

**AUSTRALIAN INSTITUTE OF PETROLEUM**

**NATIONAL PACKAGING COVENANT**

**ACTION PLAN FOR LUBRICANT OIL BOTTLES**

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# **1 SCOPE AND COVERAGE OF THE ACTION PLAN**

## **1.1 The Organisation submitting the Action Plan**

This Action Plan is submitted by the Australian Institute of Petroleum (AIP). AIP is an industry association, and a key representative body of Australia's petroleum industry.

AIP's mission is to promote and assist in the development of a strong internationally competitive Australian petroleum products industry, operating efficiently, economically and safely, and in harmony with the environment and community standards.

Through the active involvement of its members, AIP provides responsible, professional and principled representation of the industry along with factual and informed discussion of petroleum issues.

AIP is a signatory of the National Packaging Covenant (the Covenant).

This Action Plan is submitted as a joint Action Plan on behalf of the five AIP member companies involved in the production, blending, distribution, and sale of packaged lubricating oils. These five member companies are:

BP Australia Pty Ltd (incorporating Castrol Australia Pty Ltd);  
Caltex Australia Pty Ltd;  
Mobil Oil Australia Pty Ltd (as part of the ExxonMobil Group);  
Shell Company of Australia Ltd;  
Valvoline Australia Pty Ltd.

These five companies are estimated to account for about 85 per cent of the national sales of lubricating oil. In addition to AIP, each of these companies is an individual signatory of the Covenant. Each of these companies is submitting an individual action plan that supports the joint Action Plan, and the commitments contained therein.

## **1.2 Scope of the Action Plan**

This Action Plan covers the management of plastic oil bottles up to 10 litres in capacity, used to package lubricating oil products for the retail and light commercial markets. The plastic used for oil bottles packaging is almost exclusively High Density Polyethylene (HDPE).

The management includes source reduction of the packaging material, the environmentally sound collection and recycling of the used plastic oil bottles, and the development of sustainable markets and end uses for the recyclate. It should be noted that kerb-side collection is not considered to be appropriate for this waste stream, and alternative collection methods have been developed.

### **1.3 Time period for the Action Plan**

The time period selected for this Action Plan is three years, from July 2005 to June 2008.

A report on progress in the year against the Action Plan will be prepared and submitted by 30 September 2006 for the year 2005/2006, and by 30 September for each of the following two years.

### **1.4 Contributions to be made under the Action Plan**

Under the Transitional Funding formula, AIP expects to make contributions totaling \$17,875 each year.

In addition, AIP and its member companies, supported by a Financial Assistance Agreement with the Commonwealth Government, are funding a program to collect, recycle, and develop sustainable markets/end uses for the used plastic oil bottles covered by this Action Plan. This program commenced in 2004, and substantial funding has been supplied. For the period July 2005 to June 2008, total expenditure under the program is estimated to be \$3.772 million; of this total, the component provided by the financial assistance under the Commonwealth Government Agreement would be \$1.75 million, conditional on defined milestones being met.

### **1.5 Relation to Previous Action Plans.**

AIP was a signatory of the previous National Packaging Covenant. Under this, an AIP Action Plan was put in place to cover the period July 2002 to June 2005.

This Action Plan represents a continuation of initiatives established in the first Action Plan. Further details are Section 4.

## 2 ENVIRONMENTAL MANAGEMENT

Certain of the information provided in this Section was contained in the initial AIP Action Plan. This information is repeated here for completeness.

### 2.1 AIP Environmental Policy

AIP's Environmental Policy Statement outlines the following objective:

*AIP member companies in Australia share the general community concern for conservation of the environment, and seek to protect air, water and soil from contamination through their operations. In doing so, their aim is to:*

- *Treat with care all materials that may cause pollution;*
- *Achieve a zero accident rate;*
- *Maintain open communications with Governments and local communities; and*
- *Support market mechanisms for conservation and wise use of our valuable energy resources.*

AIP's policy regarding lubricating oil packaging as outlined in AIP Code of Practice CP 30 for the Management of Used Lubricating Oil and Lubricating Oil Packaging ((AIP Code of Practice CP30) is as follows:

*.....AIP and its member companies will work with other stakeholders, including packaging manufacturers and waste authorities, to facilitate the development of a viable national collection and recycling system for Lubricating Oil Containers.*

*Where possible the collection system should be coordinated with the system of collection of Used Lubricating Oil at normal waste collection centres, and should meet the following criteria:*

