



**Transfer of
Substances**

ENVIRONMENTAL RISK MANAGEMENT AUTHORITY
NGĀ KAIWHAKATŪPATO WHAKARARU TAIAO



ERMA New Zealand Transfer Report

**Substances to be transferred to the HSNO Act
under section 160(1)(a):**

Phenoxy Herbicides

**Prepared for the Environmental Risk
Management Authority**

December 2003

DISCLAIMER

This transfer report may vary (by adding, substituting or deleting) certain default controls for some substances undergoing transfer. Some of these proposals may be outside the existing regulation-making power in section 160 of the HSNO Act. Proposals to vary controls in this transfer report are made on the basis of proposed amendments to the Act, which will allow regulations to include a wider range of matters for controls.

Contents

1 Report Details	5
1.1 Transfer of Substances Standing Committee.....	5
1.2 Project Team.....	5
2 Executive Summary	6
3 Key Issues	8
4 The Transfer Report	13
4.1 Introduction.....	13
4.2 Report Layout.....	13
4.3 Default Controls and Variation of Controls.....	14
4.4 Review of Existing Information.....	14
4.5 Comparison of Existing Requirements and Default HSNO Controls.....	15
4.6 Additional Information.....	15
5 Consultation	16
5.1 Summary of Consultation Undertaken.....	16
5.2 Responses to Submissions.....	16
6 Substances to be Transferred	17
7 Recommended Variations to the HSNO Default Controls	49
7.1 Variations to Default Controls for Flammable Substances.....	50
7.2 Variations to Default Controls for Toxic and Ecotoxic Substances.....	54
7.3 Variations to Default Life Cycle Controls.....	60
8 HSNO Default Controls	63
8.1 Default Controls for Flammable Substances.....	64
8.2 Default Controls for Toxic and Ecotoxic Substances.....	65
8.3 Default Life Cycle Controls.....	70
Annex 1 – Workplace Exposure Standards (WES)	109
Annex 2 – List of Trade Name Products	111
Annex 3 – Summary of Submissions	114
Annex 4 – Outline of the Decision-making Process for the Transfer of Substances ...	152

1 Report Details

This report addresses the transfer of phenoxy herbicides that were registered or in the process of being registered under the Pesticides Act 1979 as at 2 July 2001.

1.1 Transfer of Substances Standing Committee

Report consideration date: 16 December 2003

By: Phone conference

Report to be considered by: Tony Haggerty, Max Suckling

1.2 Project Team

Haydn Murdoch
Advisor (Hazardous Substances)

Tim Strange
Advisor (Hazardous Substances)

Jim Waters
Senior Advisor, Toxicology

Simon Buckland
Manager, Technical Processes

Report prepared by

Haydn Murdoch
Advisor (Hazardous Substances)

Report signed off by

Andrea Eng
Manager,
Transfer of Substances

Bas Walker
Chief Executive

2 Executive Summary

This report covers the transfer of phenoxy herbicides from the transitional provisions to the main framework of the HSNO Act. These phenoxy herbicides are products that were registered, or in the process of being registered, under the Pesticides Act as at 2 July 2001. Products that contain the same active ingredient and that have the same hazardous properties have been grouped together under a single substance definition. This document covers 49 trade name products grouped into 37 separate substances to be considered for transfer.

As part of the transfer process, a consultation document containing the proposed classifications and controls for these substances was circulated to a wide range of stakeholders, including industry groups, registrants, government agencies and interested parties. As the result of this consultation, ten submissions were received.

Submissions

The submissions principally focussed on four areas:

1. Querying the classifications and controls assigned to individual products. A number of changes to substance classifications were made as a result of review of the substances. A summary of these changes is provided in Table 3 of Annex 3.
2. The appropriateness of applying a 6.7B classification (suspected human carcinogen) to substances containing chlorophenoxy herbicides. Advice was sought from an international expert, which confirmed that the 6.7B classification was appropriate.
3. The skin irritation potential of the salts of the phenoxy herbicides versus the skin irritation potential of the parent phenoxy acids. Submitters presented extensive evidence that while the phenoxy acids were skin irritants, due to the neutralisation reactions during salt formation the resultant salts were not. The relevant classifications were removed from the effected substances.
4. The applicability of the approved handler and tracking controls to these substances, as some are for domestic use. We have responded to these submissions by varying the approved handler and tracking requirements for phenoxy herbicides used in a limited dispersive manner, which includes domestic use products. This is discussed further in section 3 of this report.

From previous consultation on the transfer of other pesticides, there were many questions asked that had a common theme. These questions and our response to them have been compiled into a summary, which is included in Table 4 of Annex 3. All submitters were responded to by letter.

Additional Submissions on the Carcinogenicity of Chlorophenoxy Herbicides

Following our replies to submitters advising them of our intention to retain the 6.7B classification for chlorophenoxy herbicides, we received further information from Nufarm in support of removal of this classification. Additional comments in support of this data package were also received from Dow Agrosiences and the Industry Task Force II on 2,4-D Research Data (an industry group set up to respond to global regulatory requirements). A summary of the additional information and comments received is included in Table 2 of Annex 3.

Analysis of the data package by an internal ERMA New Zealand team comprising members of the Transfer Group and Science and Analysis Group has resulted in the recommendation that chlorophenoxy herbicides should not be classified as 6.7B.

Variations to default controls

The following variations to default controls are recommended:

1. The approved handler and tracking requirements, when triggered by an ecotoxic hazard, will not apply to phenoxy herbicides used in a non- or limited dispersive manner, which will include domestic (home garden) use, unless being used by a commercial contractor.
2. The tracking requirements for phenoxy herbicides are varied such that they are deleted when triggered solely by an ecotoxic hazard.
3. Where a Packing Group 2 (PG2) control is triggered as a result of a chronic endpoint, this has been **deleted**. In such cases, Packing Group 3 (PG3) applies.
4. The trigger quantities for transport on passenger service vehicles of substances available in the retail sector have been revised to 5 litres (liquids) per package.
5. No tolerable exposure limits (TELS) or environmental exposure limits (EEL) are being set at this time. In the absence of setting EELs, the default EELs that would otherwise apply are **deleted**.
6. The approved handler requirement for handling any quantity of a Class 3.1 substance under regulation 61 of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* has been **deleted**. This variation is in line with a proposed amendment to the Classes 1 to 5 Control Regulations.
7. The F17 control, relating to the intended combustion of class 2, 3 and 4 substance has been **deleted**. This variation is in line with a proposed amendment to the Classes 1 to 5 Control Regulations.

Report layout

The Transfer Reports for pesticides follow a set format, *with the following sections of particular relevance to the decision-making process*:

Section 3 - Key issues

Section 6 - List of substances to be transferred

Section 7 - Recommended variations to the default controls

Section 8 - The HSNO default controls

Annex 4 - An overview of the decision-making process.

The substances under consideration in this report are listed in the table in section 6, along with their classifications and the default HSNO control codes arising from these classifications. The recommended controls for these substances (set out in the tables in sections 7 and 8) are based on the default controls as assigned to substances based on their classifications and a comparison with existing requirements, as well as comments received during the submission process. Section 7 provides relevant comments and recommended variations to the default controls, and section 8 gives the default controls that will apply as stated.

3 Key Issues

1. Amendments to the HSNO Act and transfer requirements

The Act is proposed to be amended to 'streamline' the transfer of hazardous substances and give greater flexibility in varying controls. Decisions made in the variation of controls in this transfer report reflect the powers that we expect will be available when this amendment is passed into law. It is expected that the amendment will be promulgated in early 2004.

2. The carcinogenicity of chlorophenoxy herbicides

The consultation document for phenoxy herbicides assigned a 6.7B (suspected human carcinogen) classification to those substances containing > 0.1% of a chlorophenoxy herbicide active ingredient. This 6.7B classification was based on the International Agency for Research on Cancer (IARC) classification for chlorophenoxy herbicides (IARC, 1987¹) which concluded:

“Chlorophenoxy herbicides are possibly carcinogenic to humans (Group 2B)”

IARC Group 2B is equivalent to the HSNO (and GHS) classification of 6.7B - substances that are suspected human carcinogens. For transfer to the HSNO framework, the 6.7B classification was extended to include 2,4-DB and MCPB which are not listed in the original IARC monograph, but which are considered, on the basis of structure, to reasonably be included.

The IARC conclusion was based on a significantly increased risk of Soft-Tissue Sarcoma (STS) and Non-Hodgkin's Lymphoma (NHL) and a slight increased risk of all cancers to people exposed to chlorophenoxy herbicides.

The submissions received from the consultation cited more recent studies (e.g. Kogevinas et al 1997²) that indicated the increased risk of STS may be related to contamination of phenoxy herbicides with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). The submitters used this as support for their position that the 6.7B classification should be removed, as they claimed that modern production methods of phenoxy herbicides produce a product with no measurable TCDD contamination. However, these submissions failed to address the issue of NHL.

This issue was discussed with Professor Neil Pearce, Director of the Centre for Public Health Research, Massey University (Wellington Campus). Professor Pearce is a co-author of the Kogevinas study and has worked with IARC on a number of occasions. Professor Pearce presented a paper on agricultural exposures and NHL, to the Oxford Symposium in Nov 2002³. The paper considered a number of studies where there was no TCDD contamination and yet there was an increased incidence of NHL. It was his conclusion in both this paper and in discussions with him, that the increased risk of NHL, despite the absence of TCDD contamination, provides justification to maintain the IARC 2B classification for chlorophenoxy herbicides. On this basis, we considered that the 6.7B classification proposed in the consultation document should be retained, and submitters were advised to this effect.

¹ IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, Supplement 7: (1987) (p.156)

² Cancer mortality in workers exposed to phenoxy herbicides, chlorophenols, and dioxins. An expanded and updated international cohort study. Kogevinas et al. *Am J Epidemiol.* 1997 Jun 15;145(12):1061-75.

³ Agricultural Exposures and Non-Hodgkin's Lymphoma. N.E. Pearce, D. Mclean. Proceedings of the International Symposium on Agricultural Exposures and Cancer, Green College, Oxford, United Kingdom. 19-12 November 2002.

As a result of our letters to submitters, we were asked by Nufarm and Dow Agrosciences if they could provide additional evidence in support of the removal of the 6.7B classification. Following this request, a data package was provided by Nufarm. Additional comments in support of this data package were also received from Dow Agrosciences and the Industry Task Force II on 2,4-D Research Data (an industry group set up to respond to global regulatory requirements). A summary of the additional information and comments received is included in Table 4 of Annex 3.

The data package was reviewed by an ERMA New Zealand expert group comprising toxicologists and chemists from the Transfer Group and the Science and Analysis Group. For a substance to be assigned a Class 6.7B, the following criteria must be met (*Hazardous Substances (Classification) Regulations 2001*):

A substance for which data indicate limited evidence in humans or limited evidence in animals that exposure to the substance may lead to the development of cancer or an increased incidence of tumors, where the strength and weight of the evidence indicate to an expert that the evidence is not sufficient to classify the substance in hazard classification 6.7A.

The data package provided additional information which cast doubt upon the causal relationship between exposure to chlorophenoxy herbicides and the development of NHL and other cancers in humans. The expert group concluded that overall the evidence was inadequate and could not be interpreted as showing the presence or absence of a carcinogenic effect. The group therefore recommended that phenoxy herbicides should not be assigned a 6.7B classification at this time.

Nonetheless, the potential for dioxin to be present in phenoxy herbicides as a contaminant from the manufacturing process remains a concern. Therefore, our recommendation not to assign a 6.7B classification is predicated on the basis that any dioxin contamination in these substances is below a level that could cause cancer in exposed populations.

While causation between chlorophenoxy herbicide exposure and increased incidences of NHL are unproven at this stage, new study data (including reviews of existing data and follow up reports on historical cohorts) should be reassessed at a future date. The expert group considered it appropriate that the proposed Chief Executive Initiated Reassessment of 2,4-D should consider including a review of the carcinogenicity of other chlorophenoxy herbicides as part of the reassessment.

3. The skin irritancy of phenoxy acid salts

Many of the phenoxy herbicides were originally classified as either a skin corrosive or a skin irritant on the basis of the mixture rules. The mixture rules consider how much each component contributes to the overall skin corrosivity/irritancy of the mixture. The various mixtures contained phenoxy acids and either potassium hydroxide, sodium hydroxide, or dimethylamine. The presence of these substances resulted in the skin corrosivity/irritancy classifications. However, the mixture rules fail to account for acid/base neutralisation reactions within the mixture. Many submitters presented extensive evidence that while the phenoxy acids and other components were skin corrosives/irritants, due to the neutralisation reactions during salt formation the resultant salts were not. We agree with this and consequently the 6.3 and 8.2 classifications have been removed from the effected substances.

4. Approved handler and tracking

A number of submissions raised the issue of the applicability of the approved handler and tracking controls to these products. ERMA New Zealand has revised it's policy on the application of approved handler and tracking controls. This policy was approved in principle by the Hazardous Substances Standing Committee on 26 Nov 2003. The framework established by this policy means that:

- Tracking will not required for a substance when triggered solely by an ecotoxic hazard;
- Approved handler requirements will not apply to ecotoxic substances used in a non- or limited dispersive manner. This includes domestic use pesticides, and products used in a contained environment such as an industrial setting or in glasshouses;
- For wide dispersive substances, the need for an approved handler is to be assessed on a case-by-case basis considering factors that include the properties of the substance and its mode of action; and
- Approved handler requirements will continue to apply to an ecotoxic substance if the substance is used by a commercial contractor, regardless of it's manner of use.

On the basis of this policy this transfer report recommends that the approved handler requirements will not apply to phenoxy herbicides that are used in a non- or limited dispersive manner, unless they are being used by a commercial contractor. Section 6 specifies the substances to which this variation has been applied when they are used for home garden products. (Note: this is not intended to definitively identify all limited dispersive uses. The policy will equally apply to other substances when they are used in a non- or limited dispersive manner.) It is not expected that commercial contractors will use home garden products.

The tracking requirements are varied for phenoxy herbicides such that they are deleted when triggered solely by an ecotoxic hazard.

For those phenoxy herbicides with the potential to be used in a wide dispersive manner, the default approved handler and tracking controls apply. The appropriateness of these controls will be reviewed prior to these substances being transferred on 1 July 2004.

5. Packaging and packing group controls.

All of the phenoxy herbicides have the Packing Group 3 (PG3) control. For some of these substances, a Packing Group 2 (PG2) control was also triggered by a chronic (Class 6.6 to 6.9) classification. Where this occurred the PG2 control was deleted. Under the Global Harmonized System (GHS) of Classification and Labelling of Chemicals, a PG2 control is not triggered by a chronic endpoint.

6. Trigger quantities for transport on passenger service vehicles

Regulation 8 of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* and Regulation 10 of the *Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001* places restrictions on the size of package of Class 6, 8 and 9 substances that can be carried on any passenger vehicle. Under these regulations, some of the phenoxy herbicide products currently available in the retail sector (e.g. lawn weed herbicides) would not be allowed to be carried on public transport. Given the current packaging sizes and the potential risk from these substances, this is needlessly restrictive. Furthermore, enforcing this control after point of sale would be practically impossible.

It is recommended that the regulations relating to transport on passenger service vehicles are combined, and a revised trigger quantity set for substances available in the retail sector. ERMA New Zealand considers that the maximum quantity of these substances permitted to be carried on passenger service vehicles should be 5 litres (liquids) per package.

