste categories extracted from the National Guidelines for the Management of Waste previously agreed to by ANZECC, and wastes of sufficient concern regarding their potential impact to the environment to require their tracking and appropriate management.

Schedule A of the draft Measure lists:

- waste categories (List 1); and
- hazard characteristics (List 2).

Schedule B of the draft Measure lists:

- information requirements relating to any consignment of controlled waste under this Measure.

1.3.3 Goal of the Measure

A national environment protection goal means a goal that, first, relates to desired environmental outcomes and, secondly, guides the formulation of strategies for the management of human activities that may affect the environment. A goal may be something desirable in the future and not immediately attainable but should represent the aspirations of the Australian people for environmental quality.

The national environment protection goal of this Measure is to assist in achieving the desired environmental outcomes by providing a basis for ensuring that controlled wastes which are to be moved between States and Territories are properly identified, transported and otherwise handled in ways which are consistent with environmentally sound practices for the management of these wastes.

The desired environmental outcomes of this Measure are to minimise the environmental impacts:

- on ambient air quality;
- on ambient marine, estuarine and freshwater quality;

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- associated with hazardous wastes;
 - associated with the re-use and recycling of used materials.

The tracking system will provide information to assist agencies and emergency services, and will ensure that controlled wastes reach appropriate facilities. Consultation between parties will provide the necessary information to assess the appropriateness of proposed movements of controlled wastes. The Measure will facilitate mutual recognition of a relevant licence or permit issued by an agency.

1.3.4 Guidelines of the Measure

National Environment Protection Guidelines provide guidance on:

- how standards or goals may be achieved (for example, nutrient management strategies), or
- how specified environmental problems can be addressed (for example, contaminated sites).

They:

- are not mandatory
- provide a basis for harmonised approaches, and
- may stand alone or be part of another Measure.

Guidelines can be used in a number of ways. They can be part of a full Measure and set out the preferred approach to achieving or maintaining an environmental standard. This has advantages including the sharing of resources in the development of management strategies; for example, in the control of motor vehicle emissions. Since guidelines are not mandatory they allow jurisdictions to experiment with other approaches or for small jurisdictions to take a lower cost but, in their terms, equally effective route.

The guidelines in this Measure comprise:

- licensing and mutual recognition;
- prior notification and consignment numbers;
- waste tracking;
- obligations;
- maintenance of information;
- furnishing of information;
- failure to provide information, or giving false or misleading information;
- confidentiality; and
- amendment to the Schedules.

Guidelines will allow for systems to be developed, provided the goal of the Measure is met.

1.4 Impacts of the draft Measure

Benefits

The anticipated benefits from this Measure are as follows:

- it will play an important role in meeting the goal of reducing the environmental impact from the movement of controlled wastes across State or Territory borders;
- greater community confidence in the management of movements of controlled wastes;
- lower licence costs to transporters as a result of mutual recognition of licences and elimination of the requirement for multiple licences;
- a reduction in the proliferation of small hazardous waste facilities through encouraging the transport under secure conditions of controlled wastes to purpose-built well managed facilities;
- a reduction in the likelihood of socially inferior disposal of controlled wastes;
- lower risks to the environment and human health through tracking of wastes increasing the probability that discrepancies that might indicate illegal disposal are identified and investigated;
- consistent approaches and controls in waste management and making these approaches transparent; and
- improved information on the movement of controlled wastes will be of particular benefit to regulatory and planning agencies, and emergency services.

Costs

The anticipated costs of this Measure are as follows:

- additional costs to jurisdictions that already operate a tracking system will be low;
- additional costs to jurisdictions that do not operate a tracking system will be moderate. However, proposed reforms in most of these jurisdictions mean that in the absence of the Measure, some of these costs would have been incurred as they move towards a waste tracking system;
- small generators, especially in border regions, may face higher costs as a result of the requirement for producer notification;
- some transporters with inferior vehicles will face higher costs to upgrade their vehicles to comply with suitable controls for the carriage of controlled wastes as determined in the implementation process;
- additional costs will be incurred by jurisdictions in collating and reporting information obtained from the tracking system;
- transporters will incur compliance costs, although in some jurisdictions that do not have a formal tracking system, transporters voluntarily record movements of waste by use of manifests or other jurisdictional tracking systems. Costs are expected to be low; and
- facility operators will incur minor costs of complying with the notification requirements.

1.5 Implementation

Once a Measure is adopted by the NEPC it is the responsibility of each of the jurisdictions to implement the Measure. All jurisdictions have acceded to the agreement leading to the establishment of the NEPC, and are under a legal obligation to implement Measures adopted by the Council. This Measure is concerned with the establishment of a nationally consistent system of tracking and recording movements of controlled wastes. It is likely there will be a need for a working group to be established to consider implementation processes agreed to between jurisdictions.

1.6 Consultation

The information on requirements and processes for the draft Measure, as outlined in this Impact Statement and the draft Measure, are subject to change following the receipt of further comments from jurisdictions, industry, environment organisations and the community.

2. Background

2.1 National Environment Protection Council

The National Environment Protection Council (NEPC) had its origins in the Special Premiers' Conference held in October 1990. At this conference the Prime Minister, Premiers and Chief Ministers agreed to develop an Intergovernmental Agreement on the Environment (IGAE). The IGAE came into effect on 1 May 1992.

The IGAE includes provision for the establishment of a national body with responsibility for making National Environment Protection Measures (Measures) with the objectives of ensuring:

- a) that the people of Australia enjoy the benefit of equivalent protection from air, water and soil pollution and from noise, wherever they live;
- b) that decisions by businesses are not distorted and markets are not fragmented by variations between jurisdictions in relation to the adoption or implementation of major Measures.

Complementary legislation establishing this national body, the NEPC, has now been passed in all jurisdictions.

The NEPC is a statutory body with law making powers. Members of Council are Ministers, not necessarily environment Ministers, appointed by first Ministers from each participating jurisdiction (Commonwealth, State and Territory Governments).

The NEPC has two primary functions:

- to make National Environment Protection Measures (Measures); and
- to assess and report on their implementation and effectiveness in participating jurisdictions.

The NEPC Committee is the principal advisory body to Council. The Committee comprises the NEPC Executive Officer and one nominee of each Council member. In addition, a non-voting member has been appointed by the President of the Australian Local Government Association.

The Council and its committees are assisted and supported by the NEPC Service Corporation. The Service Corporation is managed by the NEPC Executive Officer.

2.2 National Environment Protection Measures

Measures are broad framework-setting statutory instruments defined in NEPC legislation. They outline agreed national objectives for protecting particular aspects of the environment.

Measures may consist of any combination of goals, standards, protocols, and guidelines.

A Measure once adopted by the Council and provided that it is not disallowed by the Commonwealth Parliament, becomes law in each participating jurisdiction. A two-thirds majority is required for the Council to make a Measure. Implementation of Measures is the responsibility of each participating jurisdiction.

The *National Environment Protection Council Act 1994* prescribes that Measures may relate to any one or more of the following (section 14(1)):

- a) ambient air quality,
- b) ambient marine, estuarine and fresh water quality,
- c) the protection of amenity in relation to noise (but only if differences in environmental requirements relating to noise would have an adverse effect on national markets for goods and services),
- d) general guidelines for the assessment of site contamination,
- e) environmental impacts associated with hazardous wastes,
- f) the re-use and recycling of used materials.

Measures may also relate to motor vehicle noise and emissions.

2.3 Purpose of the Impact Statement

In making Measures, the NEPC must have regard to a number of considerations. These are detailed in section 15 of the NEPC Act and include:

- consistency with the IGAE;
- environmental, economic, and social impacts;
- relevant international agreements; and
- any regional environmental differences.

Prior to making a Measure the Council must prepare a draft of the Measure and an Impact Statement (section 17 of the NEPC Act). The Impact Statement must include the following:

- (i) the desired environmental outcomes;

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- (ii) the reasons for the draft Measure and the environmental impact of not making the Measure;
 - (iii) a statement of the alternative methods of achieving the desired environmental outcomes and the reasons why those alternatives have not been adopted;
 - (iv) an identification and assessment of the economic and social impact on the community (including industry) of making the draft Measure;
 - (v) a statement of the manner in which any regional environmental differences in Australia have been addressed in the development of the draft Measure;
 - (vi) the intended date for making the draft Measure;
 - (vii) the timetable (if any) for the implementation of the draft Measure; and
 - (viii) the transitional arrangements (if any) in relation to the draft Measure.

These requirements reflect the views of the Commonwealth, State and Territory Governments as to the type of assessment needed to evaluate the potential impacts of adopting a proposed Measure. This Impact Statement takes into account the Council of Australian Governments (CoAG) requirements, contained in the Principles and Guidelines for National Standard Setting and Regulatory Action by Ministerial Councils and Standard Setting Bodies.

The NEPC legislation requires that both the draft Measure and the Impact Statement be made available for public consultation for a period of at least two months. The Council must also have regard to the Impact Statement and submissions received during public consultation in deciding whether to adopt a draft Measure.

The key role of this Impact Statement is to assist public consultation regarding the proposals contained in the draft Measure for the Movement of Controlled Wastes Between States and Territories. The Impact Statement is designed to provide a plain English explanation of the content and intent of the draft Measure, and to explain the expected impacts of implementing the Measure. The Impact Statement provides a clear and easy to follow explanation of the likely costs and benefits, noting which sectors of the Australian community will be affected.

Under the NEPC Act, the Impact Statement reflects the impacts of implementation of the draft Measure at a national level (that is, in all jurisdictions). It should be noted that any supporting regulatory or administrative mechanisms which jurisdictions may choose to develop to assist in implementation of the draft Measure will need to go through appropriate processes in those jurisdictions (for example, a draft regulation to require notification and documentation of controlled waste transportation will need to be accompanied by a regulatory Impact Statement in most cases).

Key points:

- This Impact Statement will assist the process of public consultation in the development of a National Environment Protection Measure for the Movement of Controlled Wastes Across State and Territory Borders.
- The Impact Statement is designed to meet all of the relevant requirements of the NEPC Act.

3. Movement of Controlled Waste Between States and Territories

3.1 The draft Measure

3.1.1 Background to the Measure

At its fifth meeting in November 1997, the NEPC considered a proposal to make a Measure for the Movement of Controlled Waste Between States and Territories. The NEPC accepted the proposal and:

- resolved to prepare a draft Measure for controlled waste transport;
- resolved to give notice of its intent to do so; and
- determined the scope of the draft Measure.

The Council's intention to make this Measure was advertised in the metropolitan daily press on Wednesday 12 November 1997 and Saturday 15 November 1997.

3.1.2 Desired environmental outcomes

The national environment protection goal of this Measure is to assist in minimising potential adverse impacts to the environment resulting from the movement of controlled wastes from one State or Territory to or through another by establishing a nationally-consistent system for tracking the waste.

The desired environmental outcomes of this Measure are to minimise environmental impacts:

- on ambient air quality;
- on ambient marine, estuarine and freshwater quality;
- associated with hazardous wastes;
- associated with the re-use and recycling of used materials.

To achieve the goal of this Measure, the environmental impacts of the movement of controlled wastes have to be interpreted broadly. They are not necessarily confined to the environmental hazards that can arise during transit, for example, from leakages or spillages. The Measure is also designed to contribute to three other objectives:

- to ensure that controlled wastes reach licensed or approved facilities, for treatment, recycling, storage and/or disposal;

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- to gather information about controlled wastes, including where it comes from, how it is transported, where it goes, and other information as to its ultimate fate; and
 - to minimise environmental impacts to the air, marine, estuarine and freshwater environment, and land contamination.

Use of the system would increase the likelihood that the waste leaving a State or Territory reaches a facility licensed or approved to receive it. It would also facilitate minimum requirements for transporters and vehicles. Where accidents or incidents occur the information provided under the Measure would assist regulatory agencies and emergency services in dealing with leakages and spillages. It would also assist transporters in complying with one nationally agreed model when transporting controlled wastes across State and Territory borders.

The Measure would contribute to the minimisation of the illegal disposal of controlled wastes and thus benefit the environment for all Australians. The Measure would require persons dealing with controlled wastes to provide information to the regulatory agencies in all States and Territories through which the wastes are transported. This information would also enable the relevant authorities to determine if wastes are illegally dumped or disposed. It would enable regulatory agencies to monitor the movement of controlled wastes into or out of their jurisdictions.

The Measure applies to controlled wastes that are moved interstate for treatment, disposal, storage or recycling operations. In covering recycling facilities, the Measure covers activities where the controlled wastes have some economic worth. The motive for this is that many recycling or recovery operations, which extract a valued part of the wastes, will generate significant residual wastes. This means that waste management decisions which are typically intrinsic to recovery operations will be maintained.

The waste transport industry would benefit from the establishment of a single national benchmark for tracking controlled wastes. Any illegal dumping by a few unscrupulous transporters gives an unfair advantage over those who abide by the law.

The Measure would assist Australia fulfil its international obligations, as defined under the *Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Amended 1996)*. The implications of the Measure for obligations identified in this Act are discussed in section 2.4. In the context of this Act, the Measure is important because it would:

- prevent or reduce pollution arising from management of controlled wastes; and
- provide a means of recording amounts and types of controlled wastes generated.

The development of the Measure is a matter of national priority and there are expectations in the broader community that national benchmarks will be developed as soon as possible to assist with management of controlled wastes.

Key points:

- It is necessary to transport controlled wastes from one State/Territory to another.
- Tracking of the movement of controlled wastes are a high priority for both government and the community.
- Information on generation, transportation and management is essential for the efficient control of controlled wastes.
- Nationally consistent tracking of the waste, and licensing of transporters and facilities, will increase the efficiency and consistency of the management of controlled wastes.
- This Measure will assist Australia satisfy its international obligations in regard to achieving sound management of controlled wastes, and maintaining statistics on controlled waste flows.

3.1.3 Reasons for the Measure

The goal of this Measure is to minimise the environmental impact that may result from the movement of controlled wastes.

Where tracking systems have been fully established (Victoria and South Australia) there is reasonably good information generated for both interstate and intrastate movements. History has shown that illegal disposal has decreased since the implementation of tracking systems based on the ANZECC Guidelines. For the remainder of Australia there is practically no tracking of these wastes within States or Territories let alone across borders, and as a consequence very little is known about associated environmental impacts.

The information generated from implementing this Measure will complement the national database on waste generation and assist in providing information, including numerical data, for various controlled waste categories to the Commonwealth and NEPC. States and Territories should aim to establish compatible tracking systems which will facilitate data exchange. The information gathered can then be used for planning purposes by industry and governments, for reporting purposes and monitoring environmental impacts.

The draft Measure is outlined in more detail in section 4.

3.1.4 Cost Benefit Analysis

Cost impact on Government

The expected costs of implementing the Measure will vary between jurisdictions. Some jurisdictions have established intrastate tracking and licensing systems which will require minimum modification to accommodate the Measure guidelines. Jurisdictions which do not have a intrastate tracking and licensing systems will incur greater costs in establishing systems to comply with the Measure.