- *Provision of reasonable access for households and light commercial industries to facilities for the collection of Lubricating Oil Containers. This should be based on the assumption that these users of Lubricating Oil are prepared to make reasonable efforts to dispose of the containers in a sound environmental manner. Reasonable efforts include the willingness to take the Containers to waste transfer centres, along with other waste; and*
- *The collection facilities should be cost-effective environmentally sound and in accordance with health requirements. In particular, they should not allow any residual Lubricating Oil to leak to the environment, nor pose an undue risk of users of the facilities coming into contact with the Used Lubricating Oil.*

*.....AIP and its member companies will assess which recycling avenues for the collected Containers offer the optimal environmental and economic*

*outcome. AIP will discuss the outcome of the assessment with packaging companies and the appropriate authorities.*

*Any recycling avenue identified must meet the following criteria:*

- The recycling process must satisfy all relevant occupational health and safety regulations and guidelines;*
- The recycling process must be environmentally sound with regard to emissions of all types;*
- The recycling process must lead to a complete and effective recycling outcome. In regard to plastics, this can include the recovery of the plastic into a viable marketable alternative product, or complete consumption of the plastic to recover the energy content.*

(AIP CP30 2003: The Management of Used Lubricating Oil and Lubricating Oil Packaging).

## **2.2 Potential Environmental Impacts from Used Plastic Oil Bottles**

The environmental impacts of the process of collection and recycling of used plastic oil bottles centre on:

- diversion of this waste stream from landfill;
- avoidance of pollution from the residual oil contained in the bottles; and
- difficulties in recycling caused by the adsorption of oil into the plastic.

Traditionally, used oil bottles have been disposed of through landfill. This is not regarded as sustainable, and the current AIP program is designed to divert this waste stream to other more environmentally sound disposal.

Tests have shown that drained bottles can contain residual oil up to 10 per cent of the original volume. Any leakage of this oil may lead to contamination of soil or water, at landfills or elsewhere. The washing out of used oil bottles requires special attention to effluent disposal.

The adsorption of oil into the plastic of oil bottles causes difficulties in recycling in regard to:

- Adsorption of colour bodies from the oil bottles into any broader plastic recycling stream;
- A residual oily odour in the recyclate;
- Weeping of oil from recyclate.

These issues mean that, while small volumes of used plastic oil bottles can be fed into general HDPE recycling streams, any significant volumes need special attention and separate facilities.

## **3 LUBRICATING OIL PACKAGING**

### **3.1 The Lubricating Oil Market in Australia**

The consumption of lubricating oil in Australia totalled 470 megalitres (ML) in 2004/05. This number is considered somewhat misleading, due to distortion by above average sales at the end of the previous year. A more accurate representation of long term volume would be of the order of 530 ML/year, with the market showing marginal, if any, growth.

The major users are industrial and mining companies, primary producers, transport companies and the automotive industry. These commercial users account for about 85-90 per cent of sales of lubricating oil. These sales are almost entirely made in bulk, or in steel drums, directly from the lubricating oil companies or their distributors.

The balance of sales, approximately 70 ML/year, is made in packaged form, predominantly to light commercial industry, motorists and home DIY oil changers. The sales channels include service stations, supermarkets, and automotive accessory retail outlets. Lubricating oil companies sell packaged lubricating oils under the own brands, and also supply packaged lubricating oil for private oil labels – such as those of supermarkets and automotive accessory chains.

This retail sales channel gives rise to a waste stream, comprised of used oil and used oil packaging – ie plastic oil bottles. This Action Plan is focused on the latter waste stream.

### **3.2 The Packaging of Retail Lubricating Oil**

Lubricating oil bottles are almost exclusively made from coloured HDPE. The total volume of HDPE used by AIP member companies in 2004/05 was 3624 tonnes. Adding in the estimated volume of non-AIP participants in the market, the total market usage of HDPE would have approximated 4250 tonnes.

The total number of plastic oil bottles sold by AIP members was 24.2 million in 2004/05. Including the volume of non-AIP members, the total number of plastic oil bottles used each year would approximate 28.5 million bottles.

The bottle sizes range from 0.2 - 20 litres. However the bulk of sales are concentrated in three sizes: 1 litre, 4 litres and 5 litres. The proportion of the total volume of bottles, and weight of HDPE consumed, that these three sizes constitute is shown in Table 1 below, based on data from AIP member companies. As can be seen, these three sizes constitute around 80 per cent bottle volume and HDPE usage.

Table 1: Bottle volumes and use of HDPE

Size	Proportion of total bottles: %	Proportion of total HDPE usage: %
1 litre	38	18
4 litre	16	25
5 litre	24	34
TOTAL	80%	77%

It should be noted that these are aggregate numbers, and the proportions vary considerably between individual companies.