7. TELs, EELs and application rates

No tolerable exposure limits (TELs) or environmental exposure limits (EELs) are set for actives or components of phenoxy herbicides at this time. Tolerable exposure limits and EELs may be set for these substances before they are transferred, at which time further consultation will be undertaken. Because no EELs are being set under regulation 35 of the *Hazardous Substances*

(Classes 6, 8, and 9 Controls) Regulations 2001, the default EELs set under regulation 32, which would otherwise have applied, are deleted.

Regulation 48 requires the setting of an application rate if an EEL is set for a substance designed for use as a biocide. The setting of application rates for substances will be considered in conjunction with the setting of an EEL for any actives or components of this group of pesticides.

The Ministry for the Environment is considering a range of issues with TELs and EELs, including their setting, measurement and enforcement as part of the Ministry's discussion paper on the Hazardous Substance Strategy, due to be released later this year.

8. Use of substances ecotoxic to terrestrial invertebrates

Regulation 49 of the *Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001* (control code E3) prohibits the application of a Class 9.4 substance where bees are or are likely to be foraging (e.g. to a plant or tree in flower or bloom). The regulation also allows the Authority to specify a period prior to flowering when the substance cannot be applied.

Seven of the phenoxy herbicide substances covered by this transfer report trigger the E3 control, and regulation 49 applies to these substances. However, the substances are not applied as concentrates, but are used in a diluted form. When dilutions are prepared according to the label instructions given on the trade name products (ranging from 1 in 7.5 to 1 in 266 dilution), the dilutions do not exceed the minimum degrees of hazard for a Class 9.4 substance, and therefore regulation 49 does not apply. Under these circumstances, there is no restriction on the use of these substances in areas where bees may be foraging, and no need for the Authority to set a period prior to flowering when these substances cannot be used.

9. Unintended ignition of flammable substances

Five phenoxy herbicides are flammable liquids, having 3.1D classifications.

Regulation 60(2) of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* requires any persons handling any quantity of a Class 3.1 substance under any of regulations 61, 63 (4), 65, 67 and 69 to be an approved handler (i.e. the trigger quantities that typically activate approved handler requirements do not apply). Regulation 61 reflects the standard environmental conditions (i.e. those encountered in normal day to day activities and circumstances), and as such this requirement for approved handler status is impractical.

It is recommended that the F6 control is varied to remove the requirement of regulation 60(2) for approved handler status under regulation 61. A Class 3.1D substance does not otherwise activate approved handler requirements. This recommendation is in line with a proposed amendment to the Classes 1 to 5 Control Regulations, which is scheduled to be completed before these substances are transferred.

10. Intended ignition of flammable substances

Five phenoxy herbicides are flammable liquids, having 3.1D classifications.

Regulations 84 and 85 of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* specify the controls relating to the intended combustion of class 2, 3 and 4 substances, and in particular, the protection of workers in relation to this. However, thermal radiation can come from a number of sources, not just the combustion of flammable substances, for instance, from the use of steam, or from solid fuel furnaces. It has been suggested that the protection of workers from thermal radiation for the intended combustion of flammable substances is, therefore, better covered as a generic issue under the Health and Safety in Employment Act, as, in fact, it already is.

The *Specifications for Controls for Stationary Containers for Hazardous Liquids and Gases and Proposals for Amendments to Hazardous Substance Regulations*, which is currently out for consultation, recommends that Regulations 84 and 85 are deleted. Therefore it is recommended that the F17 control is deleted for all class 3.1D substances covered by this transfer report.

Recommendations

It is recommended that the Transfer of Substances Standing Committee:

1. **Note** that the transfer of substances as set out in this transfer report is predicated on the passage of a proposed amendment to the HSNO Act;
2. **Note** that an ERMA New Zealand expert group has concluded there is inadequate evidence of a causal relationship between exposure to chlorophenoxy herbicides and the development of Non Hodgkin's Lymphoma (NHL) and other cancers in humans at this time, and the available data could not be interpreted as showing the presence or absence of a carcinogenic effect;
3. **Note** that the proposed carcinogenicity classification is consistent with the classifications of the European Commission and the USEPA;
4. **Agree** that on the basis of the expert group's conclusion, chlorophenoxy herbicides should not be assigned a 6.7B classification;
5. **Agree** that the proposed Chief Executive Initiated Reassessment of 2,4-D should consider including a review of the carcinogenicity of other chlorophenoxy herbicides, so as to take account of new data;
6. **Agree** that neutralisation reactions between the phenoxy acids and the base components during salt formation result in reduced corrosivity/irritancy of the phenoxy acid salts, and this is sufficient to justify the removal of the skin corrosivity/irritancy classifications for these phenoxy acid salts;
7. **Agree** that the approved handler and tracking controls (E7, AH1 and TR1), when triggered by an ecotoxic hazard, will not apply to phenoxy herbicides used in a limited dispersive manner, unless they are being used by a commercial contractor;
8. **Agree** that the tracking control (TR1) will be deleted for phenoxy herbicides where triggered solely by an ecotoxic hazard;
9. **Note** that the requirement for approved handler and tracking for phenoxy herbicides that may be used in a wide dispersive manner will be reviewed before these substances are transferred;
10. **Agree** to delete the Packing Group 2 (PG2) when triggered by a chronic endpoint;
11. **Agree** to set revised trigger quantities for substances available in the retail sector for transport on passenger service vehicles of 5 litres (liquids) per package;
12. **Agree** not to set TELs and EELs at this time;
13. **Agree** to delete the default EELs set under regulation 32 of the *Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001*;
14. **Agree** to defer the setting of application rates until such time as EELs are set;
15. **Note** that seven phenoxy herbicide substances have a 9.4 classification, and regulation 49 of the *Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001* applies. This regulation does not apply to dilutions of these substances when prepared according to the instructions given on the labels of the current trade name products;
16. **Agree** to delete the approved handler requirement (F6) for handling any quantity of a Class 3.1 substance under regulation 61 of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001*.
17. **Agree** to delete the requirements to control the adverse effects of intended ignition of Class 2, 3 and 4 substances (F17) specified by regulations 84 and 85 of the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001*.

4 The Transfer Report

4.1 Introduction

This report presents to the Authority (represented by the Transfer of Substances Standing Committee) the phenoxy herbicides for consideration for transfer, with recommended classifications and controls.

There are over 1200 registered pesticides, currently covered by the transitional provisions of the HSNO Act, which will be considered for transfer to the main framework of the HSNO Act. The group of substances to be considered for transfer in this document are the phenoxy herbicides, that were registered, or were in the process of being registered, under s21 the Pesticides Act 1979 at the commencement of the hazardous substances part of the HSNO Act (i.e. 2 July 2001).

The HSNO Act requires each substance approved under the Act to be listed on a register with a sufficient description to uniquely identify that substance. The substances as defined in section 6 of this document will form the basis of this register listing. For pesticides, trade name products will not be transferred as such, but will be covered by a generic substance description. The trade name products covered by the generic substance descriptions listed in this document are attached as Annex 2.

The transfer process involves looking at the available data on a substance and assigning classifications to the substance based on the criteria specified in the *Hazardous Substances (Classification) Regulations 2001*. Default HSNO controls are then assigned to a substance on the basis of the assigned classifications. These controls, set out in regulations, cover the full life cycle of the substances from import/manufacture through to final disposal and includes matters such as labelling, packaging, emergency management, tracking and disposal.

The transfer of substances to the main framework of the HSNO Act will be affected by Gazette notice under section 160 of the Act (this is a part of the proposed amendment to the Act referred to in section 3) (see also section 4.3).

4.2 Report Layout

This report covers a number of substances with different classifications and it follows that different sets of controls may apply to each substance. However, to list the details of all the controls for every substance individually would run to many hundreds of pages containing a great deal of repetition. We have therefore compiled the complete set of default controls as they apply to all the substances listed, along with proposed variations to these controls. The recommended controls are based in the first instance on the default controls which arise directly from the hazard classifications of the substance, but may include variations proposed as a result of a comparison with existing requirements.

When these substances are transferred by regulation and appear on the register, each substance will be individually listed with the controls that apply to that particular substance.

The technical part of this report is contained in three sections:

Section 6: Substances to be transferred - lists the substances under consideration with the HSNO classifications and the default controls that apply to that substance. These controls are listed according to the coding system used in the Classifications/Controls matrix set out in Part A (“The Matrix”) of the ERMA New Zealand *User Guide to HSNO Control Regulations*.

Section 7: Comments and recommended variations to the HSNO default controls - cross references the control codes that are recommended to be varied, or on which comment is made, to the control regulations, and sets out the detail of what is contained in these regulations. Variations to the default controls, as allowed for under section 160(3) of the HSNO Act and the proposed amendment to section 160, are set out in the “Recommended Controls” column. This column also contains any comments on the controls.

Section 8: HSNO default controls - cross references the control codes not included in section 7 to the controls regulations, and sets out the detail of what is contained in these regulations.

To see what controls will apply to each substance on transfer, go to section 6 and look up the substance and the control codes. Then go to sections 7 and 8 and look up each control code, specifically the column headed "Recommended Controls". The default control either applies as set out in the regulations (section 8) or is varied for that substance or groups of substances as indicated under Recommended Controls in section 7.

4.3 Default Controls and Variation of Controls

The transfer of substances to the main framework of the HSNO Act will be affected by Gazette notice under section 160 of the Act. Substances are to be classified, and the default controls prescribed for each hazard classification will apply unless varied by the Authority. In many cases, such variations have been applied.

Sections 7 and 8 of this report set out an explanation of the control regulations that apply, drawn from the suite of hazardous substances regulations:

- *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* – specific requirements for explosive (Class 1), flammable (Classes 2,3,4), and oxidising (Class 5) substances
- *Hazardous Substances (Classes 6,8 and 9 Controls) Regulations 2001* – specific requirements for toxic (Class 6), corrosive (Class 8), and ecotoxic (Class 9) substances
- *Hazardous Substances (Identification) Regulations 2001* – effectively the requirements for labeling, material safety data sheets (MSDS), workplace information requirements, and also for signage and advertising
- *Hazardous Substances (Packaging) Regulations 2001* – the standards for packaging for specific hazard classes
- *Hazardous Substances (Disposal) Regulations 2001* – information that must be provided in relation to disposal of specific classes of hazard substance and packaging
- *Hazardous Substances (Emergency Management) Regulations 2001* – specifies the information requirements for the suppliers and persons in charge of places to which this regulation applies. The requirements are set on the basis of the quantities of specific hazard classes on a site, with higher level requirements for larger quantities and the higher hazard substances
- *Hazardous Substances (Tracking) Regulations 2001* – identifies which classes of hazardous substance have to be under the control of an approved handler, and what records must be kept and for how long
- *Hazardous Substances and New Organisms (Personnel Qualifications) Regulations 2001* – sets out the competency requirements for test certificates, approved handlers and qualifications for enforcement officers. This regulation also specifies the transitional arrangements for existing license holders.

A comparison with requirements that applied under previous legislation is provided in the tables in sections 7 and 8. The recommended controls are based on the HSNO default control attached to the classifications, with variations for the purpose of continuing existing requirements.

4.4 Review of Existing Information

Under the Pesticides Act 1979, the ACVM (Agricultural Compounds and Veterinary Medicines) group of the NZFSA (New Zealand Food Safety Authority) [formally part of Ministry of Agriculture and Forestry] was responsible for the registration of phenoxy herbicides. ACVM files were accessed for information provided at the time of product registration; registrants were contacted to ensure that the data obtained from ACVM was current and correct. Publicly

available local and international sources for physical, toxicity and ecotoxicity data (including international regulatory agencies) were searched.

Under the Pesticides Act 1979 information on labels, including application rates had to be approved by the ACVM. This information is summarised for each substance in section 6.

4.5 Comparison of Existing Requirements and Default HSNO Controls

A comparison of the existing requirements and the default HSNO controls is contained in the analysis in sections 7 and 8 of this report.

4.6 Additional Information

None sought

5 Consultation

5.1 Summary of Consultation Undertaken

Consultation #	Date	Consultation ¹ format	Submissions ² received
1	21 July – 15 September 2003	The document “ <i>List of Phenoxy Herbicides to be considered for Transfer under the Transitional Provisions of the HSNO Act with proposed Classifications and Controls</i> ” was circulated to registrants, government agencies and a number of interest groups throughout the country.	Ten submissions were received from: <ol style="list-style-type: none">1. Nufarm Ltd NZ2. Dow AgroSciences3. BASF4. Bayer New Zealand Limited5. Kiwicare Corporation Ltd6. Syngenta7. Wenita Forest Products8. New Zealand Vegetable and Potato Growers Federation9. Federated Farmers10. Ministry of Health

5.2 Responses to Submissions

All submissions were responded to individually by letter.

The summary of submissions for phenoxy herbicides is attached as Annex 3. A copy of the common queries and responses from earlier consultation on the transfer of other pesticides is also provided in this Annex.

5.3 Additional Submissions on the Carcinogenicity of Chlorophenoxy Herbicides

Upon receipt of our response to submissions made by parties, Nufarm Ltd NZ and Dow Agrosciences asked for the opportunity to provide additional information in support of the removal of the 6.7B carcinogenicity classification. A data package was received from Nufarm on 18 Nov 2003. Supporting comments were also received from Dow Agrosciences and the Industry Task Force II on 2,4-D Research Data. A summary of this data package and supporting comments is provided in Table 2 of Annex 3.

¹ A list of stakeholders who received the consultation document is available on request.

² Copies of submissions received are available on request.

6 Substances to be Transferred

The substances to be transferred are listed in the following table, along with their proposed HSNO classifications and controls (these substances are listed by 'Trade Name' in Annex 2).