The Queensland Government estimates that the development of an intrastate tracking system will cost between \$212,000 and \$562,000 depending on the level of enforcement and compliance monitoring. It estimates recurrent intrastate costs at \$212,000 annually. As interstate movements of controlled wastes comprise a small percentage of total movements the additional cost of implementing an interstate system would be small. South Australia tracks 30,000 movements of controlled waste per year. Of these movements approximately 300 (1%) are interstate transfers and have little impact on its overall costs. Jurisdictions which track a small number of movements would have far lower costs. Were the South Australian percentage figures applied to the Queensland estimates, it could be seen that the overall costs per jurisdiction would be very low. Actual costs are difficult to estimate and operational experience would be required to provide reasonable estimates. Jurisdictions which delegate authority to issue consignment numbers to facilities as part of licensing conditions may be able to reduce the operational costs of operating a tracking system. It would be expected that facilities licensed under such conditions would pass a significant portion of their costs on to industry through fees.

The expected revenue to be generated from a tracking system will vary dramatically between jurisdictions. Some jurisdictions cannot charge for the issuing of certificates under existing legislation. Jurisdictions with a high number of shipments and the authority to charge for certificates could earn up to \$50,000 per annum according to Queensland and Victoria estimates for intrastate tracking systems. As with expenses, interstate shipments would comprise a small percentage of total revenue. Jurisdictions such as Western Australia, which have a very small number (approximately 30) of interstate movements, would not generate significant revenue.

From the figures above it is apparent that the implementation of an intrastate tracking system will not impact dramatically on a jurisdiction which is operating an intrastate tracking system. It is also evident that if jurisdictions wish to gain sufficient revenue to achieve total cost recovery for operating a tracking system it is necessary to set up a system for interstate and intrastate tracking.

Industry

For some jurisdictions the impact on industry will be small as the ANZECC guidelines are already being implemented. The overall additional cost to industry is expected to be small as the implementation and administration can be absorbed into current operations. Cost to industry for licensing should be reduced as mutual recognition of licences will allow a transporter to operate in multiple jurisdictions with one licence.

Where relevant the major cost will be the purchasing of certificates and this will be dependent on the number of interstate movements undertaken.

Benefits

There are significant benefits from implementing this Measure. Better quality information for controlled waste management and will be available to jurisdictions. Mutual recognition of licensing conditions will require agreement on vehicle standards and help to ensure that controlled waste is transported at minimum risk to the

environment. Industry will benefit from a common system (including a single transport licence) operating across jurisdictions which should decrease bureaucracy and improve competition.

Tangible benefits from the Measure include reduction of illegal disposal/dumping by increasing the number of movements being tracked within Australia. The Measure will assist to bring into line those who avoid control and are allowed to have an unfair advantage over those who abide by the law. Waste transported over large distances will be better tracked and controlled. Of significance is that quality information will be more readily available to emergency services in the event of spills or accidents.

Jurisdictions and their industries spend an average of \$100,000 per year in cleaning up contamination as a result of illegal waste dumping. In Queensland \$1,500,000 has been spent over the past 5 years in cleaning up dump sites.

Consumer and social impact

The proposed system of tracking has been introduced in response to industry and community concerns, and the requirements for a cleaner and safer environment. Within their jurisdictions Governments have an obligation to protect the community and the environment from pollution caused by inappropriate dumping of wastes.

Local governments and other authorities have a vested interest in ensuring that unapproved wastes do not find their way into sewerage systems, onto public land or into landfill sites. The cost of rectifying these problems can be substantial.

3.2 Influence of regional environmental differences on the development of the draft Measure

This Measure seeks to facilitate the movement of controlled wastes from one jurisdiction to another. While the environmental impacts of improper disposal will differ between regions, the Measure is designed to avoid all forms of inadequate management, by allowing wastes to be moved to appropriate facilities.

3.3 Implementation

Once adopted, the draft Measure imposes a number of obligations on jurisdictions including ensuring mutual recognition of licences, notification of movements of controlled wastes, implementation of a tracking system, and the maintenance, collation and reporting of data on movements of controlled wastes, and the retention of this data over a 12 month period.

For some jurisdictions, implementation will require minimal change. Although implementation for jurisdictions that currently do not operate any waste tracking system

will be relatively straightforward, there will be a requirement for changes to legislation. Given the cooperative approach to the development of the draft Measure, it is expected that there will be a high degree of cooperation in the implementation process. A Memorandum of Understanding between jurisdictions on management issues could be an option. In addition, the Measure is explicit as to what is required of jurisdictions. The costs of implementation to the community, government and industry are expected to be small. Governments in jurisdictions that do not have a tracking system are likely to face the highest costs.

Further discussion of implementation issues occurs in section 6.

Key points:

- Cooperation between jurisdictions is expected in the implementation of the draft Measure.
- The costs of implementation are expected to be small.
- Jurisdictions without tracking systems will face the highest costs of implementation.
- It is proposed that a working group be established to look at these issues and it is likely that a Memorandum of Understanding will be developed between the jurisdictions.
- There are numerous benefits both to industry and governments.

3.4 Relationship of the Measure to the Basel Convention

Australia is a party to the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.

The Convention obliges contracting parties to establish Measures to regulate the:

- transboundary movement of hazardous waste;
- disposal of waste; and
- reduction of the generation of hazardous waste.

There are several obligations on the Commonwealth, identified in *the Convention*, which can be supported by the Measure. The Commonwealth government needs to:

- Ensure that the generation of hazardous wastes and other wastes is reduced to a minimum.
- Ensure the availability of adequate disposal facilities, for the environmentally sound management of hazardous wastes and other wastes.
- Provide information on disposal options operated within the area of national jurisdictions.

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- Provide information on the development of technologies for the reduction and/or elimination of production of hazardous wastes and other wastes.

These requirements will be met, to some extent, by the waste tracking system and right to refuse movements deemed inappropriate, which are proposed in the Measure. The waste tracking system is designed to prohibit unauthorised transport and disposal of controlled wastes. Refusal of inappropriate movements may provide incentives for waste generators to reduce production of waste.

The draft Measure consists of a list of wastes which have designated Basel classifications, other wastes, originating from the ANZECC Guidelines, and wastes which pose environmental concerns.

The primary objective of this Measure is the regulation of the movement of controlled wastes between Australian jurisdictions, without having unintended consequences for Australia's international obligations. For the avoidance of doubt, it is noted that this Measure is not intended to have any direct or indirect bearing upon Australia's international rights or obligations with respect to the international movement of waste.

3.5 Alternatives for the Implementation of the draft Measure

To facilitate evaluation of the Measure, it is appropriate to consider alternative approaches to implementation.

3.5.1 Self Regulation

Self regulation could involve voluntary policing of waste management by generators and transporters. Industry associations could introduce or amend codes of practice, such that illegal disposal of controlled wastes is discouraged. For example, the relevant agency could recommend that generators or transporters report cases where illegal disposal is suspected, and provide some basis for their suspicions.

While licensing could impose strict conditions it is not expected that self regulation will extend to all participants in the management of controlled wastes. Membership of industry associations does not necessarily cover all relevant businesses.

Another problem is voluntary restrictions on waste management options. Self-regulation is unlikely to achieve voluntary refusal by waste transporters. Consider a shipment of controlled waste to an interstate landfill, where disposal fees are cheaper. Transport businesses may choose to move wastes to the landfill if this is allowed by the destination jurisdiction, even if a superior method of management exists in the source jurisdiction. Since legislation in the destination jurisdiction allows this method of disposal, it is difficult to argue that self regulating transportation businesses would elect not to use the facility.

It may not be possible to systematically collect statistics on controlled waste if a self regulatory code is used as required for obligations under international treaties. Self regulation will not achieve the objectives of the Measure.

Key points:

- Self regulation is not an explicit method of controlling and tracking movements of controlled waste.
- Self regulation is not comprehensive, and will not achieve the goal of the Measure.

3.5.2 Bilateral agreements between jurisdictions

This arrangement would require each State and Territory to enter into agreements with other States and Territories in respect of the procedures to be followed when controlled wastes are transported across State and Territory borders.

For example, movement of controlled wastes from Queensland to Victoria would require an agreement between the two states on the tracking and licensing system. Queensland would need to enter into an agreement with NSW, the transit State, as to the terms and conditions of transit. But there is no benefit to NSW to agree to controlled wastes from Queensland transiting through NSW for ultimate disposal in Victoria. NSW faces an increased risk for no return.

This introduces an incentive for NSW to impose conditions on transit that are designed to encourage management using NSW facilities, or designed to discourage transit. Consequently, NSW could demand different terms and conditions in transit agreements to those that it might require in disposal agreements. Inevitably, the scope for strategic behaviour on the part of jurisdictions has the potential to severely limit transportation and increase the costs of transporting waste.

General bilateral agreements would continue to allow inconsistencies with waste management, however, there may be a need to have specific arrangements between affected jurisdictions.

Key points:

- Bilateral agreements would be unlikely to meet the goal of the Measure.
- Separate negotiations, and duplicated agreements, would add to the cost of arriving at a consistent management of controlled wastes movements between all jurisdictions. It seems unlikely that the best outcome would be attained.
- Each jurisdiction currently has arrangements or legislation for regulating transport and disposal of controlled wastes. Bilateral agreements between jurisdictions with very different management conditions is undesirable.
- Bilateral agreements would allow inconsistencies to remain.

3.5.3 A national system of licensing

A possible approach to tracking interstate movements of hazardous wastes could be undertaken through a national licensing system which would require the common national licensing of all generators, transporters, and waste management facilities in each jurisdiction. Generators could be licensed to generate specified wastes, transporters to carry specified wastes, and waste management facilities to only accept specified wastes. A system to maintain records of waste movements, such as a manifest, log book, or an electronic database could be used to record the movement of hazardous wastes. Monitoring of the system could be achieved through establishment reporting procedures and a requirement that participants lodge returns of activities on a regular basis.

A national system would provide a common system of waste tracking across the country. This would benefit industry by reducing licensing requirements to a single national licence and providing common reporting systems. It would also apply a common standard for producers, facilities, and transporters across the nation.

Implementation of this approach would have a wide variety of impacts on jurisdictions. Presently, some jurisdictions operate intrastate tracking of hazardous wastes by use of a licensing, reporting, and auditing system and are satisfied that it efficiently and effectively meets their requirements. Other states operate a manifest system whereby agencies directly approve each shipment of hazardous wastes and wish to continue with this approach. Some jurisdictions have no tracking system in place.

While a national system of licensing has many benefits, a significant problem with this alternative is the need for jurisdictions to agree on universal, common elements of the system. The coverage and content of waste management legislation varies considerably across jurisdictions. Development of a national system with uniform conditions would require significant adjustments to jurisdictional legal and operational structures.

Discussion of a national system also raises issues concerning which agency would be responsible for the setting of standards and the issuing of licences. This could be a national body or a jurisdictional agency implementing standards and licence conditions agreed to by all jurisdictions.

Although this type of system may meet the goal of the Measure, a national system would be extremely difficult to develop and would limit flexibility of implementation among jurisdictions. The creation of a national body would add an additional layer of bureaucracy and costs to waste management. It is also difficult to envisage that each jurisdiction would agree to a common licence relating to movement of hazardous wastes in the absence of a flexible national framework provided by the Measure.

Key points:

- This option would not achieve the objectives of the draft Measure in an efficient manner. There would likely be a need for a national body to be set up and this would be an additional layer of bureaucracy and cost to waste management.
- Delays would be introduced between the time of transactions and the reconciliation of returns.
- It will be difficult to institute a comprehensive licence in the absence of a Measure, because there is scope for disagreement between jurisdictions about the conditions of waste management licences.
- This system would place the onus of responsibility for compliance on industry and allow the jurisdictional agency to focus on people who are trying to avoid proper waste management practices.
- The creation of a national body would add an additional layer of bureaucracy and costs to waste management.

3.5.4 Ban on interstate movement

A ban on interstate movement could be introduced as a method of regulating disposal. Options for management of controlled wastes would be limited to export of the waste overseas, or management by intrastate facilities. In the vast majority of cases, it would not be economic to transport waste overseas.

Interstate movements of controlled wastes are usually made to specialised management facilities. There may be only a few, or one, of such facilities in Australia. The limited number of specialised facilities could be explained by economic factors, as specialised management tends to be expensive.

A ban on the movement of controlled wastes might lead to more specialised facilities. Each facility would only service wastes generated in that jurisdiction. This means that high fixed costs may be incurred, but revenue per facility would be lower because waste supply would be limited. The advantages of a centralised treatment facility would be lost. Furthermore, this outcome may encourage generation of controlled wastes. If generators have access to a subsidised local management facility, then they would have less incentive to reduce waste generation.

A ban could be enforced without provision of appropriate management facilities in all jurisdictions. This situation could encourage illegal dumping and inappropriate storage of controlled wastes, thereby leading to a deterioration in environmental outcomes. A ban could also have significant regional effects.

It seems likely that new facilities, constructed as a result of a ban, would be located in proximity to the diverted demand in metropolitan areas. If this transpires, then producers in border regions would not only pay a higher price for management services; they would incur additional transportation costs to ship the controlled waste to metropolitan areas. For example, a ban might mean that controlled waste generated in Tweed Heads might have to be transported to Sydney, when a management facility exists in Brisbane.

Key points:

- A ban on movements of controlled wastes could restrict use of the limited number of specialised waste management facilities in Australia.
- A ban will lead to duplication of management services at considerable cost and weaken the incentive to minimise waste generation. Even without duplication, a ban could lead to inappropriate disposal of controlled wastes.
- The negative effects of a ban are likely to be felt most strongly in certain regions and may lead to illegal disposal.
- A ban on movements of controlled wastes will constrain best practice in relation to waste management in Australia.

3.5.5 Maintenance of the status quo

This section assesses the implications of maintaining prevailing arrangements for the movement of controlled wastes between states and territories. There are numerous arrangements and legislative requirements of transport and management of controlled waste in Australia:

- Existing intergovernmental arrangements.
- State and Territory legislation governing waste management, including transportation.

By considering the status quo, deficiencies in controls over movement of controlled wastes can be discussed. These deficiencies are identified at the end of the section.

Existing inter-governmental arrangements

ANZECC's National Manifest and Classification System

In part, the draft Measure replaces an inter-jurisdictional agreement to introduce a manifest system for tracking the movement of controlled waste between jurisdictions. In 1994, the Australia and New Zealand Environment and Conservation Council (ANZECC), through a ministerial agreement, decided to implement the *National Manifest and Classification System*. The system sets out national guidelines to track movements of wastes between jurisdictions. The system is based on a five-docket manifest, which provides detailed information on movements of controlled wastes to the waste generator, transporter, destination facility, and government agencies in the source and destination jurisdictions.

The system was designed to reconcile inconsistencies between the manifest systems used by some jurisdictions, and to facilitate the participation of the remaining jurisdictions in a national system. The system includes a set of waste classifications. These classifications reconcile the various waste classification systems that have been adopted by the jurisdictions, in effect, allowing regulators to communicate and compare data.

Compliance with the guidelines varies. In Victoria and South Australia, operators must use the ANZECC system for any movements of waste. The NSW EPA presently requires

compliance with the system in metropolitan Sydney. However, this will soon be abolished. In the other jurisdictions, some operators comply on a voluntary basis. Voluntary compliance has the State regulators playing their part in the manifest system. Some receiving jurisdictions issue consignment numbers when generators propose to ship controlled waste into the State. This does not, however, result in any systematic or complete record-keeping by the regulators.