The weighting of bottles is a competitive issue for lubricating oil companies, and is influenced by design and other proprietary factors. Typical weight of HDPE per bottle for these three sizes is as follows: 1 litre 65 grams; 4 litre 190 grams; 5 litre 210 grams. However, there are considerable differences in bottle weight (HDPE usage per bottle) between companies.

### **3.3 Labelling of Retail Lubricating Oil Packages**

All plastic oil bottles carrying the brands of AIP members companies carry the required statutory and health and safety information on their labels, as well as proprietary information.

The AIP Code of Practice CP 30 contains recommendations on the appropriate content of the labels of lubricating oils packaging. These include information on protection of the environment and recyclability of the oil and the container.

## 4 ACHIEVEMENTS TO DATE

In line with the concept of shared product stewardship responsibility, AIP and its member companies have been actively engaged in all issues regarding the environmentally sound collection and recycling/disposal of used lubricating oil packaging. The aim of AIP and its member companies is to provide a comprehensive, environmentally sound, sustainable program to divert the plastic oil bottle waste stream from landfill, and recycle the stream into value-adding products, in a manner consistent with the objectives of the Covenant.

AIP and its member companies have taken major steps to achieve these goals. More information on these developments is given in the following sections.

### 4.1 Achievements prior to 2002

The key actions to end 2001 were summarized in Section 2.3 of AIP's initial Action Plan. With regard to used plastic oil bottles, these actions included:

- Participation in a joint research project, with Ecorecycle Victoria and the Plastics and Chemical Industry Association, into possible avenues for the recycling of used plastic oil bottles;
- Risk analysis of the collection options for home (DIY) oil change used plastic oil bottles. Options analysed included kerbside, service stations and waste transfer centres. This analysis was included in AIP's initial Action Plan, and its findings have helped to guide subsequent initiatives.

### 4.2 Achievements since 2002

Since the end of 2001, AIP's actions and achievements have been focused on the development of the national program for the collection and recycling of plastic oil bottles. AIP's initial Action Plan was based around the start-up and early implementation of this program. The commitments in the Action Plan were achieved. These included:

- Development and implementation of a national program to collect and recycle used plastic oil bottles;
- Liaison with authorities
- Launch in 2005 of a communications program to support the collection/recycling program;
- Support for research initiatives to identify new markets and ends uses for recycle from the program;
- A major revision of the AIP Code of Practice CP30 *The Management of Used Lubricating Oil and Lubricating Oil Packaging*.
- Developments by individual companies in the design and lightweighting of plastic oil bottles.

Further information on these achievements is provided in the following sections.

#### **4.2.1 The Collection and Recycling Program**

In 2002, AIP worked with companies in the Visy group to develop a potential format for the program. This was based on a roll-out of the program by state over a 5 year period. Each state was to have a separate collection network of at least 25 sites, covering metropolitan and rural areas, located at waste transfer centres. The collection points were to be located adjacent to waste oil collection facilities in the waste transfer centres, and were to be banded oil tight bins set up to receive drained oil bottles. The collection points were to be serviced by a dedicated collection truck, initially on a bin exchange basis. The collected plastic oil bottles were to be aggregated in each State, and recycled into recycle suitable for use in marketable plastic products.

AIP commissioned Visy Industrial Plastics (Visy) to carry out a trial of the format, in metropolitan and rural Victoria in 2003. This trial was completed successfully. The findings confirmed the viability of the basic format, but suggested slight changes at the collection facilities. These were adopted in the final format of the program, which included a roll-out to all states over 5 years.

The program was costed at \$4.6 million for the 5 years, and an application was made in 2003 to the Commonwealth government for financial assistance for approximately 55 per cent of the cost of the 5 year. Program. Thereafter the program was to be funded by industry.

In 2004, the Commonwealth government approved the financial assistance. AIP then executed a contract with Visy to carry out the program, with a time line and service standards consistent with the milestones set by the Commonwealth government for the financial assistance.

By October 2005, the program had been rolled out to four states, in line with the agreed timelines. Key points were as follows:

- Roll-out of the collection program in Victoria. The current network covers 29 councils and 43 collection points at waste transfer centres in metro and country Victoria. An aggregation centre and processing unit is located at Laverton North.
- Roll-out of the collection program in NSW/ACT. The current network covers 23 councils and 27 waste transfer centres/collection points. An aggregation centre is located at Penrith.
- Roll-out of a collection program in Queensland. The current network covers 8 councils and 30 waste transfer centres; further collection points are under consideration. An aggregation centre is located at Eagle Farm.
- Roll-out of a collection program in S. Australia. The current network covers 18 councils and 28 waste transfer centres. An aggregation centre is located at Dry Creek.