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
2.4-D			
<p>A soluble concentrate containing 174 g/litre 2,4-D as the amine salt</p> <p>This includes the following trade name product:</p> <p>P002252 Fruit Fed Stop Drop</p>	<p>6.1E 6.4A 6.9A 9.1B 9.2A 9.3C</p>	<p>Toxic T1, T2, T3, T4, T7, T8,</p> <p>Ecotoxic E1, E2, E4, E5, E6, E7, E8,</p> <p>Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>CAUTION. Keep out of the reach of children. May be harmful if swallowed.</p> <p><u>Application Rates:</u> Citrus fruit: To stop fruit drop use 1 bottle per 450 litres water (20 ppm).</p> <p>Grape fruit: To delay harvest, drench trees thoroughly for coverage and do not mix with other sprays. Apply at least 7, preferably 10 days before any oil and/or Bordeaux sprays.</p> <p>Apricots: To prevent pre-harvest drop use 1 bottle per 450 litres (20 ppm). To hasten ripening and increase fruit size in mature trees only, apply 3 bottles (60 ppm) to Newcastle apricots and 2 bottles (40 ppm) to other varieties.</p> <p><u>Use:</u> Horticultural</p>
<p>An emulsifiable concentrate containing 520 g/litre 2,4-D as the ethylhexyl ester</p> <p>This includes the following trade name products:</p>	<p>3.1D 6.1D 6.3B 6.5B 6.9A 9.1A 9.2A</p>	<p>Flammable F2, F6, F11, F17¹,</p> <p>Toxic T1, T2, T3, T4, T5, T7, T8,</p> <p>Ecotoxic E1, E2, E4, E5, E6, E7, E8,</p> <p>Identification</p>	<p><u>PASTURE KLEEN</u></p> <p>POISON. Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or adsorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
P005106 Pasture-Kleen Herbicide P005149 Relay P005315 Thistle Killem	9.3C	<p> I1, I3, I5, I8, I9, I11, I13, I16, I17, I18, I19, I20, I21, I23, I25, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D2, D4, D5, D6, D7, D8, Emergency Management EM1, EM4, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1², </p> <p> ¹This control is deleted in accordance with the proposed amendment to the hazardous substance regulations (for more information see section 3.10). </p> <p> ²ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted. </p>	<p> SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides regulations to use this product in a manner that results in damage outside the treated property. The risk of spray drift is reduced if higher water rates are used and nozzles which minimise the production of small droplets (less than 100 microns) are used. </p> <p> <u>Application Rate:</u> To control broadleaf weeds in pasture apply up to 4.0 litres/ha. To control willows apply up to 8 litres/ha. To control Spanish Heath, apply 650 ml/100 L water to full coverage during active spring growth. </p> <p> <u>Use:</u> Agricultural </p> <p> RELAY </p> <p> POISON. Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin. </p> <p> BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides regulations to use this product in a manner that results in damage outside the treated property. To minimise the risk of damage from drift of this product, especially where susceptible vegetation is within 0.5 km, use low drift nozzles which minimise the production of small droplets (less than 100 micrometres). </p> <p> Toxic to fish Hazard Class 9 UN No 3082 HAZCHEM 2Z PG III </p> <p> <u>Application Rate:</u> To control broadleaf weeds in pasture and turf apply up to 4 litres/ha. To control cape tulip, goats rue seedlings and rushes apply up to 8 litres/ha. To control willows apply up to 8 litres/ha To control Spanish Heath, </p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
			<p>apply 650 ml/100 L water as a complete wetting spray.</p> <p><u>Uses:</u> Agricultural, Horticultural</p> <p><u>THISTLE KILLEM</u></p> <p>POISON. Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rates:</u> Recommendation for pasture and non crop situations – apply up to 4.0 litres/ha. For treatment of specific weeds – apply up to 8 litres/ha.</p> <p><u>Use:</u> Agricultural</p>
<p>A soluble concentrate containing 625 g/litre 2,4-D as the dimethylamine and diethanolamine salts</p> <p>This includes the following trade name product:</p> <p>P006025 Amicide 625</p>	<p>6.1C 6.9A 8.3A 9.1B 9.2A 9.3B</p>	<p>Toxic T1, T2, T3, T4, T5, T6, T7, T8,</p> <p>Ecotoxic E1, E2, E4, E5, E6, E7, E8,</p> <p>Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P14, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1, TR1,</p>	<p>POISON Keep out of the reach of children.</p> <p>UN No 3082 Class 9 PG III Hazchem 2XE</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides regulations to use this product in a manner that results in damage outside the treated property.</p> <p>WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p><u>Application Rates:</u> To control broadleaf weeds in cereals and pastures, apply up to 4 L/ha.</p> <p><u>Use:</u> Agricultural</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
<p>A water soluble granule containing 800 g/kg 2,4-D as the dimethylamine salt</p> <p>This includes the following trade name product:</p> <p>P005070 Baton</p>	<p>6.1D 6.3B 6.9A 8.3A 9.1B 9.2A 9.3B</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>POISON Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>UN No 3077 Class 9 PG III Hazchem 2X</p> <p>BEWARE: SPRAY DRIFT HAZARD. APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rates:</u> To control broadleaf weeds in pasture and cereals, apply up to 3 kg/ha.</p> <p><u>Use:</u> Agricultural</p>
<p>A water soluble powder containing 800 g/kg 2,4-D as the sodium salt.</p> <p>This includes the following trade name product:</p> <p>P004425 Agrichem 2,4-D</p>	<p>6.1D 6.5B 6.9A 8.3A 9.1B 9.2A 9.3C</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM13,</p>	<p>POISON Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: SPRAY DRIFT HAZARD. APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rates:</u> To control broadleaf weeds in pasture and waste areas apply up to 2.6 litres/ha</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p><u>Use:</u> Unspecified</p>
2,4-D/DICAMBA			
<p>A soluble concentrate containing 100 g/litre 2,4-D plus 50 g/litre dicamba as amine salts</p> <p>This includes the following trade name product:</p> <p>P003390 Woody Weedkiller</p>	<p>6.1D 6.4A 6.9B 9.1A 9.2A 9.3C 9.4C</p>	<p>Toxic T1, T2, T4, T7¹, T8,</p> <p>Ecotoxic E1, E2, E3, E4, E5, E6, E7², E8¹,</p> <p>Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I20, I21, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1², TR1³,</p> <p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner</p>	<p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p>This material is very damaging to Grapes, Tomatoes and other sensitive crops.</p> <p>WARNING: Do not plant shrubs, vegetables or crops until 6 months have elapsed since treatment with Woody Weedkiller. Do not compost lawn clippings until 3 cutting following treatment.</p> <p><u>Application Rates</u></p> <p>To control broadleaf weeds, onehunga weed and clovers in lawns apply up to 80 ml/100 m².</p> <p><u>Use:</u></p> <p>Home garden</p> <p><u>Packaging:</u></p> <p>200ml High Density Polyethylene (HDPE) bottle with</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>³ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>childproof lid.</p>
<p>A soluble concentrate containing 200 g/litre 2,4-D and 100 g/litre dicamba as amine salts.</p> <p>This includes the following trade name product:</p> <p>P001057 Banvine</p>	<p>6.1E 6.4A 6.9A 9.1A 9.2A 9.3B 9.4C</p>	<p>Toxic T1, T2, T3, T4, T7¹, T8,</p> <p>Ecotoxic E1, E2, E3, E4, E5, E6, E7², E8¹,</p> <p>Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1², TR1³,</p> <p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner</p>	<p>POISON Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p>WARNING: Do not plant shrubs, vegetables or crops until 6 months have elapsed since treatment with Banvine. Do not compost lawn clippings until 3 cutting following treatment.</p> <p><u>Application Rates:</u> To control broadleaf weeds in turf and waste areas:</p> <p>Knapsack: apply up to 110 ml BANVINE herbicide per 250 square meters.</p> <p>Broadcast: use up to 4.5 litres/ha BANVINE herbicide.</p> <p><u>Use:</u> Other – includes home garden use</p> <p><u>Packaging:</u> 5 litre high density polyethylene jerry can.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>³ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	
2,4-D/DICAMBA/MECOPROP			
<p>A granule containing 10.3 g/kg 2,4-D, 0.7 g/kg dicamba and 10.3 g/kg mecoprop</p> <p>This includes the following trade name product:</p> <p>P005503 Fertiliser 21:1:16 With Dicot Weed Control III</p>	<p>6.4A 6.9B 9.1C 9.2A</p>	<p>Toxic T1, T2, T4, T7, Ecotoxic E1, E2, E5, E6, E7, E8, Identification I1, I3, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>BEWARE: Apply this product carefully. Non target application (over-spread) may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p>Keep out of the reach of children. Harmful if swallowed.</p> <p><u>Application rate:</u> For post emergent control of broadleaf weeds & feeding of turf with slow release nitrogen, apply up to 160 kg/ha.</p> <p><u>Use:</u> Turf</p>
2,4-D/MECOPROP/DICAMBA		See 2,4-D/Dicamba/Mecoprop	

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
2,4-DB			
<p>A soluble concentrate containing 400 g/litre 2,4-DB as the sodium salt</p> <p>This includes the following trade name product:</p> <p>P000179 2,4-DB Herbicide</p>	<p>6.1D 6.3A 6.5B 6.9A 8.3A 9.1C 9.2A 9.3C 9.4C</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8,</p> <p>Ecotoxic E1, E2, E3, E4, E5, E6, E7, E8,</p> <p>Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P14, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>POISON Keep out of the reach of children.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p>WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p><u>Application Rate:</u> To control broadleaf weeds in Lucern and new pastures, apply up to 8 litre/ha.</p> <p><u>Use:</u> Agricultural</p>
BENTAZONE/MCPB			
<p>A soluble concentrate containing 200 g/litre bentazone and 200 g/litre MCPB as the sodium salt</p> <p>This includes the following trade name product:</p> <p>P004961 Pulsar</p>	<p>6.1E 6.3B 6.4A 6.5B 6.8B 6.9B 9.1B 9.2B</p>	<p>Toxic T1, T2, T4, T5, T7, T8,</p> <p>Ecotoxic E1, E2, E6, E8,</p> <p>Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p>	<p>CAUTION Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,	<u>Application Rate:</u> To control broadleaf weeds in cereal, clover, new pastures and peas, apply up to 7.5 litres/ha. <u>Use:</u> Agricultural
BROMOXYNIL/IOXYNIL/MECOPROP			
An emulsifiable concentrate containing 75 g/l bromoxynil and 75 g/l ioxynil both as the octanoate and heptanoate esters and 345 g/l mecoprop as the isooctyl ester This includes the following trade name product: P002799 Axall	3.1D 6.1D 6.3B 6.4A 6.5B 6.8B 6.9A 8.1A 9.1A 9.2A 9.3C 9.4C	Flammable F2, F6, F11, F17 ¹ , Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E3, E4, E5, E6, E7, E8, Identification I1, I2, I3, I5, I8, I9, I10, I11, I13, I16, I17, I18, I19, I20, I21, I22, I23, I25, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D2, D4, D5, D6, D7, D8, Emergency Management EM1, EM4, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1 ² , ¹ This control is deleted in accordance with the proposed amendment to the hazardous substance regulations (for more information see section 3.10). ² ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.	POISON Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin. BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property. Harmful to fish. <u>Application Rate:</u> To control a large range of broad-leaved weeds in winter and spring-sown cereals, ryegrass seed crops and in fine turf grass, apply up to 3.5 litres Axall per hectare. <u>Use:</u> Agricultural, Other (Amenity turf)