The ANZECC system has no legislated authority and has not been universally adopted within Australia.

State and Territory legislation governing waste management, including transportation.

New South Wales

The authority responsible for environmental management in New South Wales is the Environment Protection Authority (NSW EPA). The *Waste Minimisation and Management Act 1995*, and *Waste Minimisation and Management Regulations 1996* (WMMR), identify facilities and businesses that must be licensed, and provides a definition of controlled waste. The regulation provides for licensing of controlled waste generation and transportation activities, but these have not yet been specified in the legislation. Wastes, for the purposes of the WMMR, are now classified as controlled wastes, industrial wastes, solid wastes or inert wastes with the following definitions:

Hazardous waste means:

- (a) any of the types of wastes specified in Part 3 of Schedule 1; or
- (b) any waste that is otherwise assessed and classified as controlled wastes in accordance with the *Waste Guidelines*.

Industrial waste means:

- (a) any of the types of waste specified in Part 1 of Schedule 1; or
- (b) any waste that is otherwise assessed and classified as industrial waste in accordance with the *Waste Guidelines*.

Solid waste means:

- (a) any of the types of waste specified in Part 4 of Schedule 1; or
- (b) any waste that is otherwise assessed and classified as solid waste in accordance with the *Waste Guidelines*.

Inert waste means:

- (a) any of the types of waste specified in Part 3 of Schedule 1; or
- (b) any waste that is otherwise assessed and classified as inert waste in accordance with the *Waste Guidelines*.

(The *Waste Guidelines* means the document called *Environmental Guidelines: Assessment Classification and Management of Non-Liquid Wastes* issued by the NSW EPA and current as at 30 June 1997.)

Presently the ANZECC manifest system for tracking hazardous waste is mandatory in the metropolitan Sydney area only. The 'Draft Hazardous Waste Definition and Draft Environmental Guidelines: Solid Waste Assessment' (NSW EPA, 1996; p.1) discusses expected developments in respect of waste generator and transporter responsibilities for tracking hazardous waste:

Once the new provisions of the WMMR with respect to hazardous waste are in force, the current practice of giving consents for the disposal of hazardous waste will no longer be necessary, and the five docket system for tracking hazardous waste will be discontinued. Instead, licence conditions will require that managers of facilities, transport and activities involving hazardous waste keep records for ensuring that hazardous waste can be tracked from the point of generation to the point of treatment and disposal. A robust licensing and audit system will ensure the effectiveness of the new record-keeping arrangements. Obligations to document the transportation of hazardous waste under international treaties and the National Manifest will be maintained. In particular, all licensed generators of hazardous waste will be required to:

- *ensure that licensed contractors are used to transport their waste, and*
- *ensure that their hazardous waste is delivered to treatment, storage or disposal facilities which are licensed to receive hazardous waste.*

The expectation is that licensed agents involved in management of hazardous waste will comply with the information requirements, and verification of the receipt of hazardous waste, as specified in the ANZECC guidelines, but that prior notification of the EPA will not be required. Agents will maintain records of contracted transportation and disposal, but will not be required to provide dockets to the EPA as part of waste management.

Victoria

The authority responsible for environmental management in Victoria is the Environment Protection Authority.

In Victoria, the *Environment Protection Act 1970*, and regulations made under *the Act*, govern waste management. In the context of the Measure, there are three important components of the legislation: those that define licensed waste management premises, those that define prescribed wastes, and those that define conditions of waste transportation.

Licensed waste management premises

Waste management premises are scheduled premises, which require a licence to undertake defined waste disposal or treatment activities. Scheduled premises are defined under the *Environment Protection (Scheduled Premises and Exemptions) Regulations 1996*.

Premises for the acceptance of wastes are storage, treatment, reprocessing or disposal facilities handling any prescribed industrial waste not generated at the premises including landfills.

Prescribed Waste

Prescribed waste is defined in the *Environment Protection (Prescribed Waste) Regulations 1987*. With one exception, prescribed wastes are defined by their industrial origin. The schedule of prescribed wastes is reproduced in Appendix 1.

Conditions of waste transportation

Transportation of prescribed wastes is regulated under the *Environment Protection Act 1970*. Transporters of prescribed waste are to obtain a transport permit for each vehicle from the EPA. Permit conditions are not described in the Act.

The *Environment Protection (Transport) Regulations 1987* relate to the conduct of the waste tracking manifest system. Transportation of prescribed waste is covered by the regulations. The regulations define a transport certificate system, which is used to trace and cross-reference the movement of prescribed industrial waste and define areas of responsibility for the following participants in transportation of prescribed waste:

- Waste producer, or an accredited agent of the producer who is authorised to complete relevant parts of the certificate.
- Waste transporter.
- Occupier of a waste disposal, treatment, storage or reprocessing premises.

Responsibilities identified in the regulations are identical to those described in the ANZECC Guidelines. The Victorian EPA processes and analyses data collected from manifest docket returns. Data for 1995 are provided in Table 3.1.

Table 3.1: Hazardous waste shipments into and from Victoria, 1995, tonnes.

Prescribed wastes	Imports	Exports
Cyanides, surface treatments and heat treatment waste	14	24
Acids	149	2
Alkalis	193	9
Inorganic chemicals	130	2
Reactive chemicals	9	13
Paints, lacquers, varnish, resins, inks, dyes, pigments, adhesives	2,949	1,083
Organic solvents, solvent residues	1,160	1,401
Pesticides	41	7
Oils, hydrocarbons, emulsions	2,310	683
Organic wastes	3,292	76
Industrial washwaters, effluent	1,723	22
Organic chemicals	626	205
Solid/sludge wastes requiring special handling	355	33
Clinical and pharmaceutical wastes	80	151
Miscellaneous	51	1
Undefined	160	61
Total	13,242	3,773

Queensland

The authority responsible for environmental management in Queensland in the Department of Environment.

In 1996, Queensland formulated a plan to introduce a comprehensive waste tracking system for both intrastate and interstate movements, including compliance with the ANZECC guidelines on interstate tracking. That proposal is now to be carried forward together with the finalisation and implementation in 1998 of an Environmental Protection (Waste Management) Policy under the Environmental Protection Act 1994.

In the interim, the Department of Environment (DoE) has established a voluntary manifest tracking system in southeast Queensland, and it will shortly become a condition of licence for transporters to use the manifest. Voluntary use of the manifest will then be extended to the remainder of Queensland. This process has wide support from key parties to the movement of hazardous waste.

The previous manifest system used by Brisbane City Council to monitor wastes going to its Willawong Liquid Waste Treatment Plant is replaced by the DoE manifest, which is based on the ANZECC guidelines for tracking the movement of hazardous waste. The DoE system will now track wastes going to all treatment and disposal facilities in southeast Queensland, not just to Willawong (which is due to close on 30 June 1998).

Voluntary compliance by industry with the ANZECC guidelines when moving hazardous wastes interstate has been occurring for the past year. It is considered that compliance rates are high, and a record of consignment numbers and the completed manifest is maintained on a computer register.

Implementation of the above actions has already provided Queensland with improved knowledge on the generation rates and treatment capacities for all classes of waste and

whether the waste can be handled in Queensland or interstate. This knowledge has also lead to an initiative to develop a cleaner production package to assist businesses in the metal finishing industry to minimise their wastes.

The Queensland Government, through DoE, has also sponsored research and development into use of a global positioning system to track waste movement in real time. It is intended that DoE will receive real time alarms where exceptions to agreed practice occur, and reports on a regular basis of the sources, types and quantities of waste being handled. The GPS system is also being developed as an aid to vehicle fleet operation for improved efficiency, to maximise its acceptance by industry.

A three month trial on five vehicles is currently underway to prove the system under normal operating conditions.

South Australia

The authority responsible for environmental management in South Australia is the Environment Protection Authority. The *Environment Protection Act 1993* governs waste management in South Australia. A licence to undertake a prescribed activity of environmental significance is required by the Act. Prescribed activities of environmental significance are identified in Schedule 1 of the Act. Schedule 1 lists define activities that require a licence. In terms of waste management, Classes 3 to 6 are particularly important.

(3) Waste Treatment and Disposal.

- incineration premises;
- sewage treatment works or septic tank effluent disposal schemes;
- depots for the reception, storage, treatment or disposal of waste other than;
 - temporary storage at the place at which the waste (not being tyres or tyre pieces) is produced awaiting transport to another place;
 - handling of waste solely for recycling or reuse where the waste does not consist of or include;
- substances or things listed in Part B of the Schedule;
- waste oil in quantities exceeding 5,000 litres per year;
- waste lead acid batteries in quantities exceeding 500 batteries per year; and
- waste tyres or tyre pieces in quantities exceeding 5 tonnes per year.

(4) Activities producing listed wastes (with some exceptions).

(5) Waste transport business (category A):

The collection or transport for fee or reward of:

- waste substances or things listed in Part B of the schedule; or
- liquid waste (not being such waste lawfully disposed of to a sewer) arising from any commercial or industrial premises or from any teaching or research institution.

(6) Waste transport business (category B)

The collection or transport for fee or reward of:

- waste from domestic premises where the waste is collected or transported for or on behalf of a council;
- solid waste from any commercial or industrial premises or from any teaching or research institution;
- septic tank effluent; or
- waste soil containing substances or things listed in Part B of this schedule in a concentration above that naturally occurring in soil in the area.

Where transportation of listed waste occurs, licensed facilities and transporters are required to comply with the waste tracking manifest. A form of waste tracking by manifest has been undertaken in South Australia since 1984. The South Australian EPA's Five Docket Waste Tracking System tracks about 30,000 loads annually. There are special arrangements for collection runs for wastes such as grease trap, solvents and oily waters, that are designed to reduce the costs of record-keeping and data entry.

Data on shipments of hazardous wastes into and from South Australia is processed by the EPA, and available for analysis. Data for 1996 is provided in Table 3.2.

Table 3.2: Hazardous waste shipments into and from South Australia, 1995, tonnes or kilolitres

Description	Imports	Exports
Medical	453	15
Acids	0	1
Solvents	621	232
Paint residues	515	79
Inorganic	2	143
Pesticides	8	31
Drums	0	39
Organics	105	1
Highly reactive	8	0
OCPs	0	4
PCBs	0	14
Miscellaneous	2	10
Total	1,713	569

Source: Environment Protection Authority, South Australia.

Western Australia

The authorities responsible for environmental management in Western Australia (WA) are the Department of Environmental Protection and the Environmental Protection Authority.

The *Environmental Protection Regulations* have been recently revised to require only those premises which are considered to pose a threat to the environment are licensed. Waste management facilities have been added to the Schedule of premises requiring

licensing under the *Environmental Protection Act* and this now means that all disposal and treatment sites are subject to strict regulatory control.

No comprehensive hazardous waste tracking framework exists at present in WA. However, a comprehensive tracking and licensing system exists to control the tracking of liquid waste in the Perth metropolitan area and a number of local authorities in the South West of the State. This liquid waste tracking system relies on bar-coded docketts which are tracked from the point of production to disposal and also involves the licensing of producers, transporters and treaters and disposers of waste.

In addition, WA has successfully trialed the systems for tracking liquid waste movements using Global Positioning Systems (GPS) and also electronic sensing of waste volumes. Implementation of a regulatory system based on GPS tracking of liquid waste tankers in the Perth Metropolitan Region will be completed by October 1997. The Department of Environmental Protection sees the extension of the GPS tracking system to the tracking of hazardous waste movements as a logical extension of the current work and will be investigating this as part of the process of implementing the Measure in WA. Technical reports on the system will be provided to other jurisdictions once it is fully implemented.

WA has been using the existing ANZECC endorsed National Manifest system on a voluntary basis to track inter-state movements of hazardous wastes and is very supportive of the need for:

- prior notification of waste shipments;
- improved information sharing; and
- mutual recognition of licences.

Currently, no consolidated list of hazardous wastes is in place in WA, however, work has already commenced on comprehensive hazardous waste regulations which are being developed to be consistent with the thrust of the draft Measure. The regulations are being developed on a time-line which will allow them to be introduced soon after the Measure is finalised.

The issue of inter-state movements of hazardous wastes is of relatively minor importance in WA because of the great distances between State borders and major population centres which are the major point of production for hazardous wastes.

Tasmania

The authority responsible for environmental management in Tasmania is the Department of Environment and Land Management.

The *Environmental Management and Pollution Control Act 1994* is the primary environmental legislation dealing with regulatory controls for the disposal of environmentally dangerous and hazardous waste. A transitional provision in the Act provides that the *Environment Protection (Waste Disposal) Regulations 1974* remain in force until rescinded. These regulations identify Environmentally Dangerous Waste (Schedule 1) and Hazardous Waste (Schedule 2), the definition of disposal site, and

control on disposal of environmentally dangerous and hazardous wastes. Schedule 2 is reproduced in Appendix 1. The regulations are being redrafted to better reflect the intent of the new Act. The Hazardous Waste Management Strategy and the Solid Waste Management Policy specify the broad framework for hazardous waste and solid waste respectively, and outline broad strategic directions for present and future waste management. Integral to these policy documents is a waste management hierarchy of waste minimisation, recycling, re-use, waste treatment and disposal.

Regulation of disposal and transportation

Disposal of hazardous waste is regulated to a degree, through the implementation of waste disposal guidelines. Acceptance of hazardous waste to a disposal site requires prior approval from the Department of Environment and Land Management, and the local government that controls the disposal facility. Disposal sites receiving in excess of 100 tonnes per year are classified as Level 2 activities under the *Environmental Management and Pollution Control Act 1994*. Environmental management conditions, including controls on the types of waste which may be deposited at sites, may be applied through a permit issued under the *Land Use Planning and Approvals Act 1993* or an Environment Protection Notice.

Regulations on the disposal of hazardous waste to approved facilities are also enforced through Waste Transport Business Environment Protection Notices (WTB-EPN), issued to transporters of hazardous waste who transport for fee or reward. The WTB-EPN specifies the waste that may be transported, the vehicles that may be used and approved disposal sites for those wastes. Interstate transporters operating in Tasmania are required to hold a Tasmanian WTB-EPN in conjunction with other licence requirements.

Tasmania does not operate a manifest system. Interstate shipments are facilitated on a case-by-case basis. The Department of Environment and Land Management can issue a Waste Transport Certificate for the purposes of the receiving state's requirements for documentation. In the absence of a Tasmanian waste manifest system, several companies have adopted individual company-based systems, which are used to track waste for intrastate and interstate disposal.

Northern Territory

The Department of Lands, Planning and Environment is responsible for environmental management in the Northern Territory.

The Northern Territory Government's 1995 Waste Management and Pollution Control Strategy addressed the need to develop and implement a strategy for the management of hazardous waste generated within the Territory. The strategy includes:

- Licensing of contractors involved in the collection, treatment and disposal of hazardous wastes.
- Implementation of a mandatory waste manifest system, consistent with the ANZECC National Waste Management Guidelines.

To implement the strategy, the Department of Lands, Planning and Environment has recently released draft Waste Management and Pollution Control legislation for public consultation.