- Design, development and introduction by Visy of a truck that incorporates on-truck crushing, compacting and baling machinery for plastic containers, specially equipped to handle oil containers in an environmentally sound manner.
- Selection and establishment of an effective and environmentally sound Oil Container Processing Unit. This German Herbold shredder/de-oiler/baler machine has been installed at a dedicated site at Laverton North in outer Melbourne. The Herbold machine is operating satisfactorily.
- Establishment of recycling options for the shredded plastic. These are:
  - Recycling to produce resin for the manufacture of oil bottles by Visy.
  - Recycling into products for the general industrial plastics market, including low-grade industrial piping and builders' film.
  - The initial collected volumes of plastic oil containers were recycled by Visy in its general plastic recycling streams at its Laverton plant in Victoria. This was sustainable while collection volumes were still building up.
  - In addition, options for conversion of the plastic into liquid fuels are being evaluated.

#### **4.2.2 Liaison with Authorities**

The AIP collection program is based on waste transfer centres of councils and waste authorities, and requires the cooperation and support of those bodies. AIP, and its partner Visy, have worked closely with these bodies in the development and operation of the program.

The input of waste authorities was sought in the development of the program format. Councils and waste authorities were approached to seek their support in taking the program, as the program was rolled out by state. Once the facilities were established at waste transfer centres, AIP and its partner Visy have worked to coordinate their services with the requirements of the relevant authorities.

#### **4.2.3 Communications**

A communications campaign to promote awareness of the collection and recycling program has been developed and implemented. This is based on the development of a program logo, and provision of brochures and posters to councils for distribution as they see fit, and on stickers on collection bins.

#### **4.2.4 Industry Code of Practice**

A major revision of the AIP Code of Practice CP30, with a greatly increased focus on the life cycle management of plastic oil bottles.

#### **4.2.5 Research and development**

AIP and its partner Visy have been active in researching avenues to optimize the program. These R & D initiatives include:

- Extensive analysis of national and international options for processing facilities for crushing and shredding of the oil bottles, and subsequent

baling of the shredded material. This resulted in the choice of the German Herbold unit;

- Analysis by Visy of optimum methods to effect collections from the bins at waste transfer centres, recognizing the need to optimize transport costs to allow a wider geographical coverage. This resulted in the development by Visy of a specialist truck with an on-truck crushing/baling mechanism, for the collection of this and other similar plastic waste streams.
- Research by Visy and AIP member companies into the incorporation of the recycled plastic resin into oil bottles, while ensuring the bottles meet all health and safety requirements. To date, this research is still on-going.
- Research into pyrolysis as waste-to-energy option for the recycling.

#### **4.2.6 Bottle design**

Bottle design is a company and brand specific area. AIP CP30 lays out guidelines for companies on the recyclability of plastics used, lightweighting, and the use of recycled materials, closures and handles.

Most AIP member companies have taken significant individual initiatives in some or all of these areas. These include significant improvements in:

- Lightweighting. Some companies have reported achieving reductions in weight of plastic of approximately 10 per cent on certain bottle sizes.
- Drainability of the bottles, which will help to reduce the volumes of residual left in the bottles.
- Reductions in material usage, in the area of retrieval and reuse of plastic waste at the point of manufacture.

## **5 ACTION PLAN**

### **5.1 Objective**

AIP and its member companies support the objective of the Covenant to reduce the environmental degradation arising from the disposal of used consumer packaging, and the principles contained in the Environmental Code of Practice for Packaging.

AIP and its member companies recognize that the plastic bottles used to package lubricating oil can give rise to environmental degradation, and have already taken major steps to introduce effective management of this waste stream.

The objective of this Action Plan is to further reduce this waste stream and minimize any adverse environmental effects. This will be effected by building on and enlarging the programs already set in motion.

### **5.2 Product Stewardship**

AIP and its member lubricating oil companies accept the principle of shared responsibility for the effective lifecycle management of this oil bottle consumer packaging.

In Section 4 of the Covenant, areas are defined in which signatories should take action. AIP and its member companies will take appropriate action in all the areas defined, either directly in areas in which they play a primary role, or indirectly by working cooperatively with other parts of the packaging supply chain.

The specific commitments and actions to be taken are summarized in Appendix 1.