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
<p>An emulsifiable concentrate containing 120 g/litre bromoxynil and 120 g/litre ioxynil as the octanoate esters and 360 g/litre mecoprop-p as the butoxyethanol ester</p> <p>This includes the following trade name product:</p> <p>P005951 Image</p>	<p>6.1D 6.4A 6.5B 6.8B 6.9B 9.1A 9.2A 9.3C 9.4C</p>	<p>Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E3, E4, E5, E6, E7, E8, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I20, I21, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>POISON Keep out of the reach of children. WARNING This product may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>UN No 3082 Class 9 PG III Hazchem 2Z</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> For broad-spectrum broadleaf weed control in cereals and ryegrass seed crops apply up to 1.75 L/ha.</p> <p><u>Use:</u> Agricultural</p>
BROMOXYNIL/MCPA			
<p>An emulsifiable concentrate containing 200 g/litre bromoxynil as the octanoate ester and 200 g/litre MCPA as the ethyl ester</p> <p>This includes the following trade name products:</p> <p>P005463 Garden King Onehunga Weed Killer</p> <p>P005673 Bromicide MA</p>	<p>3.1D 6.1D 6.3B 6.4A 6.5B 6.8B 6.9A 9.1A 9.2A 9.3B 9.4B</p>	<p>Flammable F2¹, F6, F11, F17², Toxic T1, T2, T3, T4, T5, T7¹, T8, Ecotoxic E1, E2, E3, E4, E5, E6, E7³, E8¹, Identification I1, I3, I5, I8, I9, I11, I13, I16, I17, I18, I19, I20, I21, I23, I25, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal</p>	<p><u>GARDEN KING ONEHUNGA WEED KILLER</u></p> <p>POISON Keep out of the reach of children. Warning: this material may cause skin and eye irritation and be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>Toxic to fish.</p> <p><u>Application Rate:</u> For the control of annual and perennial broadleaf weeds in established lawns apply up to 30 ml per 50 square metres.</p> <p><u>Use:</u> Home garden product</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>D2, D4, D5, D6, D7, D8, Emergency Management EM1, EM4, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13, Tracking and Approved Handler AH1³, TR1⁴</p> <p>¹ This substance attracts the F2, T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² This control is deleted in accordance with the proposed amendment to the hazardous substance regulations (for more information see section 3.10).</p> <p>³ ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>⁴ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p><u>Packaging:</u> 200 ml containers</p> <p><u>BROMICIDE MA</u></p> <p>POISON Keep out of the reach of children. WARNING This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>UN No 3082 Class 9 PG III Hazchem 2Z</p> <p>Beware: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p>Toxic to fish.</p> <p><u>Application Rate:</u> To control broad-leaved weeds in wheat, barley, oats and linseed, apply up to 2 L/ha.</p> <p><u>Use:</u> Agricultural</p> <p><u>Packaging:</u> 20 L tin</p>
BROMOXYNIL/MECOPROP/IOXYNIL		See Bromoxynil/Ioxynil/Mecoprop	
CLODINAFOF-PROPARGYL			
<p>An emulsifiable concentrate containing 240 g/litre clodinafop-propargyl</p> <p>This includes the following trade name product:</p>	<p>3.1D 6.1D 6.3A 6.4A 6.5B 6.8A 6.9B</p>	<p>Flammable F2, F6, F11, F17¹,</p> <p>Toxic T1, T2, T3, T4, T5, T7, T8,</p> <p>Ecotoxic E1, E2, E5, E6, E7, E8,</p> <p>Identification</p>	<p>CAUTION Keep out of the reach of children.</p> <p>WARNING This material may cause skin and eye irritation.</p> <p>UN 3082 Environmentally Hazardous Substance, Liquid, N.O.S. (Contains: Clodinafop-propargyl 24%) Marine Pollutant. Packing Group III, Hazchem 2Z.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
P004546 Topik	9.1A 9.2A	<p>I1, I3, I5, I8, I9, I11, I13, I16, I17, I18, I19, I20, I21, I23, I25, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D2, D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM4, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1, TR1²,</p> <p>¹This control is deleted in accordance with the proposed amendment to the hazardous substance regulations (for more information see section 3.10).</p> <p>²ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p><u>Application Rate:</u></p> <p>To control Wild Oat, Lesser Canary Grass and Gnawed Canary grass in Wheat, Triticale, Ryecorn and Durum Wheat, apply up to 100 ml/ha.</p> <p><u>Use:</u></p> <p>Agricultural Horticultural</p>
DICAMBA/2,4-D		See 2,4-D/Dicamba	
DICAMBA/2,4-D/MECOPROP		See 2,4-D/Dicamba/Mecoprop	
DICAMBA/DICHLORPROP/MCPA/MECOPROP			
<p>A soluble concentrate containing 17 g/litre dicamba, 233 g/litre dichlorprop, 107 g/litre MCPA and 210 g/litre mecoprop as the dimethylamine salts</p> <p>This includes the following trade name product:</p> <p>P003176 Salvo</p>	6.1D 6.3B 6.5B 6.9B 8.3A 9.1A 9.2A 9.3B	<p>Toxic T1, T2, T4, T5, T7, T8,</p> <p>Ecotoxic E1, E2, E4, E5, E6, E7, E8,</p> <p>Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P14, P15, PG3,</p>	<p>CAUTION Keep out of the reach of children. WARNING This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>Beware: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broad-leaved weeds and</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>thistles in cereal crops, apply up to 4 litres of SALVO per hectare.</p> <p><u>Use:</u> Agricultural</p>
DICAMBA/DICHLORPROP/MECOPROP/MCPA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
DICAMBA/MCPA			
<p>A liquid containing 2.3 g/litre dicamba and 15 g/litre MCPA as amine salts</p> <p>This includes the following trade name product:</p> <p>P004201 Liquid Weed'N'Feed</p>	<p>6.1E 6.3B 6.4A 6.9B 9.1C 9.3C</p>	<p>Toxic T1, T2, T4, T7¹, T8, Ecotoxic E1, E2, E4, E6, E8¹, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p>	<p>POISON Keep out of the reach of children. WARNING This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds and add nutrition to lawns, apply up to 2 litres per 130 square metres of lawn.</p> <p><u>Use:</u> Home garden product</p> <p><u>Packaging:</u> 2 litre containers</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
DICAMBA/MCPA/MECOPROP			
<p>A soluble concentrate containing 6.2 g/litre dicamba, 50 g/litre MCPA and 200 g/litre mecoprop as the dimethylamine salts</p> <p>This includes the following trade name products:</p> <p>P004372 Improved Turfix P006101 Lawn Weed Spray</p>	<p>6.1D 6.9B 8.3A 9.1B 9.2A 9.3C</p>	<p>Toxic T1, T2, T4, T5, T7¹, T8,</p> <p>Ecotoxic E1, E2, E4, E5, E6, E7², E8¹,</p> <p>Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P14, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13</p> <p>Tracking and Approved Handler AH1², TR1³,</p> <p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>³ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1</p>	<p><u>IMPROVED TURFIX</u></p> <p>CAUTION Keep out of the reach of children. WARNING: This material may be harmful if swallowed.</p> <p>This material is very damaging to Grapes, Tomatoes and other sensitive crops. Do not allow spray to drift on to desirable plants.</p> <p><u>Application Rate:</u> To control broadleaf in lawns apply up to 65ml per 50 square metres of lawn.</p> <p><u>Use:</u> Other – home garden</p> <p><u>Packaging:</u> 200 ml, 500 ml and 1 litre High Density Polyethylene (HDPE) containers</p> <p><u>LAWN WEED SPRAY</u></p> <p>CAUTION Keep out of the reach of children. WARNING This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf in lawns apply up to 65ml per 50 square metres of lawn.</p> <p><u>Use:</u> Other – home garden</p> <p><u>Packaging:</u> 200 ml, 500 ml and 1 litre High Density Polyethylene (HDPE) containers.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		control solely from it's ecotoxic classification, this control is deleted.	
<p>A soluble concentrate containing 18.7 g/litre dicamba, 150 g/litre MCPA and 600 g/litre mecoprop</p> <p>This includes the following trade name products:</p> <p>P003253 Trimec P005192 Tricombi</p>	<p>6.1D 6.5A 6.5B 6.8B 6.9A 8.3A 9.1A 9.2A 9.3C</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from it's ecotoxic classification, this control is deleted.</p>	<p><u>TRIMEC</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control a wide range of broadleaf weeds in cereals, apply up to 4 L/ha</p> <p><u>Use:</u> Agricultural</p> <p><u>TRICOMBI</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants.</p> <p><u>Application Rate:</u> To control a wide range of broadleaf weeds in wheat, barley, oats and ryegrass seedcrops, apply up to 4 litres per hectare.</p> <p><u>Use:</u> Agricultural</p>
<p>A soluble concentrate containing 18.7 g/litre dicamba, 150 g/litre MCPA and 600 g/litre mecoprop as the dimethylamine salts</p>	<p>6.1D 6.5B 6.9A 8.3A 9.1A</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
<p>This includes the following trade name product:</p> <p>P005005 Legend</p>	<p>9.2A 9.3C</p>	<p>I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control a wide range of broadleaf weeds in wheat, barley, oats and ryegrass seed crops, apply up to 4 litres per hectare.</p> <p><u>Use:</u> Agricultural</p>
<p>A soluble concentrate containing 21 g/litre dicamba, 42 g/litre MCPA and 168.5 g/litre mecoprop as the diethanolamine salts</p> <p>This includes the following trade name products:</p> <p>P002981 Turfclean</p>	<p>6.1D 6.3B 6.9B 8.3A 9.1A 9.2A 9.3C</p>	<p>Toxic T1, T2, T4, T5, T7¹, T8, Ecotoxic E1, E2, E4, E5, E6, E7², E8¹, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1², TR1³,</p>	<p>Store away from children and foodstuffs.</p> <p><u>Application Rate:</u></p> <p>To control broad-leaved weeds and clovers in established lawns apply 1ml Turfclean per square metre of lawn.</p> <p><u>Use:</u></p> <p>Home garden product.</p> <p><u>Packaging:</u></p> <p>250 ml container</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>³ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	
DICAMBA/MCPA/DICHLORPROP/MECOPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
DICAMBA/MCPA/MECOPROP/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
DICAMBA/MECOPROP			
<p>A soluble concentrate containing 40 g/litre dicamba and 240 g/litre mecoprop as the amine salts</p> <p>This includes the following trade name product:</p> <p>P005462 Garden King Kleen Lawn</p>	<p>6.1D 6.5B 6.9B 8.3A 9.1A 9.2A 9.3C 9.4C</p>	<p>Toxic T1, T2, T4, T5, T7¹, T8,</p> <p>Ecotoxic E1, E2, E3, E4, E5, E6, E7², E8¹,</p> <p>Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P14, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p>	<p>CAUTION Keep out of the reach of children</p> <p>Warning: This material may cause irritation to the eyes and skin.</p> <p><u>Application Rate:</u></p> <p>To control broadleaf weeds in couch and kikuyu lawns apply up to 15 ml per 10 square metres.</p> <p><u>Use:</u></p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13,</p> <p>Tracking and Approved Handler AH1², TR1³,</p> <p>¹ This substance attracts both the T7 and E8 controls, which set a maximum pack size allowed on passenger service vehicles. These controls are varied so that the maximum quantity permitted on passenger service is 5 litres per package.</p> <p>² ERMA New Zealand policy varies requirements for ecotoxic substances used in a non- or limited dispersive manner (for more information see section 3.4). Where this substance is used in this manner there will be no requirement for approved handlers, unless it is being used by a commercial contractor.</p> <p>³ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>Home garden product.</p> <p><u>Packaging:</u></p> <p>200 and 500 ml glass container</p>
DICAMBA/MECOPROP/2,4-D		See 2,4-D/Dicamba/Mecoprop	
DICAMBA/MECOPROP/DICHLORPROP/MCPA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
DICAMBA/MECOPROP/MCPA		See Dicamba/MCPA/Mecoprop	
DICAMBA/MECOPROP/MCPA/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
DICHLORPROP			
A soluble concentrate containing 600 g/litre dichlorprop (optically active isomer) potassium salt	6.1D 6.5B 6.9B 8.3A	Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8,	POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
<p>This includes the following trade name product:</p> <p>P003799 Duplosan-DP</p>	<p>9.1D 9.2A 9.3C</p>	<p>Identificati on I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13 Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rates:</u> To control difficult weeds in cereals, apply up to 2.75 litres/ha.</p> <p><u>Use:</u> Agricultural</p>
DICHLORPROP/MCPA/MECOPROP			
<p>A soluble concentrate containing 310 g/litre dichlorprop-p, 160 g/litre MCPA and 130 g/litre mecoprop-p as dimethylamine salts</p> <p>This includes the following trade name products:</p> <p>P004594 Duplosan Super P005645 Compitone Super</p>	<p>6.1D 6.5B 6.9A 8.3A 9.1D 9.2A 9.3B</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12,</p>	<p><u>DUPLOSAN SUPER</u></p> <p>POISON Keep out of the reach of children WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>Beware: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> For use in wheat, barley, oats, grass crops, and grass lawns against a wide range of broadleaf</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		EM13, Tracking and Approved Handler AH1, TR1 ¹ , ¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.	weeds, apply up to 2.5 litres/ha <u>Use:</u> Unspecified <u>COMPITONE SUPER</u> POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin. Beware: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property. <u>Application Rate:</u> To control broadleaf weeds in cereals, grass crops and turf lawns, apply up to 2.5 litres/ha. <u>Use:</u> Agricultural <u>Packaging:</u> 10L HDPE jerrycan, tamper evident cap.
DICHLORPROP/MECOPROP/MCPA		See Dichlorprop/MCPA/Mecoprop	
FENOXAPROP-P-ETHYL			
An oil in water emulsion containing 69 g/litre fenoxaprop-p-ethyl This includes the following trade name product: P003945 Puma S	6.1E 6.3A 6.4A 6.5B 9.1A	Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E5, E6, E7, E8, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management	WARNING: May cause irritation of eyes and skin. May cause skin sensitization in sensitive persons. <u>Application Rate:</u> For use as a selective grass weed herbicide in Wheat and Perennial Ryegrass apply up to 750 ml/hectare. <u>Use:</u> Agricultural

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		EM1, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1 ¹ , ¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from it's ecotoxic classification, this control is deleted.	
FLUAZIFOP-P-BUTYL			
A water dispersible granule containing 250 g/kg fluzifop-p-butyl This includes the following trade name product: P003188 Fusilade	6.3B 6.4A 6.9B 9.1A	Toxic T1, T2, T4, T7, Ecotoxic E1, E2, E5, E6, E7, E8, Identification I1, I3, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM13, Tracking and Approved Handler AH1, TR1 ¹ , ¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from it's ecotoxic classification, this control is deleted.	WARNING: Harmful if swallowed. Will irritate skin and eyes. UN No 3077 Environmentally hazardous substance, solid, N.O.S. (Contains: fluzifop-P-butyl). Marine pollutant. Class 9 PG III Hazchem 2X. <u>Application Rate:</u> For the selective post emergence control of Annual and Perennial Grasses in a wide range of broadleaved crops, including Orchards, Forestry and Ornamentals, apply up to 1.5 kg/ha. <u>Use:</u> Agricultural, Horticultural

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
HALOXYFOP			
<p>An emulsifiable concentrate containing 100 g/litre haloxyfop [(R)-isomer] as the methyl ester</p> <p>This includes the following trade name product:</p> <p>P004839 Gallant NF Herbicide</p>	<p>3.1D 6.4A 6.9B 9.1B</p>	<p>Flammable F2, F6, F11, F17¹,</p> <p>Toxic T1, T2, T4, T7,</p> <p>Ecotoxic E1, E2, E6, E8,</p> <p>Identification I1, I3, I5, I9, I11, I13, I16, I17, I18, I19, I21, I23, I25, I28, I29,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D2, D4, D5, D6, D7, D8,</p> <p>Emergency Management EM1, EM4, EM6, EM7, EM8, EM9, EM10, EM11, EM12, EM13,</p> <p>¹This control is deleted in accordance with the proposed amendment to the hazardous substance regulations (for more information see section 3.10).</p>	<p>CAUTION Keep out of the reach of children.</p> <p>WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p><u>Application Rate:</u></p> <p>To control grass weeds in white clover, forestry, orchards, nurseries, non-crop areas and certain broadleaf crops, apply up to 7.5 litres/ha.</p> <p><u>Use:</u></p> <p>Agricultural Horticultural Other (forestry and nursery trees)</p>
HALOXYFOP/TERBUTHYLAZINE			
<p>A suspension concentrate containing 17 g/litre haloxyfop[(R)-isomer] as the methyl ester and 500 g/litre terbuthylazine</p> <p>This includes the following trade name product:</p> <p>P005325 Agpro Liberate</p>	<p>6.1E 6.9B 9.1A 9.2A</p>	<p>Toxic T1, T2, T4, T7, T8,</p> <p>Ecotoxic E1, E2, E5, E6, E7, E8,</p> <p>Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I21, I23, I28, I29, I30,</p> <p>Packaging and Packaging Group P1, P3, P13, P15, PG3,</p> <p>Disposal D4, D5, D6, D7, D8,</p>	<p>CAUTION Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> For use as a selective herbicide in forestry, apply up to 20 litres/ha.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p><u>Use:</u> Agricultural</p>
IOXYNIL/BROMOXYNIL/MECOPROP		See Bromoxynil/Ioxynil/Mecoprop	
IOXYNIL/MECOPROP/BROMOXYNIL		See Bromoxynil/Ioxynil/Mecoprop	
MCPA			
<p>A soluble concentrate containing 375 g/litre MCPA as the potassium salt.</p> <p>This includes the following trade name products:</p> <p>P000262 MCPA Herbicide P000375 MCPA 400 P004625 Jolyn Clean Sweep P004867 Crop Care MCPA</p>	<p>6.1D 6.9A 8.3A 9.1A 9.2A 9.3C</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see</p>	<p><u>MCPA HERBICIDE</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in pasture and cereals apply up to 6 litres/ha</p> <p><u>Use:</u> Agricultural</p> <p><u>MCPA 400</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>section 3.4). As this substance triggers the TR1 control solely from it's ecotoxic classification, this control is deleted.</p>	<p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> For use as a selective herbicide in certain crops, pasture and amenity turf apply up to 6 litres/ha.</p> <p><u>Use:</u> Agricultural</p> <p><u>JOLYN CLEAN SWEEP</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in pasture and cereals apply up to 6 litres/ha.</p> <p><u>Use:</u> Agricultural</p> <p><u>CROP CARE MCPA</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
			<p>Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in pasture and cereals apply up to 6 litres/ha.</p> <p><u>Use:</u> Agricultural</p>
<p>A soluble concentrate containing 500 g/litre MCPA as the dimethylamine salt</p> <p>This includes the following trade name product:</p> <p>P004984 Headland Spear</p>	<p>6.1D 6.3B 6.5B 6.9A 8.3A 9.1D 9.2A 9.3C</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>POISON Keep out of the reach of children.</p> <p>WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p><u>Application Rate:</u></p> <p>For use as a selective herbicide in cereal, linseed and pasture apply up to 4.5 litres/ha.</p> <p><u>Use:</u></p> <p>Agricultural</p>
<p>A soluble concentrate containing 720 g/litre MCPA as the dimethylamine salt</p> <p>This includes the following trade</p>	<p>6.1D 6.9A 8.3A 9.1A 9.2A</p>	<p>Toxic T1, T2, T3, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
name product: P005707 Agritone 720	9.3B	I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1 ¹ , ¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.	cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property. <u>Application Rate:</u> For use as a selective herbicide in certain crops, pasture and amenity turf apply up to 3 litres/ha. <u>Use:</u> Agricultural
MCPA/BROMOXYNIL		See Bromoxynil/MCPA	
MCPA/DICAMBA		See Dicamba/MCPA	
MCPA/DICAMBA/DICHLORPROP/MECOPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPA/DICAMBA/MECOPROP		See Dicamba/MCPA/Mecoprop	
MCPA/DICAMBA/MECOPROP/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPA/DICHLORPROP/DICAMBA/MECOPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPA/DICHLORPROP/MECOPROP		See Dichlorprop/MCPA/Mecoprop	
MCPA/DICHLORPROP/MECOPROP/DICAMBA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPA/MCPB			
A soluble concentrate containing 25 g/litre MCPA and 375 g/litre MCPB as the sodium salts. This includes the following trade name products:	6.1D 6.4A 6.8B 6.9B 9.1A 9.2A 9.3C	Toxic T1, T2, T4, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I20, I21, I23, I28, I29, I30,	<u>TROPOTOX PLUS</u> POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin. BEWARE: APPLY THIS PRODUCT CAREFULLY.