The Northern Territory currently operates a voluntary tracking system based on the ANZECC system. The Department proposes to implement licence and waste tracking systems consistent with the arrangements recommended in the draft Measure.

Australian Capital Territory

The government agency with key responsibility for environmental management in the ACT is the Pollution Control Authority, located in the Department of Urban Services. The ACT does not have a separate statutory authority administering pollution legislation.

There are two pieces of legislation governing waste disposal and transportation. The *Dangerous Goods Act 1984* controls the storage, handling, keeping, disposal and use of dangerous goods. The *Public Health Act 1928* and *Public Health Regulations* control the transport and disposal of refuse and general sanitation.

The key hazardous waste disposal facility, an incinerator, is not licensed, and hazardous waste transportation is not licensed. A mandatory hazardous waste tracking system does not operate. The authority uses the Victorian guidelines on types of hazardous waste that may be accepted by landfill facilities.

These arrangements are likely to change. Draft environment protection legislation has been developed, which will allow licensing and operating conditions to be imposed.

Despite the fact that a mandatory manifest system is not used in the ACT, the Office of the Environment was able to provide data on hazardous waste inflows to the ACT from New South Wales and Victoria. Since manifests are required for these shipments, and the operator of the incinerator, Totalcare, voluntarily implements the ANZECC manifest, the Office of the Environment can generate aggregate data on inflows. A manifest is not required for outflows, and while some generators and transporters voluntarily comply with the system, the available data is not comprehensive. Data on incoming shipments of hazardous waste to the ACT is provided in Table 3.3.

Table 3.3: Hazardous waste shipments into the ACT from NSW and Victoria - tonnes or kilolitres

Description of hazardous waste	From NSW (4/95 to 2/97)	From VIC (10/95 to 2/97)
Aqueous based waste (flammable vapours) from adhesive glue, resin, latex and plasticiser	12.0	0.0
Cadmium; cadmium compounds	7.7	0.0
Cytotoxic substances	2.6	10.1
Medical waste	505.7	233.4
Miscellaneous	117.5	0.0
Mixed pesticide residue	3.0	0.0
Mixed waste from production and preparation of pharmaceutical products	75.8	6.6
Organic chemicals not elsewhere specified	0.2	0.0
Pharmaceutical and residues	197.8	61.0
Total	922.3	311.2

Key points:

- Although generally accepted by producers and transporters, existing inter-governmental arrangements are not generally satisfactory
- Existing inter-governmental arrangements are not legally binding in all jurisdictions
- Existing inter-governmental arrangements are not universally adopted within Australia

3.6 Summary of alternatives

The assessments of the alternatives are summarised in Table 3.4.

Table 3.4: Assessment of alternatives

Alternative	Assessment
Self-regulation	<ul style="list-style-type: none"> • Self-regulation is not an explicit method of controlling and tracking movements of hazardous waste. • Self-regulation is not comprehensive, and will not achieve the goal of the Measure.
Bilateral agreements between jurisdictions	<ul style="list-style-type: none"> • Bilateral agreements would be unlikely to meet the goal of the Measure. • Separate negotiations, and duplicated agreements, would add to the cost of arriving at a consistent management of hazardous wastes movements between all jurisdictions. It seems unlikely that the best outcome would be attained. • Each jurisdiction currently has arrangements for regulating transport and disposal of hazardous wastes. Bilateral agreements between jurisdictions with very different management conditions is undesirable. • Bilateral agreements would allow inconsistencies to remain.
A national system of licensing	<ul style="list-style-type: none"> • This option would not achieve the objectives of the draft Measure in an efficient manner and would limit flexibility. • It would require significant adjustments to jurisdictions legal and operational structures. • It would be difficult to institute a comprehensive licensing system in the absence of a national framework as provided by the Measure. • The creation of a national body for setting standards and issuing licences would create an additional layer of bureaucracy and costs to waste management.
Ban on interstate movement	<ul style="list-style-type: none"> • A ban on movements of hazardous wastes could restrict use of the limited number of specialised waste management facilities in Australia. • A ban will lead to duplication of management services at considerable cost, and weaken the incentive to minimise waste generation by creating local management options. Without duplication, a ban would lead to inappropriate disposal of hazardous wastes. • The negative effects of a ban are likely to be felt most strongly in certain regions and may lead to illegal disposal. • A ban on movements of hazardous wastes would constrain best practice in relation to waste management in Australia.

Maintaining the status quo	<ul style="list-style-type: none">• Although generally accepted by producers and transporters, existing inter-governmental arrangements are not generally satisfactory• Existing inter-governmental arrangements are not legally binding in all jurisdictions• Existing inter-governmental arrangements are not universally adopted within Australia
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It is concluded that the draft Measure is the best approach available in achieving the goal of reducing the environmental impact of moving controlled wastes across State and Territory borders.

4. Impact Statement for the Measure

This section provides a discussion of the contents of the draft Measure. It focuses on identifying the impacts which are anticipated to arise from adoption of the draft Measure, and identifies those sectors of the community which are expected to be affected by its adoption.

4.1 Part 1 - Preliminary

Part 1 of the draft Measure describes the title, commencement provisions and definitions used in the Measure.

4.1.1 Commencement

The Measure will come into effect on the date of Gazettal. Subject to approval by NEPC and passage through parliament, this is expected to occur in June 1998.

4.1.2 Scope

This Measure is to provide a national framework for developing and integrating jurisdictional systems of tracking, prior notification, and licensing for the management of the movement of controlled wastes between States and Territories. These management systems ensure that controlled wastes are directed to and reach appropriate facilities.

For the avoidance of doubt, it is noted that this Measure relates to the movement of wastes between States and Territories within Australia, and is not intended to have any direct or indirect bearing upon Australia's international rights or obligations with respect to the international movement of waste.

This measure is not intended to relate to domestic household waste as such waste is generally regulated by local government legislation. Regulation of domestic household waste under this Measure would also place an undue burden on residents of border communities which often share landfills.

4.1.3 Schedules

There are two schedules to the Measure. The purpose of the Schedule A is to identify and list controlled wastes and identify and list hazard characteristics. Schedule B outlines information required for tracking the movement of controlled wastes. The information required by Schedule B is to accompany controlled wastes when being transported.

4.1.4 Exclusions and geographical exemptions to the Measure

Exclusions

The scope of the draft Measure does not encompass:

- (a) the intrastate/intraterritory movement of controlled wastes;
- (b) a movement of controlled waste, which for logistical reasons (for example, closer proximity), and as agreed to between the jurisdiction of origin and the jurisdiction of transit, enters the jurisdiction of transit prior to returning to a facility in the jurisdiction of origin;
- (c) the movement of controlled wastes or other wastes in accordance with the *Hazardous Waste (Regulations of Exports and Imports) Act 1989*;
- (d) an emergency which requires urgent action to protect human life, the environment and/or property;
- (e) controlled wastes:
 - (i) to be used in analysis;
 - (ii) being small amounts of residue within containers for direct refilling with the same substance; and
- (f) the movement of controlled wastes by pipeline.

Geographical exemptions

The movement of a specified controlled waste stream from a defined geographic area in one jurisdiction to a defined geographic area or facility in another jurisdiction may be exempted from one or more of Clauses 12(e), 12(f), 12(g), 12(h), and 12(i) of the measure if:

- (i) such an exemption is formalised through written agreement by both affected jurisdictions; and
- (ii) the written agreement is provided as part of those jurisdictions' reporting obligations; and
- (iii) those jurisdictions consider that the exemption does not derogate from the goal of this Measure.

Reasons for exclusions

- (a) Whilst a seamless system covering intrastate and interstate movements is desirable this is outside the scope of the draft Measure. Implementation of the Measure may well lead to a seamless system in the future.
- (b) Exclusion (b) intends to address the movement of wastes from a jurisdiction being transported briefly through another jurisdiction and re-entering the original jurisdiction (e.g. waste passing through the ACT during shipment from one place in NSW to a facility in another location in NSW) without being unloaded. Maintaining records on such shipments would cause an unnecessary

administrative burden as the shipment will be treated as an intrastate shipment under the originating jurisdiction's legislation.

- (c) Movement by ship for overseas export and import is covered by the *Hazardous Waste Act 1989*. The Act applies once a waste leaves a port and is destined for overseas export. Movement between ports in Australia by sea will be covered by the Act.

Waste imported will likewise be covered by the *Hazardous Waste Act 1989* until the waste is taken off a ship. Interstate movements to or from a port will be covered by the Measure.

- (d) Emergency situations need to be rectified quickly. Local controls can be applied.
- (e) (i) the small amounts of waste required for laboratory analysis will not constitute any significant threat to the environment.
- (ii) containers or drums may be of value and should be reused provided they are returned to the supplier for direct refilling with the same substance.

The containers (drums) may be classified as Dangerous Goods and will be controlled under that legislation.

- (f) In the event that controlled wastes are transported by pipeline across State or Territory borders it is envisaged that such a movement would be a continuous flow between a producer and a facility at fixed locations. Such transfers, which are most likely under existing domestic legislation, are well managed and do not lead to illegal dumping, so do not warrant being subject to the Measure.

Reasons for exemptions

Geographical exemptions as detailed in Clause 9 address concern for preventing undue hardship for businesses and residents of border communities. In some instances border communities share waste disposal facilities such as landfills and the transport of wastes across borders in these communities is equivalent to the movement of wastes within other towns and cities within a single jurisdiction. A requirement to obtain a consignment for every movement of controlled material to a local facility would create an unwarranted burden on residents, businesses and jurisdictional agencies. The draft Measure allows for exclusions to be made and is sufficiently flexible to allow minimal impact on border towns, for example Queanbeyan(NSW) and the ACT, Albury NSW/Wodonga VIC and Tweed Heads(NSW)/Coolangatta(QLD) where daily movements occur from a waste generator to a facility. It will be important for jurisdictions to be specific and prudent in granting exclusions to avoid incomplete tracking of controlled wastes across specified geographic areas. The onus will be on jurisdictions to ensure that when adopting such agreements, this does not derogate from the goal of the Measure.

4.2 Part 2 - National Environment Protection Goal

4.2.1 What is a Goal?

A national environment protection goal means a goal:

- that relates to desired environmental outcomes; and
- that guides the formulation of strategies for the management of human activities that may affect the environment.

A goal may be something desirable in the future and not immediately attainable, but should represent the aspirations of the Australian people for environmental quality.

4.2.2 The Goal of the Measure

The goal of the Measure is to assist in minimising the environmental impact on ambient air quality, ambient marine, estuarine, and freshwater quality, impacts associated with hazardous wastes, and impacts associated with the re-use and recycling of used materials from the movement of controlled wastes across State or Territory borders.

The goal will be achieved through the establishment of a compatible tracking system, consultation between parties and a requirement for the mutual recognition of licences. This will be achieved by ensuring controlled wastes are properly identified, transported and otherwise handled in ways which are consistent with environmental sound management practices.

The tracking system will provide information to assist agencies and emergency services in relation to accidental spills, and will ensure that controlled wastes reach appropriate facilities. Consultation between parties will provide them with the necessary information to assess the appropriateness of proposed movements of controlled wastes. The Measure will facilitate mutual recognition of a licence granted by an agency by all participating States and Territories.

4.3 Part 3 - National Environment Protection Guidelines

National Environment Protection Guidelines provide guidance on:

- how standards or goals may be achieved (for example, nutrient management strategies); or
- how specified environmental problems can be addressed (for example, contaminated sites).

They are not mandatory;

- provide a basis for harmonised approaches; and
- may stand alone or be part of another Measure.

Guidelines can be used in a number of ways. They can be part of a Measure and set out the preferred approach to achieving or maintaining an environmental standard or goal. This has advantages including the sharing of resources in the development of management strategies; for example, in the control of motor vehicle emissions. But since guidelines are not mandatory they allow jurisdictions to experiment with other approaches or for small jurisdictions to take a lower cost but, in their terms, equally effective route.

Guidelines can also be issued as stand alone Measures. For example, a proposed Measure on the Assessment of Contaminated Sites will consist of guidelines only.

The guidelines in this Measure comprise:

- licensing and mutual recognition;
- prior notification and consignment numbers;
- waste tracking;
- obligations;
- maintenance of information;
- furnishing of information;
- failure to provide information, or giving false or misleading information;
- confidentiality; and
- amendment to the Schedules.

4.3.1 Features for the establishment of a system for the movement of controlled wastes

Whilst each State and Territory will be responsible for the movement of controlled wastes within its borders, participating jurisdictions need to establish an effective and comprehensible system to control the movement of controlled waste and beyond State and Territory borders.

Such system would be facilitated by adopting a tracking system similar to that incorporated into the ANZECC guidelines and by placing obligations on all parties associated with waste management.

This Measure seeks to minimise relevant environmental impacts by establishing uniformity in the control of the movement of controlled between jurisdictions. The Measure also seeks to provide States and Territories with flexibility in the implementation of the Measure's guidelines.

It is envisaged that some key responsibilities may be placed on the waste generator to provide accurate information to the transporter and the destination facility. The

information requirements are detailed in Schedule B. It may be possible for some jurisdictions to place a high level of responsibility on facility operators, waste generators, and transporters through extensive licence conditions. This added level of responsibility may include making decisions on whether to accept controlled wastes without directly consulting the agency. This flexibility would facilitate a mechanism for the issuing of consignment numbers directly by facilities. Government agencies could benefit from this approach as it could free up limited resources for other activities such as auditing and enforcement. One negative effect of this approach is that it would place added responsibility on generators, transporters and facility operators complying with tracking mechanisms relevant to each jurisdiction.

4.3.2 Licensing and mutual recognition

This element seeks to ensure that transportation businesses meet relevant benchmarks accepted by all States and Territories. It requires suitable licences and standardised minimum requirements for transporters of controlled wastes. Each participating jurisdiction shall ensure that the movement of controlled wastes from one participating jurisdiction to another participating jurisdiction or through a participating jurisdiction shall be subject to a licence having suitable control for the carriage of controlled wastes.

A second component of the licensing guidelines is that a transport licence issued in a jurisdiction is recognised by other jurisdictions. The jurisdiction of destination or transit will accept a licence issued by the agency in the participating jurisdiction where the transporter is established for the purposes of the Measure.

The requirements of mutual recognition will be discussed by a Management Options Working Group representing all jurisdictions during the final development of the Measure and between jurisdictions during the implementation process. It is proposed however that a transitional period be allowed to give jurisdictions time to implement agreed standards. The draft Measure specifies the time frame for participating jurisdictions to agree to mutual recognition of licences (within eighteen months of the Measure coming into effect). Necessary adjustments to legal and administrative frameworks resulting from the agreements must be made within six months of agreement being reached.

Purpose of transport licence

To transport wastes which are deemed either hazardous, prescribed or controlled within some jurisdictions, the transporter must be licensed. Licences can impose several conditions and requirements on the transport company such as:

- types of waste that can be transported ;
- conditions on waste receptacles, signs and placards;
- collection from specified generators;
- the means of disposal or treatment;
- destination.

Transport licences are designed to limit risks associated with moving and disposing (including treatment) of controlled wastes. Risk of exposure to controlled materials can be reduced by appropriate containers. As risk varies with materials, different conditions are

placed for different waste types. Transport licence conditions also enable the generation of information on transportation routes and means of disposal. This information can also assist in planning for controlled wastes disposal facilities.