### **5.3 Undertakings**

AIP and its member companies are signatories to the Covenant, and so have agreed to meet the undertakings outlined in Section 5 of the Covenant for all signatories and for the packaging supply chain.

Specific commitments in relation to these are summarized in Appendix 2, and information on Key Performance Indicators and baseline data given in Appendix 3.

### **5.4 Action Plan Framework**

The framework of the AIP Action Plan is based on the principles outlined in the Environmental Code of Practice for Packaging. Under the Action Plan, AIP and its member companies will continue to develop and build on:

- The AIP plastic oil bottle collection/recycling program, by extending the program to all states.
- Promotion of the program to increase the usage rate by consumers, with the aim of raising the collection rate.
- General promotion of recycling.
- Support for development and optimization of the markets and end uses for the recycle, including re-use as plastic or as waste-to-energy.
- Company initiatives on lightweighting of the bottles and on design of the bottles to improve drainability of residual oil.
- Review of the AIP Code of Practice CP30
- Review of distribution logistics

The actions listed below are summarised in Appendix 1

#### **5.4 1 Extension of the AIP Plastic Oil Bottle Collection /Recycling Program**

The AIP collection/recycling program has been established in Victoria (2004), NSW (2005), Queensland (2005), and S. Australia (2005). The Action Plan contains extension of the program to W. Australia in 2006/07, and to Northern Territory and Tasmania in 2007/08.

The program will be fully reviewed in 2005/06, prior to the extension to the other states, to ensure its appropriate effectiveness.

In addition, the collection network in states already established will be fine-tuned in a process of continual improvement, to optimize collection performance. This will be an on-going process through each year of the Action Plan.

AIP and its member companies have noted the overarching Covenant recycling rate target for plastics of 30-35 per cent. The long-term objective of the AIP program is to reach a recycling rate for plastic oil bottles in the overarching target range. In the period covered by this Action Plan, the program is still essentially in the establishment phase, and the aim of AIP and its member companies is to achieve substantial progress towards the long-term target.

#### **5.4.2 Promotion of the AIP Plastic Oil Bottle Collection/Recycling Program and General Promotion of Recycling.**

AIP and its member companies, working with Visy, have developed a communications program format for each state (see Section 4.2.3 for further information).

Under the Action Plan, this communications program will be rolled out in W. Australia, Tasmania and Northern Territory to coincide with the collection program roll-out in each state. For established states, the program will be 'refreshed' as appropriate, in consultation with local councils and waste authorities.

To support this, AIP will maintain information on the program on its website. AIP will also work with the Commonwealth Department of Environment and state environment authorities as appropriate on joint promotions of the program, linked to the information on the collection facilities for used lubricating oil. This will be an on-going process through each year of the Action Plan.

Standards of bottle labelling, and the information regarding recycling, is covered in AIP Code of Practice CP30. During 2005/06, AIP will consult with member companies on bottle labeling to determine whether further information could be usefully supplied.

#### **5.4.3 Development and Optimisation of Markets and End-uses for Plastic Oil Bottle Recyclate**

AIP and its partner Visy have already identified viable markets for the resin from recycled oil bottles in general industrial plastics, including low-grade industrial piping and builders' film.

The focus of research and development in the Action Plan will be to continue to work with Visy, and other bottle suppliers and recyclers if appropriate, on the incorporation of the resin from recycled oil bottles in the manufacture of plastic oil bottles, and on pyrolysis for waste-to-energy.

The re-use of the resin in plastic oil bottles depends on the ability of the resin to meld successfully with the virgin resin, to produce bottles that are environmentally sound and safe, meeting the required standards for integrity and robustness of the bottle. In its role as bottle supplier, Visy has already carried out a number of tests of these criteria at various blend rates. Further research is needed before this recycling end-use can be confirmed as viable. This research will be carried in 2005/06.

The AIP Code of Practice CP30 supports moves by AIP member companies to use this recyclate in oil bottles where feasible. A number of AIP member companies have indicated their willingness to do so, subject to the bottles meeting the required standards. AIP and its member companies will review progress in 2006/07, and consider whether further steps are necessary.

In parallel, AIP will cooperate with Visy during 2005/06 and 2006/07 in an assessment of the viability of pyrolysis of the oil bottles to produce a diesel fuel. Any implementation in this regard will require larger volumes of plastic than can be supplied under the AIP oil bottle collection program, and so will depend on broader recycling initiatives. AIP and its member companies will formally review progress in this regard by June 2007.

#### **5.4.4 Lightweighting and Design of Bottles**

Lightweighting and design of bottles is a competitive issue, and will be an area for individual action by AIP member companies. General principles to be followed are outlined in AIP Code of Practice CP30.