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
P003275 Tropotox Plus P005202 Select		<p>Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p>SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broad-leaved weeds in pastures, grass and white clover seed crops, peas and cereals apply up to 4 litres/ha.</p> <p><u>Use:</u> Agricultural</p> <p><u>SELECT</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broad-leaved weeds in pastures, grass and white clover seed crops, peas and cereals apply up to 4 litres/ha.</p> <p><u>Use:</u> Agricultural</p>
A soluble concentrate containing 25 g/litre MCPA and 375 g/litre MCPB both as the dimethylamine salts This includes the following trade name products:	6.1D 8.3A 6.5B 6.9B 9.1A 9.2A 9.3C	<p>Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I2, I3, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I23, I28, I29, I30, Packaging and Packaging Group</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
P005956 Thistrol Plus		P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13, Tracking and Approved Handler AH1, TR ¹ , ¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.	property. <u>Application Rate:</u> To control broadleaf weeds in young and established pastures, cereals, peas and in white clover and grass seed crops apply up to 4 litres/ha. <u>Use:</u> Agricultural
MCPA/MECOPROP/DICAMBA		See Dicamba/MCPA/Mecoprop	
MCPA/MECOPROP/DICAMBA/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPA/MECOPROP/DICHLORPROP		See Dichlorprop/MCPA/Mecoprop	
MCPA/MECOPROP/DICHLORPROP/DICAMBA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MCPB			
A soluble concentrate containing 385 g/litre MCPB as the sodium salt. This includes the following trade name products: P000265 MCPB 400 P000268 MCPB Herbicide P004861 Soft Touch	6.1D 6.4A 6.8B 6.9B 9.1A 9.2A 9.3C	Toxic T1, T2, T4, T7, T8, Ecotoxic E1, E2, E4, E5, E6, E7, E8, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I20, I21, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,	<u>MCPB 400</u> POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin. BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property. <u>Application Rate:</u> For use as a selective herbicide in certain crops and pasture apply up to 6 litres/ha.

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		<p>Tracking and Approved Handler AH1, TR1¹,</p> <p>¹ ERMA New Zealand policy states that tracking requirements should not apply to substances which trigger the TR1 control on the basis of their ecotoxic hazard only (for more information see section 3.4). As this substance triggers the TR1 control solely from its ecotoxic classification, this control is deleted.</p>	<p><u>Use:</u> Agricultural</p> <p><u>MCPB HERBICIDE</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in pastures and some crops apply up to 6 litres/ha.</p> <p><u>Use:</u> Agricultural</p> <p><u>SOFT TOUCH</u></p> <p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in pastures and some crops apply up to 6 litres/ha.</p> <p><u>Use:</u> Agricultural</p>
MCPB/MCPA		See MCPA/MCPB	

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
MECOPROP			
<p>A soluble concentrate containing 600 g/litre mecoprop as the potassium salt</p> <p>This includes the following trade name product:</p> <p>P003786 Mecoprop 600A</p>	<p>6.1D 6.9B 8.3A 9.3C</p>	<p>Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E6, E8, Identification I1, I2, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12, EM13</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control broadleaf weeds in barley, oats, ryecorn, wheat and in grass turf apply up to 5 litres/ha.</p> <p><u>Use:</u> Unspecified</p>
<p>A soluble concentrate containing 600 g/litre mecoprop-p (optically active isomer) as the potassium salt</p> <p>This includes the following trade name product:</p> <p>P003898 Duplosan-KV</p>	<p>6.1D 6.9B 8.3A 9.3C</p>	<p>Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E6, E8, Identification I1, I2, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12EM13</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: APPLY THIS PRODUCT CAREFULLY. SPRAY DRIFT MAY CAUSE SERIOUS DAMAGE TO OTHER DESIRABLE PLANTS. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property.</p> <p><u>Application Rate:</u> To control difficult weeds in cereal apply up to 2.6 litres/ha.</p> <p><u>Use:</u> Agricultural, Horticultural</p>
<p>A soluble concentrate containing 600 g/litre mecoprop-p as the dimethylamine salt</p> <p>This includes the following trade name product:</p>	<p>6.1D 8.3A 6.5B 6.9B 9.3C</p>	<p>Toxic T1, T2, T4, T5, T7, T8, Ecotoxic E1, E2, E4, E6, E8, Identification I1, I2, I8, I9, I10, I11, I16, I17, I18, I19, I20, I21, I22, I28, I29, I30,</p>	<p>POISON Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin.</p> <p>BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product</p>

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
P005646 Compitone Plus		Packaging and Packaging Group P1, P3, P13, P14, P15, PG3, Disposal D4, D5, D6, D7, D8, Emergency Management EM1, EM2, EM6, EM7, EM8, EM11, EM12EM13	in a manner that results in damage outside the treated property. <u>Application Rate:</u> To control broadleaf weeds in cereals and turf grasses, apply up to 2.6 litres/ha. <u>Use:</u> Agricultural
MECOPROP/2,4-D/DICAMBA		See 2,4-D/Dicamba/Mecoprop	
MECOPROP/BROMOXYNIL/IOXYNIL		See Bromoxynil/Ioxynil/Mecoprop	
MECOPROP/DICAMBA/2,4-D		See 2,4-D/Dicamba/Mecoprop	
MECOPROP/DICAMBA		See Dicamba/Mecoprop	
MECOPROP/DICAMBA/DICHLORPROP/MCPA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MECOPROP/DICAMBA/MCPA		See Dicamba/MCPA/Mecoprop	
MECOPROP/DICAMBA/MCPA/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MECOPROP/DICHLORPROP/DICAMBA/MCPA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MECOPROP/DICHLORPROP/MCPA		See Dichlorprop/MCPA/Mecoprop	
MECOPROP/DICHLORPROP/MCPA/DICAMBA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MECOPROP/IOXYNIL/BROMOXYNIL		See Bromoxynil/Ioxynil/Mecoprop	
MECOPROP/MCPA/DICAMBA		See Dicamba/MCPA/Mecoprop	
MECOPROP/MCPA/DICAMBA/DICHLORPROP		See Dicamba/Dichlorprop/MCPA/Mecoprop	
MECOPROP/MCPA/DICHLORPROP		See Dichlorprop/MCPA/Mecoprop	
MECOPROP/MCPA/DICHLORPROP/DICAMBA		See Dicamba/Dichlorprop/MCPA/Mecoprop	
QUIZALOFOP-P-ETHYL			
An emulsifiable concentrate containing 100 g/litre quizalofop-p-ethyl This includes the following trade name product: P005756 Leopard 100 EC	6.1D 6.3A 6.9B 9.1B	Toxic T1, T2, T4, T7, T8, Ecotoxic E1, E2, E6, E8, Identification I1, I3, I8, I9, I11, I16, I17, I18, I19, I20, I21, I23, I28, I29, I30, Packaging and Packaging Group P1, P3, P13, P15, PG3, Disposal D4, D5, D6, D7, D8,	CAUTION Keep out of the reach of children. WARNING: This substance may be harmful if swallowed, inhaled or absorbed through the skin. BEWARE: Apply this product carefully. Spray drift may cause serious damage to other desirable plants. It is an offence under the Pesticides Regulations to use this product in a manner that results in damage outside the treated property. <u>Application Rate:</u> For the post-emergence control of most annual and perennial grasses in broadleaf crops apply up to

Substance	HSNO Classification	HSNO Default Controls	Summary of Existing Requirements and Labels
		Emergency Management EM1, EM6, EM7, EM8, EM11, EM12, EM13,	5 litres/ha. <u>Use:</u> Agricultural
TERBUTHYLAZINE/HALOXYFOP		See Haloxyfop/Terbuthylazine	

7 Recommended Variations to the HSNO Default Controls

Notes to the tables:

Control codes and regulations

The control codes in section 7 refer to the control codes as defined in the Classifications/Controls Matrix of the *User Guide to the HSNO Control Regulations*. The matrix utilises a coding system whereby each unique code represents a regulatory provision or a group of related provisions in the HSNO “regulatory toolbox”. The ERMA New Zealand publication *User Guide to HSNO Control Regulations*, which includes the Classifications/Controls Matrix, provides more in-depth guidance on the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* and the *Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001*. The regulations themselves should be referred to, however, for definitions, exemptions and the definitive interpretation of the regulatory requirements.

Explanation and comparison with existing requirements

The explanations and comparison with existing requirements are provided for guidance only. The regulations themselves should be referred to for definitions, exemptions and the definitive interpretation of the regulatory requirements.

Comments and variations to default controls

Comments and recommended variations to the default controls on a generic or substance specific basis are outlined in the following tables in the “Recommended Controls” column in the following table. These controls have been varied from the default controls and assigned as a result of the classification of the substance and consideration of submissions received. This includes controls proposed to carry over existing requirements (where relevant) from the Pesticides, Dangerous Goods, and Toxic Substances Acts and regulations. The default controls regulations applying to the substances (according to the control codes assigned in section 6) are set out in section 8.

There are some cases where the HSNO default control arising from a particular classification may not be relevant to the substance(s) under consideration. For example, the controls denoted by the control code T8 (controls on vertebrate poisons) only apply to Class 6.1 substances that are (lawfully) laid or applied outdoors for terrestrial vertebrate pest control. In cases where this control is not relevant, the control is not deleted, but has no effect if the substance is not being used for terrestrial vertebrate pest control. Further explanation on controls of this nature is provided in the “Recommended Controls” column.

Trigger quantities

The trigger quantities referred to in these tables are contained in the schedules to the Controls regulations. These are reproduced in the (Blue) *Guide to the Controls Regulations for Consultation on the Transfer of Registered Pesticides (December 2002)*. In some cases, as a result of the substance having several hazardous properties, a number of trigger quantities can be applied. Unless otherwise stated, the trigger quantity that will apply in these cases is the most stringent trigger quantity.

Packing group

Where several packing groups have been assigned to a substance as a result of classification under different hazardous properties, generally the most stringent packing group will apply. An exception to this occurs where the PG2 control has been triggered by a chronic hazard (i.e. 6.6 to 6.9 classifications), a PG3 control has been applied. Under the Global Harmonized System (GHS) of Classification and Labeling of Chemicals a PG2 control is not triggered by a chronic endpoint.

7.1 Variations to Default Controls for Flammable Substances

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 - Flammable Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
F2, T7, E8	Regulation 8 General public transportation restrictions and requirements for all Class 1 to 5 substances	<p>The following classes of flammable substances are prohibited from carriage on any passenger service vehicle in any quantity: Classes 3.1A, 4.1.2A, 4.1.3A, 4.1.3B, 4.1.3C, 4.2A or 4.3A.</p> <p>The maximum quantity per package of any other flammable substance permitted to be carried on passenger service vehicles must be less than or equal to the quantity for that class as specified in Schedule 1 of the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i>.</p> <p>Comparison with existing requirements</p> <p>Transport in a passenger vehicle of any quantity of flammable liquids of Class 3(a) was prohibited [Dangerous Goods (Class 3 - Flammable Liquids) Regulations 1985, Section 5, clause (e)].</p>	Regulations for F2, T7 and E8 have been combined. ERMA New Zealand considers that the maximum quantity of these substances available in the retail sector (e.g. products that are marketed for home garden use) permitted to be carried on passenger service vehicles should be 5 litres (liquids) and 5 kilograms (solids) per package.
F6	Regulations 60 -70 Requirements to prevent unintended ignition of flammable gases (2.1.1), aerosols (2.1.2) and liquids (3.1)	<p>These regulations prescribe controls to reduce the likelihood of unintended ignition of flammable gases, aerosols and liquids. Controls are prescribed with the aim of covering all foreseeable circumstances in which unintended ignition could take place, and include:</p> <ul style="list-style-type: none"> • placing limits on the proportion of flammable vapour to air to ensure that the proportion of flammable vapour to air will always be sufficiently outside the flammable range, so that ignition cannot take place, and • ensuring that there is insufficient energy available for ignition. This energy could be in the form of either temperature or ignition energy (e.g. a spark). Accordingly, the controls provide two approaches to ensure that there is insufficient energy for ignition: <ul style="list-style-type: none"> 1) keeping the temperature of the substance, or the temperature of any surface in contact with the substance, below 80% of the auto-ignition temperature of the substance, and 	<p>This control is varied to delete the requirement of regulation 60(2) for any person handling any quantity of a Class 3.1 substance under regulation 61 to be an approved handler for that substance. Table 2 of Schedule 3 of the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i> which sets the quantities that would otherwise trigger approved handler requirements does not set a quantity for 3.1D substances, and the approved handler requirements do not apply to these substances.</p> <p>This variation is made because the ‘any quantity’ trigger is impractical. The variation is consistent with a proposed</p>

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 - Flammable Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		<p>2) keeping sources of ignition below the minimum ignition energy, either by removal of the ignition source from any location where flammable substances are handled, or by protecting the “general” mass of flammable material from the ignition source, e.g. by enclosing any ignition sources in an enclosure that will not allow the propagation of the flame to the outside, or by using flameproof motors especially designed to prevent ignition energy escaping.</p> <p>It should be noted that any person handling any quantity of a Class 2.1.1, 2.1.2 or 3.1 substance under any of Regulations 61, 63(4), 65, 67 and 69 must be an approved handler for that substance, i.e. the trigger quantities that typically activate approved handler requirements do not apply [Regulation 60(2)].</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods Regulations did not consider controls based on variations in the flammable vapour to air proportions. They prohibited smoking or sources of ignition near vehicles, tank wagons or above-ground tanks carrying or containing Class 3(a) liquids or within 3m of a vehicle fuel tank that is being filled with a Class 3(a) liquid [Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulations 5(a), 22, 71, 78, 79, 80].</p> <p>Pipelines for Class 3 substances had to be electrically bonded and earthed [Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulation 86].</p>	amendment to the Classes 1 to 5 Controls Regulations.
F17	<p>Regulations 84, 85</p> <p>Requirements to control adverse effects of intended ignition of Class 2, 3 or 4</p>	<p>These controls are intended to ensure that where any Class 2, 3 or 4 substance is intentionally burnt, the effects of combustion are managed:</p> <ul style="list-style-type: none"> • to ensure that adverse effects are contained within the intended area, and • to prevent people being exposed to harmful levels of heat radiation. <p>Regulation 84(1) prescribes controls relating to the maximum level of heat radiation that a person may be exposed to whenever a Class 2, 3 or 4 substance is intentionally burnt. If the intended combustion involves burning substances at a rate in excess of 20 kg/hour or 20 L/hour, there is an</p>	<p>This control is deleted.</p> <p>Regulations 84 and 85 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 specify the controls relating to the intended combustion of class 2, 3 and 4 substances, and in particular, the protection of workers in relation to this. However, thermal radiation can come from a number of sources,</p>

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 - Flammable Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
	substances, including requirements for protective equipment and clothing	<p>additional requirement for the person in charge to establish a combustion zone around the intended combustion area [Regulation 84(2)]. The person in charge of the combustion zone must ensure that:</p> <ul style="list-style-type: none"> the enforcement officer has been notified of the combustion zone's location the combustion zone encompasses all areas where there is the potential for people to be exposed to a higher degree of heat radiation than the level specified in Regulation 84 (1)(b) a site plan of the combustion zone is available at all times all non-authorized personnel are excluded from the combustion zone the level of heat radiation outside the combustion zone at no exceeds the level specified in Regulation 84 (1)(b) there is appropriate signage around the perimeter of the zone warning that combustion is occurring and prohibiting entry into the zone. <p>For those situations where the level of heat radiation within a combustion zone may exceed the level specified in Regulation 84 (1)(b), there is a requirement for the person in charge to ensure that all people entering the combustion zone have the appropriate protective clothing and equipment [Regulation 85]. Specific requirements are prescribed relating to the design, construction and use of the protective clothing and equipment, including:</p> <ul style="list-style-type: none"> they must be designed, constructed and operated to prevent any person being subjected to more than the level of heat radiation specified in Regulation 84 (1)(b). they must either be constructed of materials that are not degraded, attacked or combusted by the substance under the expected use conditions, or if they are not completely resistant, they must retain their integrity for the time specified by the supplier. they must be accompanied by documentation that gives sufficient instruction on their use and maintenance. 	<p>not just the combustion of flammable substances, for instance, from the use of steam, or from solid fuel furnaces. It has been suggested that the protection of workers from thermal radiation for the intended combustion of flammable substances is, therefore, better covered as a generic issue under the Health and Safety in Employment Act, as, in fact, it already is.</p> <p><i>The Specifications for Controls for Stationary Containers for Hazardous Liquids and Gases and Proposals for Amendments to Hazardous Substance Regulations</i>, which is currently out for consultation, recommends that Regulations 84 and 85 are deleted.</p> <p>See section 3.10 for more information.</p>