Purpose of vehicle standards

Vehicles used to transport controlled wastes are fundamental in managing and minimising risks associated with transportation. Appropriately designed, constructed and well maintained vehicles, equipped with spill controls and security features, reduces the risks associated with the transportation of controlled wastes.

Maintenance and equipment requirements on such vehicles and their transporters may be imposed by:

- Environment agencies
- Jurisdiction road transport authorities which may require specific licences.

The vehicle operator is equally important for the security and safe handling of controlled wastes during transport. As such, appropriate driver training may be required for wastes that have the potential for significant environmental impact if inappropriately managed. An analogous system of control exists in all jurisdictions for dangerous goods where requirements are imposed by transport authorities for the safe transport of materials which could pose a risk to the environment or human health. It is envisaged that agreement to mutually recognise licences will be based on agreed minimum standards (as implied in clause 12(a) and 12(b)) which could be placed on transport operators/drivers and their vehicles.

One-way trips

Controlled waste disposal in jurisdiction border regions may often involve waste movements of relatively short distances in one direction only. For example, shipments from the ACT to New South Wales or Victoria are often one-way. Tasmania rarely receives controlled waste. One-way trips occur in other circumstances.

In such cases, the implications of requiring the destination jurisdiction to recognise another jurisdiction's transport licences and vehicle standards will depend on the nature of those licences and standards. If a jurisdiction imposes very few licence conditions, then the risks associated with interstate transport may be relatively high.

Under the draft element, the destination jurisdiction would have to accept the transport licence and vehicle standards, and therefore incur the risks associated with transportation, but the destination jurisdiction may refuse to issue consignment numbers to transport from the jurisdiction of origin. On the other hand, if the licensing jurisdiction imposes similar or more stringent conditions on transportation, then the destination jurisdiction is likely to recognise those conditions, and the draft element reduces the administrative burden on transport companies. In this case, implementation may reduce the discrepancy between licence conditions.

Return trips

The draft Measure explicitly excludes the requirement for multiple licences clause 12(c). In this way the Measure alters the existing requirement for multiple licenses and thereby is expected to save costs for transport companies and ensure a uniform high standard of compliance.

4.3.3 Prior notification and consignment numbers

A producer intending to dispatch controlled wastes to another jurisdiction must give prior notification and make application for a consignment number prior to the date of intended transport. Consignment numbers and approval for shipment will be authorised by designated agencies within the destination jurisdiction or by waste management facilities authorised to accept waste and issue consignment numbers as part of their licence conditions.

The agency or designated facility in the destination jurisdiction will refer to a set of criteria which apply to a consignment number application to transport controlled wastes interstate. The criteria specified in the Measure are whether:

- (a) there is a facility for that type of controlled wastes in the participating jurisdiction of origin;
- (b) the facility to which the controlled wastes are directed is of at least equal standard that would apply to a similar facility in the participating jurisdiction of origin;
- (c) the facility to which the controlled wastes are directed is an appropriately licensed or approved by the agency in the participating jurisdiction of destination; and
- (d) the controlled wastes are to be received at a landfill facility in the participating jurisdiction of destination.

In assisting with the process of consulting and decision making, the element in clause 12(g) provides guidance on a common set of transportation criteria. This will be useful in that the criteria will be used uniformly throughout Australia.

An alternative approach could rely only on licensing requirements and not include consultation. This may well result in an increase risk of inappropriate decisions and may impact adversely on the environment, and reduce exchange of information.

Impact

In practice, this element allows a destination agency to refuse or accept waste on the basis of the criteria identified in 12(g). Prevention of an ‘inferior’ form of waste management is the key motive of the criteria. Preventing disposal of controlled wastes at landfills could be interpreted as a particular objective. Inferior disposal may currently occur because:

- the facility is of a lower standard than an appropriate facility in the source jurisdiction; or
- that the pricing of some element(s) of controlled wastes management is distorted.

For example, disposal fees at the destination facility may not reflect all environmental costs of disposal, and subsidised disposal may attract interstate controlled wastes.

Right of refusal may be exercised to prevent ‘inappropriate’ disposal. While the banning of interstate transport of controlled wastes to such a facility can prevent an ‘inferior’ outcome, it is preferable to reduce any incentive for such inferior methods of disposal.

While refusal is currently exercised by agencies in some jurisdictions, the criteria used to justify refusal are not explicitly identified in legislation. The transparent criteria contained in the Measure will enable agencies to make a decision to allow or refuse movement of controlled wastes.

It is expected that greater exchange of information relating to proposed movements of controlled wastes will take place through greater consultation. This consultation will lead to improved decision making in deciding the appropriateness of proposed movements of controlled wastes and will enable jurisdictions to focus on the primary objective of reducing the environmental impact of such movements. It is assumed that the appropriate agencies in jurisdictions involved in consultation will have intimate knowledge on waste facilities within their jurisdictions.

It is anticipated that there will be negligible impact on jurisdictions that already have requirements associated with this element.

4.3.4 Waste Tracking

Clause 12 provides guidance for jurisdictions on means for developing compatible components of a system for tracking the movement of controlled waste between States and Territories. Clause 12(h) places responsibility on each participating jurisdiction to ensure adequate information accompanies all controlled wastes. The required details are set out in Schedule B of the Measure. One key benefit would be that the accompanying details provide relevant accurate information in handling the controlled waste in case of normal operations and in emergencies where a spill may have occurred.

An objective of the proposed tracking system is to ensure that controlled waste is taken to licensed or approved facilities. That is, the system seeks to limit illegal or unauthorised disposal of controlled waste. In assessing whether the proposed tracking system achieves this objective, the pivotal question is how does the proposed tracking system encourage a transporter (or producer) to legally dispose of waste, which might otherwise be disposed of illegally, in the process of moving waste from its source to the professed management facility.

Consider the example where a transporter contemplates purposefully dumping controlled wastes rather than pay for its legal control. The generator has most likely paid for the cost of legal control as part of the collection fee, so the transporter may seek to profit by retaining this amount. One objective of the proposed tracking system is to reduce the incidence of illegal interstate disposal of controlled wastes. The imposition of penalties on companies or individuals that do not comply with the system is a key component to achieving reduction.

The transporter knows that if a consignment number to transport the waste interstate is requested, this means that the controlled wastes is in the scope of the tracking system, and there is every chance that illegal disposal will be detected, if the management facility does not receive the controlled wastes.

On the other hand, the tracking system can be avoided if the controlled wastes are:

- Legally disposed of within the source jurisdiction.
- Illegally disposed of within the source jurisdiction (if there is no intra-jurisdiction tracking system).
- Illegally disposed of within some other jurisdiction (the tracking system is violated).

Clearly, the transporter's decision is then determined by a comparison of the cost of legal management, against the likelihood of detection and expected penalty of illegal disposal in the source jurisdiction only, and the expected penalties from violating the tracking system requirements and illegally disposing of waste in some other jurisdiction.

Obviously, if detection is unlikely and there is a small penalty associated with violating the system, then the tracking system will not discourage illegal disposal facilitated by interstate transportation of controlled wastes. Without penalties, and given the administrative costs, generators and transporters would seek to avoid the tracking system. This implies that the system will only be an effective deterrent if there are penalties associated with its violation.

To discourage interstate dumping the expected penalty of illegal disposal must be at least as great as the cost of legal disposal. One significant penalty is the revocation or loss of recognition of transport licences of interstate controlled wastes transporters if they do not comply with the system. Mutual recognition of licences will require coordination between States and Territories. Jurisdictions may need to make adjustments to legal frameworks and licence conditions to ensure that appropriate universal enforcement of violations occurs regardless of which jurisdiction the violation occurs in and regardless of which jurisdiction the transporter is licensed in. Historical evidence has shown that strong and universal enforcement will give complying transporters an incentive to bring the actions of non-complying transporters to the attention of licence authorities.

Without enforcement, the tracking system will not be as effective. Transporters will comply with the tracking system if they intend to dispose of waste in a legal or authorised manner. They know that if a tracking system exists and they dump the waste in transit, that the data discrepancy will draw attention. Therefore, regulation and enforcement penalties associated with illegal disposal will influence such behaviour. With an effective system and an appropriate penalty for non-compliance, the incidence of illegal interstate disposal of controlled wastes could be reduced.

Relationship to intrastate tracking

Few jurisdictions currently operate an intrastate tracking system. The proposed interstate tracking system is likely to have an important complementary relationship with an

intrastate system. In such circumstances, there will be information on the method of management of all controlled wastes generated within the jurisdiction. It is then easier for the jurisdiction agency to detect illegal or inappropriate disposal or storage. If the agency identifies a firm that might reasonably be expected to generate controlled waste, and no manifest or other tracking mechanism indicates that the firm has disposed of controlled waste intra- or inter-jurisdiction, then investigation may be warranted.

Tracking intrastate and interstate transportation would therefore strengthen enforcement of legislation on management of controlled wastes. Without a tracking system on interstate transport, the local facility or transporter may not be required to record such activity. Illegal disposal intrastate may be explained away by stating that the controlled wastes was disposed of interstate. This defence is not available if there is a requirement to supply required information and documentation, irrespective of the location of the facility. A transporter of controlled wastes who cannot provide required documentation should be investigated.

Producers are required to provide some information for the tracking system. If the transporter does not request this information, then the producer may suspect that the transport and disposal is not legal.

Information about trans-border flows of controlled wastes by creating a nationally-consistent system for tracking waste

In the vast majority of cases, generators and transporters of controlled wastes do not seek to weigh up costs of legal waste management against expected penalties of illegal disposal. They elect to undertake legal control, and seek a cost-effective means of achieving this outcome. In some cases, the cost-effective means of control is situated in another jurisdiction.

Transportation of controlled wastes is associated with managing the risk to the environment. While licensing conditions diminish such risks, the risks may, in some circumstances be exacerbated by long transportation routes and highly dangerous wastes. Interstate transport of controlled waste can at times involve the transport of extremely hazardous wastes over long distances to specially designed facilities.

Several motives exist for recording sound information on proposed movements of controlled wastes. A destination jurisdiction may prefer to refuse consignments of controlled wastes, and appropriate information is necessary for this to be possible. Furthermore, information can assist environmental authorities and emergency services in source, transit and destination agencies dealing with leakages and spillages.

In conclusion, requirements set out in Schedule B would provide useful information on the quantity and types of controlled waste, the intended transport route, and destination. Therefore the Measure satisfies the objective of creating a set of information in a nationally consistent manner.

Administrative issues concerning the proposed tracking system

To place some constraints on illegal disposal of controlled wastes, the proposed tracking system draws on an extensive set of information. Provision of this information represents some cost to the producer, transporter, and destination, transit and source agencies. Responsibilities define who incurs administrative costs, and the nature of these costs. Secondly, the medium of information exchange determines the magnitude of costs.

Agent responsibilities

Under the proposed system the controlled waste producer initiates the flow of information regarding interstate transportation, by requesting a consignment number. This action requires the producer to have, or be aware of, the intention to transport the waste to a certain facility interstate. If the producer is also the transporter, then this is a reasonable assumption. For example, a very large company generating significant volumes of controlled waste may have a licence to transport controlled waste using vehicles that it owns. In this case, the producer and transporter are a single company, so the producer forms the intention to transport controlled wastes interstate. In other cases, a regular producer of large volumes of controlled waste may liaise directly with an interstate facility. The transporter is engaged once agreement between the producer and facility has been reached. In such cases, it is reasonable for the producer to instigate the tracking system.

In other circumstances, the producer does not initiate the intention to transport controlled wastes interstate. Rather, it is the transporter that initiates this intention. This is more often the case when the producer generates relatively small or irregular volumes of controlled wastes. For example, consider a transport company which collects wastes from the production, formulation and use of photographic chemicals and processing mats, and that the wastes are generated by a dozen film processing small businesses from a few neighbouring suburbs. The film processing businesses pays a transporter to collect the wastes. The transporter collects and (safely) stores the controlled wastes, until a sufficient quantity has been collected. A sufficient quantity would be defined by the size of the transporter's vehicle and the location of the management facility.

In this circumstance, several difficulties appear to be associated with requiring the waste producers to instigate the tracking process:

- the producers do not know when interstate transport will be undertaken; and
- if the date of transport is known, each producer will need to apply for a consignment number - the waste actually transported will have multiple consignment numbers attached to it, multiplying the administrative burden for source and destination agencies.

These problems are compounded if the film processing businesses do not know whether the controlled wastes will be transported interstate. In this case, the transporter would need to notify the businesses of the intent to transport controlled waste and the proposed facility, and instruct the producer to apply for a consignment number. This adds to the administrative burden on producers and transporters. As a consequence, producers and

transporters have some preference for intrastate facilities, to the extent that they avoid administrative costs of interstate transportation.

In general, separation of the producer's initial decision to dispose of controlled wastes from the decision to transport controlled wastes interstate for management, introduces some complexities to the tracking system. While the proposed system of tracking waste creates detailed information about the source of that waste, it does so by placing a potential burden on all parties in the management of controlled wastes.

A pertinent question is whether it is necessary to make the producer act as the instigator of the tracking system to achieve the defined objectives. Information from the original source is vital to tally evidence of waste initially generated against evidence of waste received at the destination facility. If the amount received is less than the amount intended by the producer for legal handling, then investigation of the discrepancy may be warranted, on the grounds that illegal disposal may have occurred in transit. The tracking system as proposed is designed to identify such occurrences.

It is not, however, necessary for the producer to instigate the tracking process for this information to be provided. The transporter could be the instigator. For example, the transporter could be required to keep records on the controlled wastes collected from the film processing businesses; invoices currently issued to each business almost certainly identify the volume and type of waste collected. The application for consignment comes from the transporter once the intention to transport interstate is formed. If consignment is approved, then the manifest is appended with basic information about the producers and volume of waste from each producer, which was gathered from the producers at point of collection. This approach would limit iterative communication between producer and transporter, and avoid a multitude of requests and information flows from producers to source and destination agencies.

An advantage of producer instigation of the tracking process is that the overall efficiency of controlled wastes disposal could improve. The producer could obtain assistance from the receiving jurisdictions in respect of the most appropriate facility within the jurisdiction to which the waste should be directed. This improves the efficiency of information flows, and is likely to be instrumental in reducing the potential environmental impacts of controlled wastes. It could also be of benefit to the producer in that it could avoid stockpiling of controlled wastes for treatment, or having wastes turned away from facilities.

Medium of information exchange

A secondary issue in assessing costs associated with the manifest process is the medium of information exchange. There are two choices: a manifest system of paper docket or computerised information. Paper dockets would be very similar to those currently used under the ANZECC Guidelines. Computerised information might consist of software and equipment through which producers and transporters relay information to source, destination and transit jurisdictions. Each jurisdiction can implement a paper or electronic system, or both. If an electronic system is chosen, information in printed form must accompany the shipment.

A comparative analysis of costs reveals variations between the two methods in variable costs and fixed costs. Paper docket systems have considerable variable costs - businesses must fill in the docket and agencies presumably require staff to transfer the information from the docket to a computer. The agency computer holding the final set of information from the manifest is the major fixed cost.