As indicated in Section 4.2.6, there have been a number of significant developments by AIP member companies in this field since 2002, and it is expected that this will be an on-going process. Given this, it is considered appropriate that no specific overall industry commitment be given in this regard, but that progress should be reviewed in 2006/07, to determine whether any industry-wide action is possible or necessary.

#### **5.4.5 Review of the AIP Code of Practice**

The AIP Code of Practice CP30 *The Management of Used Lubricating Oil and Lubricating Oil Packaging* will be reviewed by AIP and its member companies to ensure, inter alia, that its provisions regarding the management of the plastic oil bottle waste stream are still appropriate. The review will address each of the strategies outlined in the Environmental Guidelines contained in the Environmental Code of Practice for Packaging, ie

- Source reduction. In particular, the review of the code will consider lightweighting and drainability in the light of the reviews carried out in 2006/07.
- Potential for re-use.
- Recovery and recycling, including the recyclability of the bottle, closures, labels and handles.
- Ability to incorporate recycled content.
- Minimizing impacts of packaging.
- Propensity to become litter.

#### **5.4.6 Review of Distribution Logistics**

Distribution logistics is a competitive issue. Key principles are covered in AIP Code of Practice CP30. AIP will review distribution logistics with individual member companies in 2006/7 to establish whether these principles need to be revised in the update of the code.

## 6 CONTACT DETAILS

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## APPENDIX 1

### Summary of action plan commitments, product stewardship categories

Product Stewardship Focus	Commitment	Implementation	KPI	Timeframe
<b>Year One</b>				
Disposal	Extend & optimize collection of used plastic oil bottles	<ol style="list-style-type: none"> <li>1. Review format of current program</li> <li>2. Review existing collection networks, optimize</li> <li>3. Gather data on collection performance</li> </ol>	<ol style="list-style-type: none"> <li>1. Review carried out</li> <li>2. Each state reviewed, networks changed as required</li> <li>3. Tonnage of collections recorded by AIP</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2006</li> <li>2. On-going</li> <li>3. On-going</li> </ol>
Education, Wholesaling and retailing	Promote / increase consumer awareness of AIP collection program	<ol style="list-style-type: none"> <li>1. Refresh current communications program in Victoria, NSW, Queensland, S. Australia</li> <li>2. Maintain, update AIP website</li> <li>3. Liaise with Commonwealth government and state waste authorities on joint promotions</li> </ol>	<ol style="list-style-type: none"> <li>1. All councils taking program contacted</li> <li>2. AIP website list of collection points up-to-date</li> <li>3. Contacts made.</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2006</li> <li>2. On-going</li> <li>3. June 2006</li> </ol>
Labelling	Labelling of bottles to encourage recycling	AIP to review labeling with member companies	Review held with each company	June 2006

Research, Market Development	Identify/confirm new markets for oil bottle recyclate	<ol style="list-style-type: none"> <li>1. Support R &amp; D by bottle suppliers into use of recyclate in new oil bottles</li> <li>2. Support R &amp; D by recyclers into viability of pyrolysis for waste-to-energy oil bottle waste stream</li> </ol>	<ol style="list-style-type: none"> <li>1. Further tests carried out by bottle suppliers</li> <li>2. Analysis by recycler carried out.</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2006</li> <li>2. June 2006</li> </ol>
Design, Production, Disposal	Oil bottle design to minimize material usage and maximize drainability	<ol style="list-style-type: none"> <li>1. Individual action by AIP member companies and bottle suppliers on bottle lightweighting, design, and production waste recovery.</li> </ol>	<ol style="list-style-type: none"> <li>1. Bottle weights, design changes, notified to AIP by individual companies</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2006</li> </ol>
<b>Year 2</b>				
Disposal	Extend & optimize collection of used plastic oil bottles	<ol style="list-style-type: none"> <li>1. Extend program to W. Australia</li> <li>2. Review existing collection networks, optimize</li> </ol>	<ol style="list-style-type: none"> <li>1. Collection network, aggregation centre established in W. Australia</li> <li>2. Each state reviewed, networks changed as required</li> <li>3. Tonnage of collections recorded by AIP</li> <li>4. Ratio of tonnage collected to HDPE usage by AIP member companies in 2005/06</li> </ol>	<ol style="list-style-type: none"> <li>1. December 2006</li> <li>2. On-going</li> <li>3. On-going</li> <li>4. September 2006</li> </ol>