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 - Flammable Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		<p>Comparison with existing requirements</p> <p>Several regulations [Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulations 93-99] defined the requirements when either vaporizing equipment or a stationary internal combustion engine was installed to use Class 3(a) dangerous goods.</p> <p>Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulations 100-123, governed the storage of oil with internal combustion engines or oil-burning equipment.</p> <p>The need for protective clothing was described in Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulation 192.</p>	

7.2 Variations to Default Controls for Toxic and Ecotoxic Substances

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
T1	<p>Regulations 11-27</p> <p>Limiting exposure to toxic substances</p>	<p>This control relates to limiting public exposure to toxic substances through the setting of tolerable exposure limits (TELs). A TEL represents the maximum allowable concentration of a substance legally allowable in a particular environmental medium. TEL values are established by the Authority and are enforceable controls under the HSNO Act. TELs are derived from potential daily exposure (PDE) values, which in turn are derived from acceptable daily exposure (ADE)/reference dose (RfD) values.</p> <p>An ADE / RfD value must be set for a toxic substance if:</p> <ul style="list-style-type: none"> • It is likely to be present in an environmental medium (air, water, soil or a surface that the substance may be deposited onto) or food or other matter that might be ingested • It is a substance to which people are likely to be exposed to during their lifetime, and; • Exposure is likely to result in an appreciable toxic effect <p>If an ADE / RfD value is set for a substance, a PDE for each exposure route must also be set for the substance. The PDE is a measure of the relative likelihood of a person actually being exposed to the substance through a particular exposure route given daily living patterns.</p> <p>Comparison with existing requirements</p> <p>Exposure limits were not required previously, except for in the workplace (see next section).</p>	<p><u>No TELs are being set at this time .</u></p> <p>If TELs are to be set at a later date for substances or components of substances in transfer, further consultation will be undertaken.</p>
T2	<p>Regulations 29, 30</p> <p>Controlling exposure in places of work</p>	<p>A workplace exposure standard (WES) is designed to protect persons in the workplace from the adverse effects of toxic substances. A WES is an airborne concentration of a substance (expressed as mg substance/m³ of air or ppm in air), which must not be exceeded in a workplace and only applies to places of work that the public does not have access to.</p>	<p>It is proposed that existing workplace exposure standards be adopted where they have been set by OSH.</p> <p>The workplace exposure standards for the active ingredients and components of phenoxy</p>

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		<p>Workplace Exposure Standards (WES) are set by OSH (Occupational Safety and Health Service) under the Health and Safety in Employment Act 1992. Under the HSNO Act, an existing WES can be adopted or a new one set using the methodology specified in Regulation 30 of the <i>Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001</i>. Where workplace exposure standards have been set for a substance it is proposed that the standards be adopted as set out in the Occupational Safety and Health Service <i>Workplace Exposure Standards; Effective from 2002</i>. The standards are available online at http://www.osh.govt.nz/order/catalogue/pdf/wes2002.pdf</p>	<p>herbicides are given in Annex 1.</p> <p>Note that for substances where there is likely to be exposure to dust and particulates, OSH have set a WES-TWA for “Particulates not otherwise classified” of 10 mg/m³. Exposure to dust and particulates is controlled under the <i>Health and Safety and Employment Act 1992</i>.</p>
T7	Regulation 10 Restrictions on the carriage of hazardous substances on passenger service vehicles	<p>In order to limit the potential for public exposure to hazardous substances, the following requirements are prescribed for the carriage of toxic or corrosive substances on public transport vehicles:</p> <ul style="list-style-type: none"> • carriage of any quantity of a Class 6.1A or 8.2A substances is prohibited; • carriage of any other Class 6 or 8 substance is restricted to the quantities per package provided in Schedule 2 of the <i>Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001</i>. <p>Comparison with existing requirements</p> <p>The Toxic Substances Regulations 1983 (Regulation 37) restricted transport of toxic or corrosive substances to comply with NZ transport legislation. Group I toxic substances or Group I corrosive substances were not permitted in passenger service vehicles.</p>	See F2 for variations to this control.
T8	Regulation 28 Controls on Vertebrate Poisons	<p>This regulation applies to Class 6.1 substances that are (lawfully) laid or applied outdoors for terrestrial vertebrate pest control. Requirements are prescribed to limit the likelihood of such substances from coming into contact with members of the general public and non-target species in places of public access.</p> <p>The person in charge of laying or applying the bait must erect warning signs at every normal entry point to the place at least 3 days prior to the</p>	None of the substances to be transferred are used as terrestrial vertebrate poisons. This control does not apply to these substances.

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		<p>bait being applied or laid. The signs must:</p> <ul style="list-style-type: none"> • identify (and supply a contact number) of the person applying or laying the substance • identify the substance and state that it is toxic and ecotoxic • state the date on which the substance is being applied or laid • ensure that that the sign complies with Regulations 51 – 53 of the <i>Hazardous Substances (Identification) Regulations 2001</i> <p>The signs must remain in place until either:</p> <ul style="list-style-type: none"> • the substance has been removed • enough time has elapsed that the substance is no longer hazardous • a specified period of time has elapsed (as approved by the Authority in the application) <p>The requirement for the substance to be under the control of an approved handler or secured (T6, Regulation 9) can be waived once the bait has been applied or laid.</p> <p>Comparison with existing requirements</p> <p>Regulation 21 of the Pesticides (Vertebrate Pest Control) Regulations 1983 specified the circumstances in which notices had to be put in place when substances containing 1080, cyanides or phosphorus were used but did not specify signage requirements for 3-chloro-p-toluidine which was listed in Part III of the First Schedule of the Pesticides Act. There was no specification of the number of days in advance that the signs had to be in place.</p> <p>Regional councils may also specify signage requirements via resource consents and regional plans under the Resource Management Act 1991.</p>	

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Ecotoxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
<p>E1</p>	<p>Regulations 32 – 45</p> <p>Limiting exposure to ecotoxic substances</p>	<p>This control relates to the setting of Environmental Exposure Limits (EELs). An EEL establishes the maximum concentration of an ecotoxic substance legally allowable in a particular (non target) environmental medium (e.g. soil or sediment or water), including deposition of a substance onto surfaces (e.g. as in spray drift deposition).</p> <p>An EEL can be established by one of three means:</p> <ul style="list-style-type: none"> • Applying the default EELs specified • Adopting an established EEL • Calculating an EEL from an assessment of available ecotoxicological data <p>Regional councils have the ability under section 15(1)(a), 15 (1)(b) and 15(1)(d) of the Resource Management Act 1991 to set specific values on consents to discharge to water or land in order to manage adverse effects on the environment.</p>	<p>Regulation 35 provides a mechanism for an EEL to be set for all Class 9 substances. If no EEL is set, a default EEL, set under regulation 32, applies (0.1 micrograms of substance per litre of water; 1 microgram of substance per kilogram of dry weight of soil or sediment).</p> <p><u>No EELs are being set under regulation 35 at this time, and regulation 32 is deleted. The effect of these changes is that no EELs will apply to phenoxy herbicides.</u></p> <p>If EELs are to be set at a later date for substances or components of substances in transfer, further consultation will be undertaken.</p>
<p>E2</p>	<p>Regulations 46 – 48</p> <p>Restrictions on use within application area</p>	<p>These regulations relate to controls on application areas. An application (target) area is an area that the person using the substance either has control over or is otherwise authorised to apply the substance to. For ecotoxic substances that are intentionally released into the environment (e.g. pesticides), any EEL controls will not apply within the application (target) area providing the substance is applied at a rate that does not exceed the allowed application rate. In addition, any approved handler controls (T6, Regulation 9) do not apply once the substance has been applied.</p> <p>In recognition of the need to limit adverse effects within the target area, regulations have been prescribed to restrict the use of the substance within the target area. These include a requirement to set an application rate for any substance designed for biocidal action for which an EEL has been set. The application rate must not be greater than the application rate specified in the application for approval, or not greater</p>	<p>An application rate must be set for a substance if an environmental exposure limit (EEL) is set for a substance that is designed for biocidal action.</p> <p><u>No application rates are being set at this time. The setting of EELs is to be done at a later date (see Control Code E1). The setting of application rates for phenoxy herbicides will be considered in conjunction with the setting of an EEL for any actives or components of this group of pesticides.</u></p>

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Ecotoxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>than a rate calculated in a similar manner to that used to calculate EELs (with the proviso that the uncertainty factors must not exceed 100).</p> <p>Comparison with existing requirements</p> <p>Application rates specified on the label are prescribed by the Pesticides Act 1979. The proposed application rates under HSNO are the same as the existing rates.</p>	
<p>E4</p>	<p>Regulations 50, 51</p> <p>Controls relating to protection of terrestrial vertebrates</p>	<p>This regulation applies to Class 9.3 substances that are intentionally released into the environment in granular form or coated on seeds for pest control. The following controls are prescribed to restrict adverse affects in non-target species:</p> <ul style="list-style-type: none"> the Authority has the ability to set a surface deposition EEL specifically for use in application areas (expressed as mg/m²). The concentration of substance on any exposed surface must not exceed this EEL six or more hours after application of the substance. the Authority has the ability to specify that the bait should be a specific colour, and/or have a specific method of release and/or contain, or not contain, specific attractants or repellents. 	<p>Regulation 50 applies to substances that are in a granular form or coated on seed. There are 29 phenoxy herbicides in this transfer report having a 9.3 classification, which are either solid (granule or powder) or liquid (including soluble concentrate and emulsifiable concentrate) substances.</p> <p>Because these substances are not laid in an application area in solid form or coated on seed (the solids are dissolved in water and applied as a spray; the liquids are diluted with water and applied as a spray), this regulation does not apply. Until such time as regulation 50(1) applies to these substances, there is no requirement to set an environmental exposure limit under regulation 50(2).</p> <p>Regulation 51 applies to Class 9.3 substances that are likely to be used outdoors as bait or part of a bait for vertebrate species. None of the phenoxy herbicide substances with a 9.3 classification are used as bait or part of a bait, so this regulation does not apply.</p>

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Ecotoxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
E7	<p>Regulation 9 Approved handler requirements</p>	<p>Where ecotoxic substances of any hazard classification 9.1A, 9.2A, 9.3A or 9.4A are held in any quantity, the substances must generally be under the personal control of an approved handler at all times, or locked up. However, such substances may be handled by a person who is not an approved handler if:</p> <ul style="list-style-type: none"> • an approved handler is present at the facility where the substance is being handled, and • the approved handler has provided guidance to the person in respect of handling, and • the approved handler is available at all times to provide assistance if necessary. 	<p>ERMA New Zealand has revised it’s policy on the applicability of the approved handler controls. (see section 3.4 for more information).</p> <p>On the basis of this proposal, the approved handler requirements are varied, such that this control is not required for phenoxy herbicides used in a non- or limited dispersive manner, unless the substance is being used by a commercial contractor.</p> <p>The application of the approved handler requirements to phenoxy herbicides used in a wide dispersive manner will be reviewed before these substances are transferred.</p>
E8	<p>Regulation 10 Restrictions on the carriage of hazardous substances on passenger service vehicles</p>	<p>In order to limit the potential for environmental exposure to ecotoxic substances, the carriage of any Class 9 substance on public transport vehicles is restricted to either 5L, 5 kg or 1000 mL gas (aggregate water capacity).</p> <p>Comparison with existing requirements</p> <p>The current Land Transport Rule does not include ecotoxic substances unless they are classified under the United Nations Transport of Dangerous Goods – Model Regulations as a Class 9.</p>	<p>See F2 for variations to this control.</p>

7.3 Variations to Default Life Cycle Controls

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
PG2	Schedule 2	Packaging requirements equivalent to UN Packing Group II	Where the PG2 control has been triggered by a chronic hazard (i.e. 6.6 to 6.9 classifications), a PG3 control has been applied. Under the Global Harmonized System (GHS) of Classification and Labeling of Chemicals a PG2 control is not triggered by a chronic endpoint.

Hazardous Substances (Tracking) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
Exclusion	Regulation 7	These regulations do not apply to any substance required for the motive power or control of a vehicle, aircraft or ship if the substance is contained within the fuel, electrical or control system, or to any fuel gas supplied or used in a distribution system, gas installation, or gas appliance that is subject to the Gas Act 1992.	
TR1	Regulations 4(1), 5, 6 General tracking requirements	<p>Some (highly) hazardous substances are subject to tracking requirements, i.e. the location and movement of the substance must be recorded at each stage of its lifecycle until its final disposal. The hazard classifications of the substances requiring tracking are listed in Schedule 1 of the <i>Hazardous Substances (Tracking) Regulations 2001</i>. The type of information to be recorded is specified in Schedule 2 of the <i>Hazardous Substances (Tracking) Regulations 2001</i> and includes a requirement to identify the approved handler and provision of information on the identification, quantity, location and disposal of the substance.</p> <p>The record must meet the location and presentation requirements specified in Part 2 of the <i>Hazardous Substances (Identification) Regulations 2001</i>, i.e. it must be accessible within 10 minutes and meet the performance standards for comprehensibility and clarity. The record must be kept for a period of 12 months after the substance has been transferred to someone else. If the substance is discharged into</p>	<p>ERMA New Zealand has revised its policy on the application of approved handler and tracking controls. The policy states that tracking will not be required where the TR1 control is triggered by the ecotoxic hazard only. (see section 3.4).</p> <p>On the basis of this policy, the tracking requirements are varied, such that this control is deleted for phenoxy herbicides when the control is triggered solely by a Class 9 classification.</p> <p>See section 8.3, control code TR1.</p>

Hazardous Substances (Tracking) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>the environment or disposed of, the record must be kept for 3 years.</p> <p>Regulation 6 provides requirements for the transfer of hazardous substances from one place to another.</p> <p>Comparison with existing requirements</p> <p>Under the Dangerous Goods Act (1974) and Dangerous Goods (Class 3 - Flammable Liquid) Regulations 1985, Class 3 substances, and particularly Class 3a and 3b substances, were managed at the importation point (e.g. the consignee had a duty to prevent accumulation of Class 3 liquids on a wharf – Regulation 9) and subsequently by the owner, by the person in charge of a transport vehicle or the bulk storage licensee. The owner of a Class 3 Dangerous Good was required to notify the Chief Inspector of Dangerous Goods if there was leakage to the environment during pumping operations (Regulation 92).</p> <p>Under the Toxic Substances Regulations 1983, Regulation 50, a record of the sale of a deadly or dangerous poison had to be kept in a “Sale of Poisons” book.</p>	