Conversely, computerised information tends to have high fixed costs and low variable costs. The administrative costs for business detailing information and agencies processing the data are likely to be relatively low. However, each business requires equipment to gain access to the system, which represents a high fixed cost. However, this is off-set by the likelihood that such companies would have computerised systems installed for company management purposes.

The magnitude and distribution of administrative costs relates to the stages of the tracking system. If each producer instigates the tracking process, and provides information to the transporter and origin and destination agencies, then the docket system will place administrative requirements on many businesses. If shipments of controlled waste are small and infrequent, then a docket system, requiring a relatively low fixed cost, is likely to be preferred to a computerised system. In this case, the majority of consignment numbers and docket information will relate to small quantities of controlled waste generated by small firms, and agencies will need to incur relatively high administrative costs.

If the transporter instigates the tracking system, then a computerised system may be preferred by all parties. Consider the transporter collecting waste from the film processors. The transporter may use a computer to issue invoices to the controlled wastes producers. In this case, the producer and controlled wastes information is already stored on computer. The producer requires neither an additional docket nor a computer; the invoice (or some amended form of invoice) is sufficient to generate producer information which can be appended to an electronic manifest. The transporter uses e-mail, web site, or other modem down-loads to apply for consignment numbers and to relay electronic manifests to source, destination and transit agencies. The transporter may require additional investment in a modem to do this. Waste management facilities may also use computers to process deliveries - information on consignments from interstate (verifying volumes and types of controlled waste) can be relayed to relevant agencies.

If an electronic system transpires, then it may be preferable for jurisdiction agencies to develop software for distribution to all participants for compatibility and comparability.

Alternative: Log book of interstate controlled wastes shipments

An alternative to an extension of the proposed tracking system to all jurisdictions would be to require generators, transporters and defined waste management facilities to maintain records consistent with the ANZECC Guidelines, but do not require manifest information to be submitted to source and destination agencies. It would be a tracking system without notification.

An example of this alternative system is as follows. A licensed transporter has collected a sufficient stock of controlled wastes, and intends to transport the materials to an interstate facility for disposal. The transporter allocates a consignment number to the shipment (from a stock of numbers).

The controlled wastes are transported to the destination facility, where the transporter supplies a transport licence number, consignment number and other ANZECC information (including generator licence numbers if they exist).

The transporter and waste management facility maintain a log of shipments, with a unique number attached to each consignment. If the source jurisdiction wishes to verify that controlled wastes are being disposed of appropriately, then an audit of a particular transporter might be undertaken. Audit information pertaining to intrastate waste management can be requested of each generator, transporter or disposal facility, as necessary.

A joint audit arises when information pertaining to waste management (disposal/storage) in another jurisdiction is required. A process is initiated so that the destination agency requests information from the destination facility, pertaining to a certain set of consignment numbers.

If the source jurisdiction chooses not to conduct audits of interstate shipments, then it might appear that this system does not differ from the status quo. However, implementation of this system might mean that the destination jurisdiction places information conditions on waste management facilities within its jurisdiction, which might not currently be required. The destination jurisdiction agency would need to enforce such conditions, if it is to undertake joint audit proceedings.

This system could be implemented through licence conditions currently imposed on generators, transporters and waste management facilities. In some cases, current arrangements for licensing by the jurisdiction agency would not be sufficient to implement this system. An additional set of licences might be needed. For example, if a jurisdiction agency is not responsible for licensing waste management facilities, then the agency would need to extend its existing powers to implement the system. Note that this is the case if implementation of tracking is by notification or by logs.

Table 4.1 compares the notification system proposed under the Measure, with an alternative log system and illustrates how existing ANZECC manifest dockets could be applied to the proposed tracking system.

Table 4.1: Comparison of controlled wastes tracking systems

ANZECC docket	Purpose under a system by notifications	Role under system by logs
White original	Waste management facility notifies agency in destination State. Segment used to notify the generator	Optional. Optional
Pink 1st copy	Generator notifies agency in State of origin	Optional.
Green 2nd copy	Retained by generator.	Retained by generator.

	Segment used to notify agency in State of destination	Optional
Yellow 3rd copy	Retained by waste management facility. Segment used to notify agency in State of origin.	Retained by waste management facility. Optional
Blue 4th copy	Retained by transporter. Segment used to notify agency in State of transit (where relevant)	Retained by transporter. Optional.

Capacity for prior notification

A log system would not involve prior notification of destination and source agencies. Several reasons for prior notification were provided in the ANZECC guidelines:

Information obtained through a prior notification system will provide State agencies with greater knowledge of controlled wastes moving into their jurisdictions and help ensure appropriate treatment, disposal and handling occurs (p. 6).

A requirement for prior notification achieves both objectives, but it may not be necessary to achieve these aims. For example, provision of information within short periods of time of the shipment does not appear to be necessary. The information is needed to create a 'big picture' of movements and chosen methods of waste management. Arguably, the manifest information is not needed before the movement.

Benefits of a log book tracking system

The key advantage of a log book system is reduced cost for generators, transporters and waste management facilities. Regular transports of the same type of controlled wastes would not incur repeated sets of returns to the agencies. For example, transports of controlled wastes within border regions might require several manifests per week. Transporters might prefer to maintain a log book of individual movements over other tracking systems as it would be simple to record, compile and submit the information as required. The log book might be a compilation of manifests, or some other form.

Disadvantages of a log book tracking system

One drawback of a log system is that right of refusal may not be facilitated. Under a log book system, jurisdictions would be unable to consider the appropriateness of accepting, or not accepting, a specific shipment as there would be no requests for consignment numbers.

In states/territories where an intrastate tracking system is currently used, a different system for interstate shipments may be confusing. Forms would be needed for intrastate movements, but not for interstate movements.

Key Points:

- The use of a log book tracking system would not meet the objectives of the Measure.
- Each jurisdiction would require participants in an interstate shipment to retain information about that shipment in a log book system.

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- The provision of that information with each and every shipment would not be mandatory. Jurisdictions could choose to implement the tracking system as a system with or without prior notification.
 - Audits of shipments might have to be conducted jointly by jurisdiction agencies.

4.3.5 Obligations

Participating jurisdictions are given the responsibility for ensuring various obligations are met, ie: the waste producer provides relevant information as required in Schedule B, the facility operator provides appropriate notification to the relevant agency, the transporter carries information as required in Schedule B during transport of controlled wastes, and the receiving agency or facilities delegated by the agency issues or refuses to issue a consignment number within 5 working days of request.

Information that shall accompany controlled waste shipments is indicated in the following table.

Table 4.2 Information Requirements of agents

Producer	Transporter	Management facility
Name	Name	Name
Address	Address	Licence number
Normal and emergency phone number	Vehicle registration numbers	Type of treatment (Schedule A)
Producer licence number	Transporter licence number	Date of receipt
Description of the waste	Date of transport	Any discrepancies
Waste code (Schedule A, List 1)	Intended route	
Contaminant (Schedule A, List 1)	Date of dispatch	
UN number/UN Class/Code	Name of transit jurisdiction	
Dangerous goods class		
Packaging group number		
Amount of waste		
Waste origin code		
Consignment number		
Proposed depot		
Jurisdiction of destination		

Key points:

- The proposed obligations would assist in achieving the objective of ensuring that controlled wastes reaches a facility licensed or approved to receive it.
- Important information for general handling and in emergency situations would accompany the controlled wastes.
- The costs of implementation are likely to be low, to the extent that integration with the intrastate system (where it exists) will be possible.

4.3.6 Maintenance of records

To ensure proper waste management, jurisdictions need to know the type of wastes and the amounts of wastes which are being produced and moved between jurisdictions. The information supplied can be used in the development of waste management strategies and policy setting.

This element in the Measure identifies minimum information to be maintained which includes description (including contaminant details) and amount of wastes, the name and address of the waste producer, transporter, facility and type of treatment provided for the wastes. An added benefit of maintaining such records would be in relation to meeting part of Australia's reporting requirements under international obligations.

4.3.7 Furnishing of information

Council may require jurisdictions to provide additional information so that it can report on the implementation and effectiveness of the Measure.

All parties to the movement of controlled wastes will need to maintain systems to provide this information. The additional costs will result from maintaining data bases. Ideally the databases should be compatible to simplify data exchange and analysis.

4.3.8 Failure to provide information, or giving false or misleading information

This element aims to ensure that persons involved in the movement of controlled wastes have a responsibility to provide accurate information relating to that activity (as specified in Schedule B). Accurate information will assist emergency services in management of spills. It will also provide quality data for waste management operational and planning purposes.

In cases where false or misleading information is provided the Measure makes it clear that it should be made an offence. Consideration must also be made for repeat offences. Relevant enforcement and penalty provisions already exist in some jurisdictions and would minimise the impact of this element. It is anticipated that there would be a greater impact on jurisdictions that do not have relevant legislation currently in place.

4.3.9 Confidentiality

Reasons for collecting data on the movement of controlled wastes include gathering general information on the movement of wastes for strategic planning purposes and for judging the effectiveness of this Measure in achieving its goal. It is not intended as a means for making public the activities of firms or individuals.

Claims for confidentiality will be assessed by jurisdictions where the claims are relevant, in accordance with guidelines or procedures agreed by all jurisdictions.

Jurisdictions will need to establish assessment procedures in accordance with the Measure and could make reference to the WorkSafe policy on assessing information claimed as commercially-in-confidence. In the case of claims made in the interests of national security, the Commonwealth would need to assess these, but in accordance with procedures agreed by all jurisdictions. Jurisdictions may wish to jointly consider minimum security practices in cases where commercial-in-confidence claims have been granted or are being assessed.

4.3.10 Amendment to the Schedules

It is envisaged that the amendment process to the schedules should be transparent and consistent with section 20 of the NEPC Act. Section 20 requires that any proposed amendment to the Measure must be subjected to the full National Environment Protection Council measure process including public consultation requirements. Such a process, which will take place periodically, would not incur a fee for the nominator, but would need the support and sponsorship of a jurisdiction. If the nomination involves amending Schedule A List 1 (controlled wastes) then a recommendation could be sought from expert sources by the NEPC.

5. Schedules to the Measure

5.1 Schedule A - Lists 1 and 2

5.1.1 The definition of controlled wastes

The definition of controlled wastes is central to the Measure. For the purpose of this Measure “Waste” means:

- (a) any discarded, rejected, unwanted, surplus or abandoned matter; or
- (b) any otherwise discarded, rejected, unwanted, surplus or abandoned matter intended for:
 - (i) recycling, reprocessing, recovery or purification by a separate operation from that which produced the matter; or
 - (ii) sale,whether of any value or not.

‘Waste’ does not include any matter destined for direct reuse for its original intended purpose.

The Measure defines controlled wastes as any waste in List 1 provided the participating jurisdiction of destination considers that the waste possesses one or more of the characteristics in List 2. List 1 is comprised of waste categories recognised as hazardous under international agreements, waste categories extracted from the National Guidelines for the Management of Waste previously agreed to by ANZECC, and wastes of sufficient concern regarding their potential impact to the environment to require their tracking and appropriate management.

Radioactive wastes are a special category which may be particularly controlled and require special management. States and Territories already have specific legislation in place to regulate radioactive wastes. As such they are only subjected to the Measure if not already specified in existing legislation. A list of relevant legislation is given in Appendix 3.

5.1.2 Quantity thresholds

There are difficulties associated with setting threshold limits. One of the main objectives of the Measure is to minimise the risk of illegal disposal. Consider the situation when there is an intrastate tracking system in place. A threshold applied to interstate shipments could be used as a loophole for illegal disposal - the disposer can argue that each consignment transported was beneath the threshold quantity, so a consignment number

(or approval) was not required. The source jurisdiction agency would then have to refer to additional information (such as records from the disposal facility) to clarify what might have happened to the controlled wastes.

This arrangement would introduce considerable administrative complexity for agencies and industry in relation to information systems for monitoring movements of controlled wastes. Consider the implications of a quantity threshold for information flows between waste generators and transporters. If generators are required to initiate the tracking system, and there is a quantity threshold, then generators of wastes below the threshold will not be required to report information. However, this arrangement would be complicated by separate reporting responsibilities of a waste generator and a waste transporter. A waste transporter may collect several small loads of wastes, and transport the substances in a single large load, in excess of the threshold. In this circumstance, a quantity threshold makes it difficult to determine the information requirements of generators and transporters.

Individual thresholds for each type of waste, or particular contaminants, would need to be assessed and codified in the Measure. Examination of movements would be needed to ensure that quantity thresholds would not be abused. Examinations would require additional staff to police interstate movements.

There are several arguments why the magnitude of these foregone benefits are limited. Movements between jurisdictions, motivated by specialised waste management, tend to be in relatively large quantities, because average fuel and vehicle costs on long trips are reduced by having large loads of controlled wastes. In this respect, quantity thresholds might be exercised only infrequently. For movements of relatively small quantities, the transporter's cost of complying with the Measure is likely to be quite low, given that requirements only extend to possession of a transport licence, and the recording and provision of information to government agencies.

Key points:

- The definition provides clear guidance to government, the community, waste generators, transporters, and disposal facilities.
- The scope of the Measure could be limited by threshold levels for controlled waste quantity or contaminant concentration. Reporting requirements would be waived if a shipment was classified beneath the threshold.
- A drawback of a threshold is that it could be used as a loophole to avoid reporting waste that is disposed of illegally. This outcome would seriously undermine the effectiveness of the Measure.
- Another significant drawback is that determining and administering thresholds will be an expensive and lengthy process. Each threshold would have to be risk-based. A threshold is likely to make administration more complex for all participants in management of controlled waste transport.
- The benefit of a threshold is that shipments representing a relatively low risk in transport or disposal would not incur costs to comply with reporting requirements.

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- | |
|---|
| <ul style="list-style-type: none">• Benefits are defined by the number of relatively small interstate shipments of controlled wastes; if most interstate shipments are expected to be relatively large, then a threshold would not be needed. |
|---|

A controlled material is defined by its properties. In most cases, regulation of controlled waste is defined by a list of materials. Lists of controlled waste used by the Commonwealth, State and Territory governments identify broad and specific classes of materials which are likely to have controlled properties. Lists adopted in Victoria, South Australia, and Tasmania are referred to in Appendix 1. For example, a broad category might be ‘Lead and lead compounds’.

List 1 comprises of materials defined in Annex 1 of the *Basel Convention*. It also includes some materials defined in list 1 of the ANZECC Guideline, not identified in Annex 1 of the *Convention*.

Alternative - contaminant thresholds

A contaminant threshold could be applied to define some wastes as controlled. The threshold could apply to some of the classes of wastes identified in List 1. A threshold would be defined at certain contaminant levels, below which potential environmental harm would be so low that the wastes would not be classified as controlled.

An advantage of applying a contaminant threshold is that shipments posing relatively small environmental hazards would not fall within the scope of the Measure. In such cases, the cost of complying with a tracking system might exceed the expected harm arising from illegal disposal of the materials.

The disadvantage of a concentration threshold is that some parties to an interstate shipment would need to incur costs to establish whether a batch of waste is defined as controlled waste for the purposes of the Measure. The costs of complying with the Measure would almost certainly be less than those associated with sampling and testing.