			5. Tonnage recycled and end use in 2005/06 recorded by AIP	5. September 2006
Education, Wholesaling and Retailing	Promote / increase consumer awareness of AIP collection program	<ol style="list-style-type: none"> <li>1. Refresh current communications program in Victoria, NSW, Queensland, S. Australia</li> <li>2. Launch communications program in W. Australia.</li> <li>3. Maintain, update AIP website</li> <li>4. Liaise with Commonwealth government and state waste authorities on joint promotions</li> </ol>	<ol style="list-style-type: none"> <li>1. All councils taking program contacted</li> <li>2. Communications program launched to councils</li> <li>3. AIP website list of collection points up-to-date</li> <li>4. Contacts made.</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2007</li> <li>2. December 2006</li> <li>3. On-going</li> <li>4. June 2007</li> </ol>
Research, Market Development	Identify/confirm new markets for oil bottle recyclate	<ol style="list-style-type: none"> <li>1. Review progress on R &amp; D by bottle suppliers into use of recyclate in new oil bottles, and any take-up by member companies</li> <li>2. Review outcome of R &amp; D by recyclers into use of pyrolysis for waste-to-energy oil bottle waste stream</li> </ol>	<ol style="list-style-type: none"> <li>1. Review carried out</li> <li>2. Review carried out.</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2007</li> <li>2. June 2007</li> </ol>

Design, Production, Disposal	Oil bottle design to minimize material usage and maximize drainability	1. AIP and companies review whether industry action possible or necessary on bottle lightweighting, design, and production waste recovery.	1. Review carried out 2. Companies to advise AIP of usage of HDPE in oil bottles in 2005/06	1. June 2007 2. September 2006
Distribution	Achieve maximum efficiency in distribution logistics	1. Individual review of CP30 provisions by AIP with member companies	1. Reviews carried out	1. June 2007
<b>Year 3</b>				
Disposal	Extend & optimize collection of used plastic oil bottles	1. Extend program to Northern Territory and Tasmania  2. Review existing collection networks, optimize	1. Collection network, aggregation centre established in NT and Tasmania  2. Each state reviewed, networks changed as required 3. Tonnage of collections recorded by AIP 4. Ratio of tonnage collected to HDPE usage by AIP member companies in 2006/07 5. Tonnage recycled and end use in 2006/07 recorded by AIP	1. November 2007 (NT), February 2008 (Tasmania)  2. On-going 3. On-going 4. September 2007 5. September 2007

Education, Wholesaling and retailing	Promote / increase consumer awareness of AIP collection program	<ol style="list-style-type: none"> <li>1. Refresh current communications program in Victoria, NSW, Queensland, S. Australia, and W. Australia</li> <li>2. Launch communications program in NT and Tasmania.</li> <li>3. Maintain, update AIP website</li> <li>4. Liaise with Commonwealth government and state waste authorities on joint promotions</li> </ol>	<ol style="list-style-type: none"> <li>1. All councils taking program contacted</li> <li>2. Communications program launched to councils</li> <li>3. AIP website list of collection points up-to-date</li> <li>4. Contacts made.</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2008</li> <li>2. November 2007 (NT) February 2008 (Tasmania)</li> <li>3. On-going</li> <li>4. June 2008</li> </ol>
Research, Market Development	Identify/confirm new markets for oil bottle recyclate	<ol style="list-style-type: none"> <li>1. Outcome of reviews in 2006/07 to be incorporated in update of AIP code of practice CP30</li> </ol>	<ol style="list-style-type: none"> <li>1. Review and update of CP30 carried out, new edition published</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2008</li> </ol>
Design, Production, Disposal	Oil bottle design to minimize material usage and maximize drainability, recovery and recyclability, and in general conform to Environmental Code of Practice	<ol style="list-style-type: none"> <li>1. Outcome of review in 2006/07 to be incorporated in update of AIP code of practice CP30</li> </ol>	<ol style="list-style-type: none"> <li>1. Review and update of CP30 carried out, new edition published</li> <li>2. Companies to advise AIP of usage of HDPE in oil bottles in 2006/07</li> </ol>	<ol style="list-style-type: none"> <li>1. June 2008</li> <li>2. September 2007</li> </ol>

Distribution	Achieve maximum efficiency in distribution logistics	1. Outcome of review in 2006/07 to be incorporated in update of AIP code of practice CP30	1. Review and update of CP30 carried out, new edition published	1. June 2008
<b>Post July 2008</b>				
Disposal	Extend & optimize collection of used plastic oil bottles		1. Tonnage of collections recorded by AIP 2. Ratio of tonnage collected to HDPE usage by AIP member companies in 2007/08 3. Tonnage recycled and end use in 2007/08 recorded by AIP	1. On-going 2. September 2008 3. September 2008