Hazardous Substances (Personnel Qualifications) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
AH1	<p>Regulations 4 – 6</p> <p>Approved Handler requirements (including test certificate and qualification requirements)</p>	<p>Some (highly) hazardous substances are required to be under the control of an approved handler during specified parts of the lifecycle. An approved handler is a person who holds a current test certificate certifying that they have met the competency requirements specified by the <i>Hazardous Substances and New Organisms (Personnel Qualification) Regulations 2001</i> in relation to handling specific hazardous substances.</p> <p>The specific classes and quantities of hazardous substances that trigger approved handler requirements are listed in the schedules of the</p>	<p>ERMA New Zealand has revised its policy on the application of approved handler and tracking controls. The policy states that approved handler requirements will not be applied to substances used in a non- or limited dispersive manner, unless they are being used by a commercial contractor. This will include domestic use pesticides (household and home garden products). (see section 3.4)</p> <p>On the basis of this proposal, the approved handler requirements are varied, such that this</p>

Hazardous Substances (Personnel Qualifications) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>relevant property controls, in the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i> and <i>Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001</i>.</p> <p>Regulation 4 describes the test certification requirements, Regulation 5 describes the qualification (competency and skill) requirements, and Regulation 6 describes situations where transitional qualifications for approved handlers apply.</p> <p>Comparison with existing requirements</p> <p>The designation “Approved Handler” is new. The Dangerous Goods Regulations put responsibility for control variously on the manager of a business handling dangerous goods, the dangerous goods licensee and Dangerous Goods Inspectors.</p>	<p>control will not apply to phenoxy herbicides (when the control is triggered solely by a Class 9 classification) used in a limited dispersive manner, unless they are being used by a commercial contractor.</p> <p>The application of the approved handler requirements to phenoxy herbicides used in a wide dispersive manner will be reviewed before these substances are transferred See section 8.3, control code AH1.</p>

8 HSNO Default Controls

Notes to the tables:

Control codes and regulations

The control codes in section 8 refer to the control codes as defined in the Classifications/Controls Matrix of the *User Guide to the HSNO Control Regulations*. The matrix utilises a coding system whereby each unique code represents a regulatory provision or a group of related provisions in the HSNO “regulatory toolbox”. The ERMA New Zealand publication *User Guide to HSNO Control Regulations*, which includes the Classifications/Controls Matrix, provides more in-depth guidance on the *Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001* and the *Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001*. The regulations themselves should be referred to, however, for definitions, exemptions and the definitive interpretation of the regulatory requirements.

Explanation and comparison with existing requirements

The explanations and comparison with existing requirements are provided for guidance only. The regulations themselves should be referred to for definitions, exemptions and the definitive interpretation of the regulatory requirements.

8.1 Default Controls for Flammable Substances

Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 - Flammable Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
F11	Regulation 76 Segregation of substances incompatible with Class 2, 3 or 4 substances	<p>In order to reduce the likelihood of unintended ignition of flammable substances, there is a requirement to ensure that the substance does not come into contact with any incompatible substance or material. A list of substances and materials considered incompatible with Class 2, 3 and 4 substances is provided in Table 1 of Schedule 3 of the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i>.</p> <p>Comparison with existing requirements</p> <p>To prevent leakage of liquid or vapours all Class 3 dangerous goods had to be stored in sealed containers [Dangerous Goods (Class 3 –Flammable Liquids) Regulations 1985, Regulation 31(d)].</p> <p>No explosive substance or substance liable to spontaneous ignition or to cause fire was allowed to be carried on the same vehicle or within 15m [Class 3(a)] or 6m [Class 3(b)] of any depot or dangerous goods in any premises unless it was separated by a screen wall [Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985, Regulations 5(b) and 31].</p>	

8.2 Default Controls for Toxic and Ecotoxic Substances

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
T3	Regulations 5, 6 Requirements for keeping records of use	<p>A person using a highly toxic or corrosive substance in an area where members of the public may be present, or where the substance may enter air or water, must keep written records of each use. “Highly toxic” substances are those with classifications of 6.1A, 6.1B, 6.1C, 6.6A, 6.7A, 6.8A or 6.9A. With respect to corrosive substances, these relate to substances with classifications of 8.2A or 8.2B.</p> <p>The information to be provided in the record is described in regulation 6(1). The record must be kept for a minimum of 3 years following the use and must be made available to an enforcement officer on request.</p> <p>Comparison with existing requirements</p> <p>The requirement for keeping records of use was not previously specified under the Pesticides Act 1979 or under the Toxic Substances Act 1979. Under the Toxic Substances Regulations 1983, section 50, a record of the sale of a deadly or dangerous poison (LD50 <200mg/kg) had to be kept in a “Sale of Poisons” book.</p> <p>Record keeping may be required by regional councils under specific resource consent conditions, or via rules in regional plans.</p>	
T4	Regulation 7 Requirements for equipment used to handle substances	<p>Any equipment used to handle toxic substances (e.g. spray equipment) must retain and/or dispense the substance in the manner intended, i.e. without leakage, and must be accompanied by sufficient information so that this can be achieved.</p> <p>Comparison with existing requirements</p> <p>These requirements are consistent with existing requirements of the Dangerous Goods (Class 2 Gases) Regulations 1980, Regulation 26.</p> <p>The Toxic Substances Act 1979, s26 (1) was prescriptive in specifying the type of container that must be used. The HSNO Act specifies the</p>	

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		<p>performance criteria that must be met (the container must not leak).</p> <p>This is also consistent with the existing requirements of the Health and Safety in Employment (HSE) Act 1992.</p>	
T5	<p>Regulation 8</p> <p>Requirements for protective clothing and equipment</p>	<p>Protective clothing/equipment must be employed when substances that are highly toxic or corrosive are being handled. The clothing/equipment must be designed, constructed and operated to ensure that the person does not come into contact with the substance and is not directly exposed to a concentration of the substance that is greater than the WES for that substance.</p> <p>The person in charge must ensure that people using the protective clothing/equipment have access to sufficient information specifying how the clothing/equipment may be used, and the requirements for maintaining the clothing/equipment.</p> <p>Comparison with existing requirements</p> <p>These requirements are consistent with the existing requirements of the Toxic Substances Act 1979.</p> <p>Consistent with the existing requirements of the Dangerous Goods (Class 2 - Gases) Regulations 1980, Regulation 131, Dangerous Goods (Class 4 - Flammable solids) Regulations 1985, Regulation 31, and Dangerous Goods (Class 3 - Flammable liquids) Regulations 1985, Regulation 192.</p> <p>Under the Health and Safety in Employment Act (HSE) 1992, section 10 (2) b, employees must have access to suitable clothing and equipment to protect them.</p>	
T6	<p>Regulation 9</p> <p>Approved handler requirements</p>	<p>Where hazardous substances of classification 6, 8, and 9 at quantities specified in Schedule 1 of the <i>Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001</i> are held these substances must generally be under the personal control of an approved handler, or locked up.</p> <p>However, such substances may be handled by a person who is not an</p>	

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Toxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended Controls
		approved handler if: <ul style="list-style-type: none"> • an approved handler is present at the facility where the substance is being handled, and • the approved handler has provided guidance to the person in respect of handling, and • the approved handler is available at all times to provide assistance if necessary 	

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Ecotoxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
<p>E3</p>	<p>Regulation 49 Controls relating to protection of terrestrial invertebrates, e.g. beneficial insects</p>	<p>This regulation applies to substances that are ecotoxic to terrestrial invertebrates (Class 9.4 substances) and prescribes controls to restrict the use of such substances in situations where they may pose a high risk to beneficial invertebrates, e.g. honeybees.</p> <p>Specifically, a person must not apply a Class 9.4 substance:</p> <ul style="list-style-type: none"> • in an area where bees are foraging and the substance is in a form in which bees are likely to be exposed to it; or • on specific plants likely to be visited by bees if the plant is in open flower or part bloom, or is likely to flower within a specified period of time following application of the substance (not longer than 10 days). <p>Comparison with existing requirements</p> <p>The Pesticides Regulations 1983, Regulation 14, stated that a substance with “Toxic to Bees” on the label could not be used without a permit. This only applied to pesticides; other ecotoxic substances had no controls.</p>	
<p>E5</p>	<p>Regulations 5, 6 Requirements for keeping records of use</p>	<p>A person using a substance that is highly ecotoxic (i.e. has a hazard classification of 9.1A, 9.2A, 9.3A, or 9.4A) must keep a written record of that use if 3kg or more of the substance is applied or discharged within 24 hours in an area where the substance may enter air or water (and leave the place where it is under control).</p> <p>The information to be provided in the record is described in Regulation 6(1). The record must be kept for a minimum of 3 years following the use and must be made available to an enforcement officer on request.</p> <p>Comparison with existing requirements</p> <p>The Pesticides Regulations 1983, Regulation 7(2), required records of use for pesticides. There were no controls on other ecotoxic substances.</p>	

Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 – Ecotoxic Substances

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
E6	Regulation 7 Requirements for equipment used to handle substances	<p>Any equipment used to handle ecotoxic substances (e.g., spray equipment) must retain and/or dispense the substance in the manner intended, i.e. without leakage, and must be accompanied by sufficient information so that this can be achieved.</p> <p>Comparison with existing requirements</p> <p>The requirements have changed from being prescriptive (the type of container that must be used) under the Toxic Substances Act 1979, section 26 (1), to performance based (the container must not leak) under HSNO.</p>	
E7	Regulation 9 Approved handler requirements	<p>Where ecotoxic substances of any hazard classification 9.1A, 9.2A, 9.3A or 9.4A are held in any quantity, the substances must generally be under the personal control of an approved handler at all times, or locked up. However, such substances may be handled by a person who is not an approved handler if:</p> <p>an approved handler is present at the facility where the substance is being handled, and</p> <p>the approved handler has provided guidance to the person in respect of handling, and</p> <p>the approved handler is available at all times to provide assistance if necessary.</p>	<p>This regulation only applies to a substance:</p> <ul style="list-style-type: none"> • used in a wide dispersive manner; or • used by a commercial contractor <p>See control code E7 in section 7.2</p>

8.3 Default Life Cycle Controls

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
<p>The <i>Hazardous Substance (Identification) Regulations 2001</i> prescribe requirements with regard to identification of hazardous substances in terms of</p> <ul style="list-style-type: none"> • information that must be “immediately available” with the substance (priority and secondary identifiers). This information is generally provided by way of the product label. • documentation that must be available in the workplace, generally provided by way of Material Safety Datasheets (MSDS). • signage at places where there are large quantities of the substance. 			
Exclusion	Regulation 4	These regulations do not apply to substances used for motive power of a motor vehicle, aircraft or ship that is contained in the fuel system of the vehicle, aircraft or ship.	
I1	<p>Regulations 6, 7, 32, 33, 34, 35, 36 (1)-(7)</p> <p>General identification requirements</p>	<p>These controls relate to the duties of suppliers and persons in charge of hazardous substances with respect to identification (essentially labelling) (Regulations 6 and 7), accessibility of the required information (Regulations 32 and 33) and presentation of the required information with respect to comprehensibility, clarity and durability (Regulations 34, 35 and 36(1)-(7)).</p> <p>Regulation 6 – Identification duties of suppliers</p> <p>Suppliers of any hazardous substance must ensure it is labelled with all relevant priority identifier information (as required by Regulations 8 - 17) and secondary identifier information (as required by Regulations 18 - 30) before supplying it to any other person. This includes ensuring that the priority identifier information is available to any person handling the substance within 2 seconds (Regulation 32), and the secondary identifier information available within 10 seconds (Regulation 33).</p> <p>Suppliers must also ensure that no information is supplied with the substance (or its packaging) that suggests it belongs to a class that it does not in fact belong to.</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Regulation 7 – Identification duties of persons in charge</p> <p>Persons in charge of any hazardous substance must ensure it is labelled with all relevant priority identifier information (as required by Regulations 8 - 17) and secondary identifier information (as required by Regulations 18 - 30) before supplying it to any other person. This includes ensuring that the priority identifier information is available to any person handling the substance within 2 seconds (Regulation 32), and the secondary identifier information available within 10 seconds (Regulation 33).</p> <p>Persons in charge must also ensure that no information is supplied with the substance (or its packaging) that suggests it belongs to a class that it does not in fact belong to.</p> <p>Regulations 32 and 33 – Accessibility of information</p> <p>All priority identifier Information (as required by Regulations 8 - 17) must be available within 2 seconds , e.g. on the label. All secondary identifier Information (as required by Regulations 18 - 30) must be available within 10 seconds , e.g. on the label.</p> <p>Regulations 34, 35, 36(1)-(7) – Comprehensibility, Clarity and Durability of information</p> <p>All required priority and secondary identifiers must be presented in a way that meets the performance standards in these regulations. In summary:</p> <ul style="list-style-type: none"> • any information provided (either written and oral) must be readily understandable and in English • any information provided in written or pictorial form must be able to be easily read or perceived by a person with average eyesight under normal lighting conditions • any information provided in an audible form must be able to be easily heard by a person with average hearing 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<ul style="list-style-type: none"> any information provided must be in a durable format i.e. the information requirements with respect to clarity must be able to be met throughout the lifetime of the (packaged) substance under the normal conditions of storage, handling and use. <p>Comparison with existing requirements</p> <p>The Toxic Substances Act 1979, Toxic Substances Regulations 1983 and the Pesticides Act 1979 had specific labelling requirements, including the size and positioning of specific words and phrases on the label [Toxic Substances Regulations 19 Lettering, 20 name and address of manufacturer, packer or importer, 23/24/25 Requirements for labels on containers; 31 labels on containers kept ready for use; 33 markings on poison bottles not to be covered; 34 Labels not to be removed or defaced].</p> <p>The Pesticides Board had to approve labels for all registered pesticides. For deadly and dangerous poisons a Director was appointed for this purpose under the Toxic Substances Act 1979. This power now rests with the Authority delegated to the Ministry of Health. The labels approved for deadly and dangerous poisons were valid for 5 years.</p> <p>Under HSNO there is no label approval process. The onus is on manufacturers, importers, suppliers and “persons in charge” to ensure that their substances are labelled in accordance with the relevant identification regulations. HSNO only defines a minimum letter size. An industry code of practice is in preparation to assist in complying with these regulations.</p> <p>The Dangerous Goods (Labelling) Regulations 1978, Regulation 4 had similar regulations for label legibility but it was explicit in requiring that the label was to endure until the last traces of the substance had been removed from the container. It also prescribed (Regulation 6) the exact form and warning symbols the labels had to conform to. Labels were to provide the best information that described the dangerous nature of the substance.</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
I2	Regulation 8 Priority identifiers for corrosive substances	<p>This requirement specifies that corrosive substances must be prominently identified as being corrosive. In addition, information must be provided on the need to prevent access to the substance by children, unless the substance is being used in a place of work, or part of a place of work, where children will not lawfully be present.</p> <p>This information must be available to any person handling the substance within 2 seconds (Regulation 32) and can be provided by way of signal headings or commonly understood pictograms on the label.</p>	
I3	Regulation 9 Priority identifiers for ecotoxic substances	<p>This requirement specifies that ecotoxic substances must be prominently identified as being ecotoxic.</p> <p>This information must be available to any person handling the substance within 2 seconds (Regulation 32) and can be provided by way of signal headings or commonly understood pictograms on the label.</p> <p>Comparison with existing requirements</p> <p>The Pesticides Act 1979 focused on the preventative measures to avoid poisoning livestock and “beneficial” animals or plants. The HSNO controls extend this concern to include unintentional harm to all living organisms.</p> <p>The Toxic Substances Act 1979 did not have signal words specific for environmental effects but these effects were able to be identified under the warning and precautionary statements.</p> <p>The Pesticides Board could require an indication on the label of hazards to the environment.</p>	
I5	Regulation 11 Priority identifiers for flammable	<p>This requirement specifies that flammable substances must be prominently identified as being flammable. In addition, the following information must be provided:</p> <ul style="list-style-type: none"> • an indication of whether the substance is a gas, aerosol, liquid or 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	substances	<p>solid</p> <ul style="list-style-type: none"> • if a flammable liquid, information must be provided on its general degree of hazard (e.g. highly flammable) • if a flammable solid, information must be provided on its general type of hazard (e.g. dangerous when wet) <p>This information must be available to any person handling the substance within 2 seconds (Regulation 32) and can be provided by way of signal headings or commonly understood pictograms on the label.</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods (Labelling) Regulations 1978 specified the exact design of label required for Class 2d flammable gases (LPG), Class 3a and 3b flammable liquids and Class 4 flammable solids.</p>	
18	Regulation 14 Priority identifiers for toxic substances	<p>This requirement specifies that a Class 6.1 substance (other than a 6.1E substance that is NOT intended to be sold to the general public) must be prominently identified as being toxic. In addition, information must be provided on the general degree and type of hazard of the substance (unless it is a 6.1D substance used in a place of work where the general public may not lawfully be present), and the need to restrict access to the substance by children.</p> <p>This information must be available to any person handling the substance within 2 seconds (Regulation 32) and can be provided by way of signal headings or commonly understood pictograms on the label.</p> <p>Comparison with existing requirements</p> <p>The Toxic Substances Regulations specified the precise words to be used, whereas the HSNO Act specifies the performance based outcome to be met.</p>	