In conclusion there are significant drawbacks in adopting either quantity or concentration thresholds. Establishing quantity or concentration limits for all substances that meet the definition of controlled wastes would be an extremely expensive process and require years of research and assessment. The advantages of avoiding quantity or concentration limits provides a clear and cost effective means of defining and identifying substances to be covered by this Measure.

5.2 Schedule B

To complement the tracking system, information is required to accompany controlled wastes during transit. This information will assist emergency services in identifying the wastes in case of an accident. The information will also be available as required by Council.

The Measure requires minimum information to be maintained, however, jurisdictions will have the option for additional information being maintained.

Schedule B is based on the current ANZECC guidelines and allows sufficient scope for jurisdictions to design the manner in which jurisdictions require information to be kept or accompany the movement of wastes, for example, electronic transfer.

5.3 General impacts of the Measure

A 1993 survey of community attitudes to environmental issues (ANOP, 1993) found that 12% of the Australian population spontaneously indicated 'toxic waste disposal' as the main issue of concern about the environment worldwide and in Australia generally. The majority (92%) of respondents to the survey rated disposal of chemical waste as the highest priority environmental issue for the Commonwealth government to deal with. Qualitative results obtained during the survey also indicated the community's concern about the hazards of industrial waste disposal. These concerns appear to be based on a feeling of helplessness about the issue. Controlled wastes are perceived as insidious and there are real concerns about where they end up and the damage they cause. Disposing of the waste is seen as a continual problem which is difficult to police (ANOP, 1993).

These types of concern are often exacerbated (if not caused) by a paucity of information about the wastes and their disposal. This is particularly so in the circumstance where the community may only ever see such information in media reports about incidents involving spillages or other accidental release of controlled wastes.

The widespread dissemination of factual and easily understandable information about the amounts of controlled wastes being generated, moved, stored, and treated, and the associated risks, can increase the level of concern in the community, in the short term. This is particularly so if the information is released without suitable educational material to enable individuals to correctly and rationally assess the impact on themselves. Some sections of the community discover that they are in fact exposed to greater hazard than they previously assumed, while others will learn that they have less (as individuals) to be concerned about. The overall level of community anxiety may increase in the short term as a result.

Community levels of anxiety should diminish as actions by governments and industry are seen by the community as better management of the disposal of controlled wastes, reducing the likelihood of environmental contamination or harm to humans. This should be regarded as beneficial by the general community.

Many transporters are small businesses. The Measure may increase costs for such businesses if there are delays in approval of interstate transport. The cost of complying with tracking depends on the tendency for transporters to record tracking information irrespective of the Measure. Most transporters already keep records of transactions.

Many small businesses produce controlled wastes, which are collected by transport/storage companies in 'milk run' operations. If producers are required to initiate tracking, then there will be multiple costs for the generator and transporter. Allowing the transporter/storage company to keep records of collection and initiate the interstate consignment process may reduce these costs.

Elements of the draft Measure will have several effects on State and Territory governments.

Resource requirements

- Resources for processing of tracking information.
- Resources for consignment number approval.
- Compilation and publication of data.
- In jurisdictions where intrastate manifest system does not currently function, the government will need to undertake an information campaign, and may need to alter licence conditions.

Effect of the Measure on State and Territory legislation (apart from implementation legislation)

The main effect of the introduction of facility or transport licences may be triggered by the Measure, in jurisdictions where waste management licensing is not comprehensive.

Information about controlled wastes transportation and disposal

The manifest system generates information about controlled wastes transportation and disposal. Information can be used by planning authorities and the waste management industry, to consider types of, and locations for, new waste management facilities. As discussed in section 3.1.3, generation of data on controlled wastes is relevant to commitments defined in the *Hazardous Waste (Regulation of Exports and Imports) Act 1989 (Amended 1996)*.

If the destination jurisdiction does not operate an intrastate tracking system, then this information may not provide a sound basis for regional communities to form views about the acceptability of disposal or transportation.

Disproportionate effect of tracking system costs

Border towns and agricultural businesses may be disproportionately affected by the Measure. While controlled wastes disposal across the jurisdiction border may be the most efficient method of disposal, and transport distance is no further than that within metropolitan areas, each load could be subject to the tracking process if subjected to all elements of the Measure.

6. Implementation

In addition to the Measure development process, a working group will be established to consider implementation issues.

6.1 Consequence of adoption by the NEPC

Once a Measure is adopted by the NEPC it is the responsibility of each of the jurisdictions to implement the Measure.

It is anticipated there will be a need for a further agreement that ensures consistency of implementation from one jurisdiction to another.

6.2 Definition of controlled wastes

Most jurisdictions have definitions of controlled wastes (either as controlled wastes or as prescribed wastes). There is not a one to one correspondence between the definitions across the jurisdictions. Nonetheless, amending lists of controlled wastes where they exist, and adopting lists of controlled wastes where there are none, is a relatively straightforward exercise. It should be noted that future changes to List 1 are subject to requirements of the NEPC Acts, and as such it is important to establish a consistent and justifiable list from the outset.

6.3 Licensing

The requirement for licences and mutual recognition of licences means that the terms and conditions of licences are unlikely to vary widely between jurisdictions. For administrative ease, it is reasonable to expect that the licences issued by jurisdictions will converge to a standard form. There might be minor differences where the licence issued by a jurisdiction covers intrastate transport and there are local peculiarities that need to be treated differently in the licence. Such peculiarities are likely to be rare.

6.4 Prior notification and consignment numbers

Prior notification and the issue of consignment numbers does not appear to raise any difficult implementation issues. Jurisdictions must ensure that procedures are in place such that consultation takes place between concerned parties. Right of refusal can be

exercised based on a set of criteria outlined in the Measure. As discussed earlier, the manner in which right of refusal is exercised would need to have regard for the requirements of competition policy. Any problems or debates that might arise within this context are not related to the content and implementation of the Measure *per se*, but are related to the extent to which jurisdictions act in accordance with the spirit of the Measure.

The Measure has sufficient flexibility that jurisdictions may reserve the right to issue consignment numbers by their own agencies or they may delegate this authority to facilities as part of licence conditions. If authority to issue consignment numbers is transferred to facilities, prior notification and requests for consignment numbers would take place between producers and facilities.

6.5 Waste tracking

The adoption of a standard form for recording wastes is a necessary element of a nationally consistent system. It reduces the scope for confusion as to the information that is required by jurisdictions. For those jurisdictions that already use a tracking system, implementation of the waste tracking requirements will be a simple matter. Those jurisdictions that do not operate a tracking system but plan to introduce a system irrespective of the Measure, will clearly be guided by the contents of the Measure and will adapt their proposed systems accordingly. Difficulties with implementation are not envisaged. The Measure does not prescribe the form of the system, (ie. whether electronic or paper based) but does prescribe the information requirements that must be met. Implementation issues will be jointly considered by a working group representing the jurisdictions.

6.6 Evaluation of the Measure

Under the NEPC Act, each member of the NEPC must prepare an annual report on the implementation of Measures by his/her jurisdiction and the effectiveness of those Measures. The report will be submitted to Council.

In addition, the Council must prepare a report of its operations for each year ending 30 June, which includes reports made by members and an overall assessment of the implementation and effectiveness of Measures. This report must be laid before the Parliament of each jurisdiction.

Jurisdictions will consider the need for agreed consistent reporting to the NEPC, given the intention of the Measure is to establish a nationally consistent system. The consultative process that is integral to the development of Measures is easily adapted to devising nationally consistent reporting systems.

7. Summary of Impacts

7.1 Introduction

This section summarises the key impacts identified in the earlier sections as arising from the adoption of the draft Measure.

The key benefits anticipated relate to the fact that implementation of the Measure will be a key factor in achieving the goals outlined in the Measure. The key benefits are outlined in Table 7.1. The key costs are outlined in table 7.2.

7.2 Impacts

Table 7.1: Key benefits anticipated from implementation of the draft Measure

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|---|
| <ul style="list-style-type: none">• The Measure will play an important role in meeting the goal of reducing the environmental impact from the movement of controlled waste across State or Territory borders.• Greater community confidence in the management of movements of controlled wastes.• Lower licence costs to transporters as a result of mutual recognition of licences and elimination of the requirement for multiple licences.• A reduction in the possible proliferation of small controlled wastes facilities through encouraging the transport under secure conditions of controlled wastes to purpose-built well-managed facilities.• A reduction in the likelihood of socially inferior disposal of controlled wastes.• Lower risks to the environment and human health through tracking of wastes increasing the probability that discrepancies, that might indicate illegal disposal, are identified and investigated. |
|---|

Table 7.2: Key costs anticipated from implementation of the draft Measure

- | |
|--|
| <ul style="list-style-type: none">• Additional costs to jurisdictions that already operate a tracking system will be low.• Additional costs to jurisdictions that do not operate a tracking system will be moderate. In addition, proposed reforms in most of these jurisdictions mean that in the absence of the Measure, some of these costs would have been incurred as they move towards a waste tracking system.• Small generators, especially in border regions, will face higher costs as a result of the requirement for producer notification.• Some transporters with inferior vehicles will face higher costs to upgrade their vehicles to comply with suitable control for the carriage of controlled wastes as determined in the implementation process.• Additional costs will be incurred by jurisdictions in collating and reporting information obtained from the tracking system.• Transporters will incur compliance costs, although in some jurisdictions that do not have a formal tracking system, transporters voluntarily record movements of waste by use of a manifest or other jurisdictional tracking systems. Costs are expected to be low.• Facility operators will incur minor costs of complying with the notification requirements. |
|--|

References

ANOP (1993), **Community Attitudes to Environmental Issues**, ANOP Report on 1993 National Research Program, Prepared for the Department of the Environment, Sport and Territories.

ANZECC (1994), **National Manifest and Classification System**.

NSW EPA (1996), **Draft Hazardous Waste Definition and Draft Environmental Guidelines: Solid Waste Assessment**.

Queensland Department of Environment and Heritage (1996), **Proposed Waste Tracking System — Regulatory impact statement**.

Royal Society (1992), **Risk: Analysis, Perception and Management**, The Royal Society, London.

Vic EPA (1996), **Draft Strategy: Zeroing in on Waste Pathways to Cleaner Production for Victorian Industries**, Publication517.

Appendix 1: Prescribed or listed wastes currently in use

Victoria

Prescribed wastes are listed in the Schedule of the Environment Protection (Prescribed Waste) Regulations 1987.

Part A: Type or class of waste - domestic origin

Grease interceptor trap effluent and residues

Part B: Type or class of waste - industrial origin

Abattoir effluent

Acids and acidic solutions

Adhesives (excluding solid inert polymeric materials)

Alkalis and alkaline solutions

Animal effluent

Antimony and antimony compounds

Arsenic and arsenic compounds

Asbestos (all chemical forms)

Azides

Barium and barium compounds

Beryllium and beryllium compounds

Biocides

Boiler blowdown sludge

Boron and boron compounds

Cadmium and cadmium compounds

Caustic solutions

Chlorates

Chromium compounds

Containers and bags containing hazardous compounds

Copper compounds

Detergents

Distillation residues

Dyes

Electroplating effluent and residues

Filter backwash waters

Filter cake sludges and residues

Fly ash

Food processing effluent

Grease interceptor trap effluent and residues

Heat treatment salts

Heterocyclic organic compounds containing oxygen, nitrogen or sulphur
Hydrocarbons and their oxygen, nitrogen or sulphur compounds
Immobilised waste
Industrial plant washdown waters
Infectious substances
Inks
Inorganic cyanides and cyanide complexes
Inorganic halogen containing compounds
Inorganic sulphur containing compounds
Isocyanate compounds (excluding solid inert polymeric materials)
Laboratory chemicals
Lead compounds
Lime neutralised sludges
Lime sludges
Mercaptans
Mercury and its compounds and equipment containing mercury
Metal finishing effluent and residues
Methacrylate compounds (excluding solid inert polymeric materials)
Nickel compounds
Oils
Oil interceptor sludges
Oil water mixtures
Organic halogens compounds (excluding solid inert polymeric materials)
Organic solvents
Oxidising agents
Paint sludges and residues
Perchlorates
Peroxides
Pesticides
Pharmaceutical substances
Phenolic compounds (excluding solid inert polymeric materials)
Phosphorus and its compounds
Pickling liquors
Polychlorinated biphenyls and related materials and equipment containing
polychlorinated biphenyls and related materials
Polymeric latices
Poultry processing residues and effluent
Reactive chemicals
Reducing agents
Resins (excluding solid inert polymeric materials)
Salines effluent and residues
Scallop processing residues
Selenium and selenium compounds
Silver and silver compounds
Solvent recovery residues
Surfactants
Tallow

Tannery effluent and residues
Tars and tarry residues
Tellurium and tellurium compounds
Textile effluent and residues
Thallium and thallium compounds
Timber preservative effluent and residues
Treatment plant sludges and residues (excluding sewage and septic tank sludges and residues)
Triple interceptor trap effluent and residues
Vanadium and vanadium compounds
Vegetable oils
Waste-carrying vehicle washdown waters
Wool scouring effluent and residues
Zinc compounds
Waste, other than that already specified, which pose an environmental hazard

Queensland

Regulated wastes are listed in Schedule 8 of the *Environmental Protection (Interim) Regulation*.