## APPENDIX 2

### undertakings by AIP

Requirements	Compliance	Action Plan Section Reference
Details of Organisation	Provided	1.1
Place in Packaging Chain	Provided	3
Identity of all involved signatories and interrelationships	Provided	1.1
Contact details	Provided	6
Time period	Provided	1.3
Contributions of signatories	Provided	1.4
Product stewardship actions, as per Covenant section 4, covered in Action Plan	Yes	5.2, 5.4 and Appendix 1
Undertakings: <ul style="list-style-type: none"> <li>• Produce action plans</li> <li>• Work to achieve overarching targets</li> <li>• Report annually</li> <li>• Provide appropriate waste management pricing, financial and other support</li> <li>• Apply principles of the covenant</li> <li>• Good practice collection systems</li> <li>• Purchasing policies for recycled content goods</li> <li>• Promote principles and undertakings</li> <li>• Education and promotion programs</li> </ul>	Yes	5.3 <ul style="list-style-type: none"> <li>• 1.2</li> <li>• 5.1</li> <li>• 1.3</li> <li>• 1.4</li> <li>• 5.4.1, 5.4.3, 5.4.4, 5.4.5</li> <li>• 5.4.1</li> <li>• 5.4.3, 5.4.5</li> </ul>

<ul style="list-style-type: none"> <li>• Facilitate programs to optimize value of recycled materials</li> <li>• Waste industry reduction agreement not superseded</li> <li>• Implement product stewardship policies</li> <li>• Provide financial support for kerbside/other recovery systems</li> <li>• Packaging design to minimize material use</li> <li>• Packaging consistent with public health, safety, environmental</li> <li>• Used packaging as a resource</li> <li>• Adopt Environmental Code of Practice</li> </ul>		<ul style="list-style-type: none"> <li>• 5.4.2</li> <li>• 5.4.2</li> <li>• 5.4.3</li> <li>• Not applicable</li> <li>• 5.2. 5.4</li> <li>• 1.3, 5.4.1</li> <li>• 5.4.4, 5.4.5</li> <li>• 2.1, 5.4.4, 5.4.5</li> <li>• 5.4.2, 5.4.3, 5.4.5</li> <li>• 5.4, 5.4.5</li> </ul>
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## APPENDIX 3

### AIP KEY PERFORMANCE INDICATORS AND DATA

As per Table 1, Schedule of the National Packaging Covenant, for brand owners and packaging supply chain.

Key Performance Indicator (KPI)	Data / Information
<b>Goal 1 KPIs</b>	
Packaging Material	High density polyethylene (HDPE)
Tonnes of packaging material. Baseline tonnage 2004/05	3624 tonnes. Commitment to collect this data in action plan years
Tonnes of product packed. Baseline tonnage 2004/05	63088 tonnes. Commitment to collect this data in action plan years
Ratio of product to packaging . Baseline ratio 2004/05	17.4. Commitment to collect this data in action plan years
Improvements in design, manufacture, marketing and distribution to minimise the environmental impact of packaging	See sections 4.2 and 5.4 .4
Changes to protection, safety, hygiene, shelf-life or supply chain considerations affecting amount and type of packaging used	See sections 4.2 and 5.4 .4, 5.4.6
Total weight by type of non-recyclable packaging sold per annum into the Australian market	Nil

<b>Goal 2 KPIs</b>	
Percentage of signatories providing recycling collection facilities for post consumer packaging generated on-site (ie relating to collection of used plastic oil bottles sold by AIP member companies)	100 per cent. All AIP companies provide such facilities through the AIP plastic oil bottle collection/recycling program
Tonnage of consumer packaging collected at on-site facilities (ie used plastic oil bottles collected under the AIP plastic oil bottle collection/recycling program): <ul style="list-style-type: none"> <li>• Recycled</li> <li>• Sent to landfill</li> </ul>	<ul style="list-style-type: none"> <li>• 100%</li> <li>• Nil</li> </ul>
Implementation of buy recycled purchasing policies or practices	See sections 4.2 and 5.4 .3
Establishment of base line performance data	Yes
Annual reporting against Action Plan	Committed: see section 1.3
Improvements and achievements against individual targets and milestones.	To be reported in annual report.
<b>Supplementary data</b>	
Tonnes of used packaging collected> Baseline tonnage 2004/05	32 tonnes
Proportion of used packaging collected to tonnes of packaging material. Baseline proportion 2004/05	1%