Abattoir effluent
Acids and acid solutions
Adhesives (excluding solid polymeric materials)
Alkalis and alkaline solutions
Antimony
Arsenic
Asbestos (all chemical forms)
Azides
Bacterial sludge (septic tank and sewerage)
Barium
Beryllium
Biocides
Boiler blowdown sludge
Boron
Cadmium
Caustic solutions
Chlorates
Chromium
Contaminated soils
Copper compounds
Cytotoxic wastes
Detergents
Distillation residues
Dyes
Electroplating effluent and residues
Filter backwash waters

Filter cake sludges and residues
Fish processing wastes
Fly ash
Food processing waste
Grease interceptor trap effluent and residues
Halogen compounds (other than solid inert polymeric materials)
Heat treatment salts
Heterocyclic organic compounds containing oxygen, nitrogen or sulphur
Hydrocarbons (oxygen, nitrogen or sulphur)
Industrial plant washdown waters
Infectious substances
Inks
Inorganic cyanides and cyanide complexes
Inorganic sulphur compounds
Isocyanate compounds (excluding solid inert polymeric materials)
Laboratory chemicals
Lead
Lime neutralised sludges
Lime sludges
Materials or substances contaminated with infectious substances
Mercaptans
Mercury and anything containing mercury
Metal finishing effluent and residues
Methacrylate compounds (other than solid inert polymeric materials)
Nickel
Nightsoil
Oil interceptor sludges
Oil waster emulsions and mixtures
Oils
Organic solvents
Oxidising agents
Ozone depleting substances
Paint sludges and residues
Perchlorates
Pesticides
Petroleum tank sludges
Pharmaceutical substances
Phenolic compounds (other than solid inert polymeric materials)
Phosphorus
Pickling liquors
Polychlorinated biphenyls and related substances and anything containing polychlorinated biphenyls or related materials
Polymeric latices
Poultry processing wastes
Reactive chemicals
Reducing agents
Resins (other than solid inert polymeric materials)

Salines effluent and residues
Selenium
Silver compounds
Solvent recovery residues
Surfactants
Tallow
Tannery effluent and residues
Tars and tarry residues
Tellurium
Textile effluent and residues
Thallium
Timber preservative effluent and residues
Treatment plant sludges and residues (excluding sewage and septic tank sludges and residues)
Tyres
Vanadium
Vegetable oils
Vehicle washdown waters
Wool scouring effluent and residues
Zinc compounds

South Australia

Listed wastes are identified in Part B of Schedule 1 of the *Environment Protection Act 1993*. They are any of the following:

Acids and acidic solutions
Adhesives (excluding solid inert polymeric materials)
Alkali metals and alkaline earth metals
Alkalis and alkaline solutions
Antimony and antimony compounds and solutions
Arsenic and arsenic compounds and solutions
Asbestos
Barium compounds and solutions
Beryllium compounds and solutions
Boron and boron compounds
Cadmium and cadmium compounds and solutions
Calcium carbide
Carbon disulphide
Carcinogens teratogens and mutagens
Chlorates
Chromium compounds and solutions
Copper compounds and solutions
Cyanides or cyanide solutions and cyanide complexes
Cytotoxic wastes
Dangerous substances within the meaning of the *Dangerous Substances Act 1979*

Distillation residues
Fluoride compounds
Halogens
Heterocyclic organic compounds containing oxygen, nitrogen or sulphur
Hydrocarbons and their oxygen, nitrogen and sulphur compounds (including oils)
Isocyanate compounds (excluding solid inert polymeric materials)
Laboratory chemicals
Lead compounds and solutions
Lime sludges or slurries
Manganese compounds
Medical waste consisting of —
(a) a needle, syringe with needle, surgical instrument or other article that is discarded in the course of medical, dental or veterinary practice or research and has a sharp edge or point capable of inflicting a penetrating injury on a person who comes into contact with it; or
(b) human tissue, bone, organ, body part or foetus; or
(c) a vessel, bag or tube containing a liquid body substance; or
(d) an animal carcass discarded in the course of veterinary or medical practice or research; or
(e) a specimen or culture discarded in the course of medical, dental or veterinary practice or research and any material that has come into contact with such a specimen or culture; or
(f) any other article or matter that is discarded in the course of medical, dental or veterinary practice or research and that poses a significant risk to the health of a person who comes into contact with it.

Mercaptans
Mercury compounds and equipment containing mercury
Nickel compounds and solutions
Nitrates
Organic halogen compounds (excluding solid inert polymeric materials)
Organic phosphates
Organic solvents
Organometallic residues
Oxidising agents
Paint sludges and residues
Perchlorates
Peroxides
Pesticides (including herbicides and fungicides)
Pharmaceutical wastes and residues
Phenolic compounds (excluding solid inert polymeric materials)
Phosphorus and its compounds
Polychlorinated biphenyls
Poisons within the meaning of the *Drugs Act* 1908
Reactive chemicals
Reducing agents

Selenium and selenium compounds and solutions
Silver compounds and solutions
Solvent recovery residues
Sulphides and sulphide solutions
Surfactants
Thallium and thallium compounds and solutions
Vanadium compounds
Zinc compounds and solutions

Tasmania

Hazardous wastes are listed in Schedule II of the Environmental Protection (Waste Disposal) Regulations.

Waste that consists of or contains —

Arsenic;
Cyanide.

Any water soluble toxic compound of any of the following elements —

Barium;
Boron;
Cadmium;
Chromium;
Copper;
Lead;
Mercury;
Selenium;
Zinc.

Waste that consists of or contains acids or alkaline materials.

Waste that consists of or contains flammable material derived from grease, coal, tar, petroleum, oil, or shale.

Waste which may either by itself or in combination with other material be infectious, explosive, poisonous, toxic, or otherwise dangerous or injurious to human, animal, or plant life.

Sewage sludge (whether mixed with water or not) that contains suspended or settle-able solids that have not decomposed or have only partially decomposed.

Appendix 2: Competition Policy Assessment

Under the COAG Competition Principles Agreement (1995), an assessment of competitive implications is required as part of the process for making subordinate legislation. If approved by NEPC, the proposed Measure will be adopted as subordinate legislation within most jurisdictions (under the processes for adoption of Measures set out in the NEPC Act passed by each jurisdiction).

The draft Measure and the anticipated implications of its adoption are explained in detail in the impact statement (above). The draft Measure relates to the markets for the transport, treatment, storage and disposal of controlled wastes. The Measure will require particular minimum standards for transport and handling of wastes within the waste transport market, and may allow the transport of some wastes between jurisdictions to be restricted where the facility of destination proposed is environmentally inappropriate.

Adoption of the draft Measure will introduce national consistency in the transportation of controlled wastes between jurisdictions. Currently a number of jurisdictions have formal systems for managing the transport of controlled wastes within their own borders. The Measure will formalise a consistent national system for managing controlled waste transport between jurisdictions. The draft Measure has been developed to maximise consistency between the proposed Measure for managing controlled waste between jurisdictions, and the existing systems for managing controlled waste transport within jurisdictions.

Minimum standards for transport and handling of wastes

The draft Measure will require controlled waste generators and transporters to ensure that controlled waste is only transported on appropriately permitted vehicles and only transported to approved treatment or disposal facilities. As noted above, this will:

- ensure that controlled wastes being transported between jurisdictions reach licensed or approved facilities for treatment, recycling, storage or disposal,
- allow comprehensive information on the generation, cross-border transport, treatment, storage and disposal of controlled wastes to be gathered, and
- ensure that controlled wastes are handled appropriately during transport between jurisdictions, and are delivered to appropriate treatment, storage or disposal facilities so that the potential for adverse environmental impacts is minimised.

The proposed system consists of:

- mutual recognition of licences for waste transporters,
- consideration of whether a proposed transport of controlled waste is environmentally appropriate by the jurisdiction of origin and the proposed jurisdiction of destination, and

-
- requirements for the maintenance of appropriate records both during (on board the licensed vehicle) and following the waste transport activity.

This system will be applied consistently to all proposed transports of controlled wastes between jurisdictions. The introduction of the Measure will provide consistent national approaches to the management of controlled waste transportation. This will improve the operation of markets:

1. By providing controlled waste transporters and generators with a single national system for the approval and management of the transportation of controlled wastes between jurisdictions. This will reduce transaction costs to players in the market, as they will not have to seek multiple licences for vehicles travelling in multiple jurisdictions and will need to seek only a single permit to transport a load of controlled waste through multiple jurisdictions.
2. The introduction of the Measure will allow the provision of consistent national information on the key contacts and processes for controlled waste transport across Australia. This provision of a consistent system and consistent information will provide better information and a simpler system to potential market entrants.
3. Without the Measure, the complexity of inter-jurisdictional transport may interfere with the efficient and effective movement of wastes between the waste source and those facilities throughout Australia which are capable of dealing with particular controlled wastes.

Right of refusal

Jurisdictions of destination have the right to refuse to issue a permit (consignment number) for a particular waste transport proposal. Clause 12(g) of the draft Measure specifies the criteria which jurisdictions will take into account in considering whether to issue a consignment number for a particular waste transport proposal. The criteria set out in the draft Measure all relate specifically to the environmental objective of ensuring that controlled wastes are “handled in ways which are consistent with environmentally sound practices for the management of those wastes” (draft Goal of the Measure, clause 10).

Under the draft clause 12(g)(iv), the proposed jurisdiction of destination has the right to refuse transport of controlled wastes to a “landfill facility” in that jurisdiction. This criteria allows jurisdictions to refuse the transport of wastes which could easily be disposed of to similar facilities in the jurisdiction of origin, and will allow jurisdictions to prevent a situation where one jurisdiction fails to develop appropriate waste management facilities in the future, relying instead on the export of wastes to valuable landfill space in another jurisdiction.

Under these criteria, jurisdictions will only refuse a waste transport proposal where that proposal will lead to an environmentally inappropriate outcome. It is anticipated that the refusal of a transport proposal will be fairly rare, and that it will only occur in situations where the environmental costs of allowing the transport are considered to be unacceptable by the jurisdiction of destination.

It is certainly not the intention that this right of refusal be used to restrict competition between controlled waste disposal, treatment or storage facilities where there are multiple facilities which are capable of providing a service which is environmentally appropriate.

Indeed, a refusal on grounds other than environmental concerns noted could not be justified under the draft Measure.

Conclusion

The draft Measure will not restrict competition in any market. It will not place any restriction upon the number of buyers or sellers in the waste transport market, nor will it in any way limit the scale of activities of those buyers and sellers.

The Measure will provide a single national system for transporters of controlled wastes which will facilitate the development of a controlled waste transport market with consistent regulatory and systems requirements for all players within that market. This will flow on to improved access to controlled waste treatment, storage and disposal facilities, and will improve the level of competition within those markets.

Appendix 3: Legislation related to radioactive substances

Legislation governing movement of radioactive wastes

Radioactive substances, including radioactive wastes, can be particularly controlled. State and Territory governments already have legislation in place to regulate management, including the handling, storage and transportation, of radioactive substances. Licences are usually required for the conduct of such activities. Movement of radioactive waste is adequately covered by existing legislation. This appendix provides a list of State and Territory legislation specifically governing radioactive substances.

New South Wales - The *Radiation Control Act 1990* and *Radiation Control Regulations 1993* provide for the regulation and control of the sale, use, keeping and disposal of radioactive substances and radiation equipment.

Queensland - *Radioactive Substances Act 1958* and the *Radioactive Substances Regulation 1961* provide for the control and regulation of the possession, use, sale and transport of radioactive substances and possession and irradiating apparatus. All persons and corporations possessing, using, selling and transporting radioactive substances in Queensland must hold a licence issued under the *Radioactive Substances Act*. The disposal of radioactive substances may only proceed with the written approval of the Chief Health Officer, Department of Health.

Victoria - The *Nuclear Activities (Prohibitions) Act 1983* prohibits the construction or operation of nuclear facilities which includes processing, storage and disposal. Division 2AA of the *Health Act 1958* (as amended) and the *Health (Radiation Safety) Regulations 1994* control the operation, possession, use, manufacture, storage, transport, sale, installation, servicing, maintenance, repair, testing, disposal, or other dealing with radioactive materials in Victoria. A system of licensing of operators and corporations, and the registration of sealed radioactive sources, is incorporated in the Act and Regulations.

South Australia - *Radiation Protection and Control Act 1982* and *Radiation Protection and Control (Transport of Radioactive Substances) Regulations 1991*. A person shall not use or handle a radioactive substance unless that use or handling is authorised by a licence or temporary licence under the Act.

Western Australia - The present legislation for radiation safety comprises the:

- *Radiation Safety Act 1994.*
- *Radiation Safety (General) Regulations 1996.*
- *Radiation Safety (Qualifications) Regulations 1980.*
- *Radiation Safety (Transport of Radioactive Substances) Regulations 1991.*

Persons using radiation substances controlled by the Act must hold a licence.

Northern Territory - *Radioactive Ores and Concentrates (Packaging and Transport) Act 1980* regulates the packaging, storage and transport of radioactive ores and concentrates.

Australian Capital Territory - *Radiation Act 1983* regulates the use, transportation and disposal of radioactive materials and equipment.

Tasmania - Radioactive wastes are regulated under the *Radiation Control Regulations 1984* and the Code of Practice for the Disposal of Radioactive Wastes by the User (1985 - NHMRC).

Appendix 4: Development of the Draft Measure

Project Team

Development of the Measure is being carried out by a small project manager and a small project team. The team can be assisted by consultants with expertise in specific aspects of the project where relevant.

The Measure team is chaired by Mr Rob Thomas, South Australia EPA and comprises:

Mr Geoff Sclare, South Australia EPA

Mr Patrick Deprez, Tasmania Department of Environment and Land Management

Mr Rob Allen, Victoria EPA

Ms Mary Mertin, Project Manager, NEPC Service Corporation

Mr Marc Thompson Project Officer, NEPC Service Corporation

The role of the team is to draft a Measure and Impact Statement on the Measure; initiate and manage consultancies as appropriate; interact and seek advice from the NGO Advisory Group, the Jurisdictional Reference Network and interested parties; monitor progress on consultation; undertake consultation on technical issues as appropriate; and ensure that the project is carried out in accordance with the NEPC legislation and the directions of the National Environment Protection Council and the NEPC Committee.

Jurisdictional Reference Network

A Jurisdictional Reference Network assists the Project Team in the development of a Measure and Impact Statement. Members of the Jurisdictional Reference Network will, with their representative NEPC Committee members, obtain whole-of-Government views, and whole-of-Government approvals for their respective jurisdictions. Members will convey these views to the Project Team to ensure that they are aware of concerns of all jurisdictions, including any sensitivities on the part of the stakeholders, during the development of the Measure and associated Impact Statement. The members of this group are:

Dr Tony Hodgson, ACT

Mr Mark Hyman, Commonwealth

Mr Greg Thomas, New South Wales

Mr Brett Struck, Northern Territory

Mr Gary O'Connor, Queensland

Mr Max Harvey, South Australia

Mr Warren Jones, Tasmania

Mr Terry A’Hearn, Victoria
Mr Noel Davies, Western Australia

Consultation within the individual jurisdictions is the responsibility of the Jurisdictional Reference Network and mechanisms which could be used include workshops, meetings, focus groups, and the taking of submissions.

Non-Government Organisation Advisory Group

To facilitate consultation among stakeholders, the formation of a Non-Government Organisation (NGO) advisory group was agreed to at the February NEPC Committee meeting. NGO Advisory Group members are as follows:

Mr John Borig, Australasian Railway Association
Mr Peter Dyson, Waste Management Association of Australia
Mr Dr Wally Zuk, Waste Management Association of Australia (alternate)
Mr Lloyd Eldred, Brambles Specialised Transport Group
Mr Claude Gauchat, AVCARE
Mr Simon McCrae, National Environment Consultative Forum
Dr Sue Graham-Taylor, National Environment Consultative Forum (alternate)
Mr Vince Scollen, Australian Chamber of Manufactures
Ms Kathy Sdrinis, Australian Council of Trade Unions
Mr Victor Slater, Australian Council of Trade Unions (alternate)
Mr David Sinclair, Minerals Council of Australia
Mr David Sly, Environment Management Industry Association of Australia
Mr Jason Blackmore Environment Management Industry Association of Australia (alternate)
Mr Ian Swann, Plastics and Chemicals Industries Association

Appendix 5: Acronyms

ACT	Australian Capital Territory
ADG	Australian Code for the Transport of Dangerous Goods
ANOP	Australian National Opinion Polls
ANZECC	Australia and New Zealand Environment and Conservation Council
ATC	Australian Transport Council
CoAG	Council of Australian Governments
CPA	Competition Principles Agreement
EPA	Environment Protection Authority
IGAE	Intergovernmental Agreement on the Environment
NEPC	National Environment Protection Council
NHMRC	National Health and Medical Research Council
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
OECD	Organisation for Economic Cooperation and Development
QDEH	Queensland Department of Environment and Heritage
SCC	Specific contaminant concentration
TCLP	Toxicity characteristics leaching procedure
Vic EPA	Victorian Environment Protection Authority
WTB-EPN	Waste Transport Business Environment Protection Notice