Hazardous Substances (Identification) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
I9	<p>Regulation 18</p> <p>Secondary identifiers for all hazardous substances</p>	<p>This control relates to detail required for hazardous substances on the product label. This information must be accessible within 10 seconds (Regulation 33) and could be provided on secondary panels on the product label. The following information is required:</p> <ul style="list-style-type: none"> • an indication (which may include its common name, chemical name, or registered trade name) that unequivocally identifies it, and • enough information to enable its New Zealand importer, supplier, or manufacturer to be contacted, either in person or by telephone. • in the case of a substance that, when in a closed container, is likely to become more hazardous over time or develop additional hazardous properties, or become a hazardous substance of a different class, a description of each likely change and the date by which it is likely to occur. 	
I10	<p>Regulation 19</p> <p>Secondary identifiers for corrosive substances</p>	<p>This control relates to the additional label detail required for corrosive substances. This information must be accessible within 10 seconds (Regulation 33) and could be provided on secondary panels on the product label. The following information must be provided:</p> <ul style="list-style-type: none"> • an indication of its general degree and general type of corrosive hazard (e.g. highly corrosive to the skin) • an indication of the circumstances in which it may harm skin or eye tissue, and the type and extent of harm it is likely to cause • an indication of the circumstances in which it may damage metallic objects, and the type and extent of damage it is likely to cause • the name and concentration of any ingredient that would, independently of any other ingredient, cause the substance to be classified in either Class 8.2 or 8.3. <p>The requirement to give sufficient contact details (not just the address), to enable the manufacturer to be contacted in person, is required by</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		HSNO but was not laid down in the Toxic Substances Regulations 1983 or the Dangerous Goods Act 1974.	
I11	Regulation 20 Secondary identifiers for ecotoxic substances	<p>This control relates to the additional label detail required for ecotoxic substances. This information must be accessible within 10 seconds (Regulation 33) and could be provided on secondary panels on the product label. The following information must be provided:</p> <ul style="list-style-type: none"> • an indication of the circumstances in which it may harm living organisms • an indication of the kind and extent of the harm it is likely to cause to living organisms • an indication of the steps to be taken to prevent harm to living organisms • in the case of a ecotoxic substance of classification 9.1A, 9.1B or 9.1C, an indication of its general type and degree of hazard (e.g. very toxic to aquatic life) • in the case of a ecotoxic substance of classification 9.2A, 9.2B or 9.2C, 9.3A, 9.3B, 9.4A, 9.4B or 9.4C, an indication of its general type of hazard (e.g. ecotoxic to terrestrial invertebrates) <p>These requirements could be addressed by statements on the label with respect to its action against both target and non-target organisms, and the method of application used to avoid exposure to non-target organisms. A statement should be included warning against incorrect disposal in sensitive environments.</p> <p>Comparison with existing requirements</p> <p>The Pesticides Act 1979 focused on the circumstances which might lead to the poisoning of livestock and “beneficial” animals or plants. The HSNO controls extend this concern to include unintentional harm to all living organisms. There is a new emphasis on prevention of harm – a requirement to define measures to be taken to avoid harm.</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
I13	Regulation 22 Secondary identifiers for flammable liquids	<p>This control relates to the additional label detail required for flammable substances. This information must be accessible within 10 seconds (Regulation 33) and could be provided on secondary panels on the product label. The following information must be provided:</p> <ul style="list-style-type: none"> • an indication of its general type and degree of flammable hazard (e. g. highly flammable liquid) • an indication of the circumstances in which it may be ignited unintentionally • an indication of the likely effect of an unintentional ignition • an indication of the steps to be taken to prevent an unintentional ignition <p>Comparison with existing requirements</p> <p>The Dangerous Goods (Labelling) Regulations 1978 did not require that the label indicate the steps to be taken to prevent accidental ignition, although the Chief Inspector of Dangerous Goods had the discretion to ask for additional requirements.</p>	
I16	Regulation 25 Secondary identifiers for toxic substances	<p>This control relates to the additional label detail required for toxic substances. This information must be accessible within 10 seconds (Regulation 33) and could be provided on secondary panels on the product label. The following information must be provided:</p> <ul style="list-style-type: none"> • an indication of its general type and degree of toxic hazard (e.g. mild skin irritant) • an indication of the circumstances in which it may harm human beings • an indication of the kinds of harm it may cause to human beings, and the likely extent of each kind of harm • an indication of the steps to be taken to prevent harm to human beings • the name and concentration of any ingredient that would 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>independently of any other ingredient, cause the substance to be classified in Class 6.1A, 6.1B, 6.1C, 6.5, 6.6, 6.7, 6.8 or 6.9</p> <ul style="list-style-type: none"> the name of any ingredient that would independently of any other ingredient, cause the substance to be classified as a 6.1D substance. In addition, the concentration of the ingredient that would contribute the most to that classification must be provided. <p>Comparison with existing requirements</p> <p>The Toxic Substance Regulations focused on the potential toxic effects on people. HSNO has the additional requirement for information on how to prevent these effects.</p>	
I17	Regulation 26 Use of Generic Names	<p>This control provides the option of using a generic name to identify specific ingredients (or groups of ingredients) where such ingredients are required to be listed on the product label as specified by Regulations 19(f), 25(e) and 25(f).</p> <p>[Regulations 19(f), 25(e) and 25(f) specify a requirement to list on the product label, the name and concentration of any ingredient that would independently of any other ingredient, cause the substance to be classified as either 6.1A, 6.1B, 6.1C, 6.1D, 6.5, 6.6, 6.7, 6.8, 6.9, 8.2 or 8.3].</p> <p>Comparison with existing requirements</p> <p>The Toxic Substances Regulations 1983 and the Pesticides Regulations 1983 did not allow for the use of generic names except in certain cases (Toxic Substances Regulations 1983, Regulation 21(1) (b)).</p>	
I18	Regulation 27 Requirements for using concentration ranges	<p>This control provides the option of giving concentration ranges for those ingredients whose concentrations are required to be stated on the product label as specified by Regulations 19(f), 25(e) and 25(f).</p> <p>[Regulations 19(f), 25(e) and 25(f) specify a requirement to list on the product label, the name and concentration of any ingredient that would independently of any other ingredient, cause the substance to be</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>classified as either 6.1A, 6.1B, 6.1C, 6.1D, 6.5, 6.6, 6.7, 6.8, 6.9, 8.2 or 8.3].</p> <p>Comparison with existing requirements</p> <p>The Toxic Substances Regulations 1983 and the Pesticides Regulations 1983 did not allow concentrations to be given within a range, although “approximate proportions” were sometimes permissible (Toxic Substances Regulations 1983, Regulation 21(2)).</p>	
I19	<p>Regulations 29 – 31</p> <p>Alternative information in certain cases</p>	<p>Regulation 29 – Substances in fixed bulk containers or bulk transport containers</p> <p>Regulation 29 relates to alternative ways of presenting the priority and secondary identifier information required by Regulations 8 – 25 when substances are contained in fixed bulk containers or bulk transport containers.</p> <p>Regulation 29(1) specifies that for fixed bulk containers, it is sufficient compliance if there is available at all times to people near the container, information that identifies the type and general degree of hazard of the substance. When Class 1, 2, 3, 4 or 5 substances are contained, there is an additional requirement that information must be provided describing any steps to be taken to prevent an unintentional explosion, ignition combustion, acceleration of fire or thermal decomposition.</p> <p>Regulation 29(2) specifies that for bulk transport containers, it is sufficient for the substance to be labelled or marked in compliance with the requirements of the Land Transport Rule 45001, Civil Aviation Act 1990 or Maritime Transport Act 1994.</p> <p>Regulation 30 – Substances in multiple packaging</p> <p>Regulation 30 relates to situations when hazardous substances are in multiple packaging and the outer packaging obscures some or all of the required substance information. The outer packaging must:</p> <ul style="list-style-type: none"> • be clearly labelled with all relevant priority identifier information, 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>i.e. the hazardous properties of the substance must be identified, or</p> <ul style="list-style-type: none"> • be labelled or marked in compliance with either the Land Transport Rule 45001, Civil Aviation Act 1990 or the Maritime Safety Act 1994 as relevant, or • in the case of an ecotoxic substance, it must bear the EU pictogram “Dangerous to the Environment” (‘dead fish and tree’ on orange background), or • bear the relevant class label assigned by the UN Model Regulations <p>Regulation 31 – Alternative information when substances are imported</p> <p>Regulation 31 relates to alternative information requirements for hazardous substances that are imported into New Zealand in a closed package or in a freight container and will be transported to their destination without being removed from that package or container. In these situations, it is sufficient compliance with HSNO if the package or container is labelled or marked in compliance with the requirements of the Land Transport Rule 45001.</p> <p>Comparison with existing requirements</p> <p>HSNO and the Toxic Substances Regulations 1983 both require outer packaging labels (during the transport of hazardous substances) to conform to the Land Transport Act 1998, the Civil Aviation Act 1990 and the Maritime Transport Act 1994.</p>	
I20	<p>Regulation 36(8)</p> <p>Durability of information for Class 6.1 substances</p>	<p>Any packaging in direct contact with a Class 6.1A, 6.1B, 6.1C or 6.1D substance must be permanently identified as having contained a toxic substance unless the substance as packaged is restricted to a place of work.</p> <p>Comparison with existing requirements</p> <p>This was covered by Toxic Substances Regulations 1983, Regulation 18(b) to (e).</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
I21	<p>Regulations 37–39, 47–50</p> <p>Documentation required in places of work</p>	<p>These controls relate to the duties of suppliers and persons in charge of places of work with respect to provision of documentation, essentially Material Safety Datasheets (MSDS) (Regulations 37, 38 and 50); the general content requirements of the documentation (Regulation 39 and 47), and the accessibility and presentation of the required documentation in respect of comprehensibility and clarity (Regulation 48).</p> <p>These controls are triggered when substances of specific hazard classifications are held in the workplace in quantities equal to or greater than the levels as specified in Schedule 2 of the <i>Hazardous Substances (Identification) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>Regulation 37 – Documentation duties of suppliers</p> <p>A supplier must provide documentation containing all relevant information required by Regulations 39 – 46 when selling or supplying to another person a quantity of a hazardous substance at or above the level specified in Schedule 2 of the <i>Hazardous Substances (Identification) Regulations 2001</i>, if the substance is to be used in a place of work and the supplier has not previously provided the documentation to that person.</p> <p>Regulation 38 – Documentation duties of persons in charge of places of work</p> <p>The person in charge of any place of work where hazardous substances are present in quantities above those specified in Regulation 38 (and with reference to Schedule 2 of the <i>Hazardous Substances (Identification) Regulations 2001</i>) must ensure that every person handling the substance has access to documentation containing all relevant information required by Regulations 39 – 46. The person in charge must also ensure that the documentation does not contain any information that suggests the substance has hazardous properties it does</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>not have.</p> <p>Regulation 39 – General content requirements for documentation</p> <p>The documentation provided with a hazardous substance must include the following information:</p> <ul style="list-style-type: none"> • the unequivocal identity of the substance (e.g. the CAS number, chemical name, common name, UN number, registered trade name(s)) • a description of the physical state, colour and odour of the substance • if the substance’s physical state may alter over the expected range of workplace temperatures, the documentation must include a description of the temperatures at which the changes in physical state may occur and the nature of those changes • in the case of a substance that, when in a closed container, is likely to become more hazardous over time or develop additional hazardous properties, or become a hazardous substance of a different class, the documentation must include a description of each likely change and the date by which it is likely to occur • contact details for the New Zealand supplier/manufacturer/importer • all emergency management and disposal information required for the substance • the date on which the documentation was prepared • the name and concentration of any ingredients that would independently of any other ingredient, cause the substance to be classified as either a Class 6.1A, 6.1B, 6.1C, 6.5, 6.6, 6.7, 6.8, 6.9, 8.2 or 8.3 substance. <p>Regulation 47 – Information not included in approval</p> <p>This regulation relates to the provision of specific documentation information (e.g. as provided on an Material Safety Datasheets</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>(MSDS)). If information required by regulations 39 to 46 was not included in the information used for the approval of the substance by the Authority, it is sufficient compliance with those regulations if reference is made to that information requirement along with a comment indicating that such information is not applicable to that substance.</p> <p>Regulation 48 – Location and presentation requirements for documentation</p> <p>All required documentation must be available to a person handling the substance in a place of work within 10 minutes. The documentation must be readily understandable by any fully-trained worker required to have access to it and must be easily read, under normal lighting conditions, at a distance of not less than 0.3m.</p> <p>Regulation 49 – Documentation requirements for vehicles</p> <p>This regulation provides for the option of complying with documentation requirements as specified in the various Land, Sea and Air transport rules when the substance is being transported.</p> <p>Regulation 50 – Documentation to be supplied on request</p> <p>Notwithstanding Regulation 37 above, a supplier must provide the required documentation to any person in charge of a place of work (where a hazardous substance is present) if asked to do so by that person.</p> <p>Comparison with existing requirements</p> <p>In addition to the manufacturer’s address, required to be given on the label, HSNO requires information (e.g. a telephone number) that allows the manufacturer of a hazardous substance to be contacted in person.</p> <p>The Dangerous Goods (Labelling) Regulations 1978 only required the name of the substance and in some circumstances the manufacturer’s name, to be on the label. HSNO requires every available name,</p>	

Hazardous Substances (Identification) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>including CAS number, UN number, trade names and common names.</p> <p>Documentation of some information (e.g. the flashpoint of flammable substances) was not required by the Dangerous Goods (Labelling) Regulations, though the Chief Inspector might in some cases insist upon it.</p> <p>There is also a requirement to provide information on hazardous substances under the Health and Safety in Employment Act 1992.</p>	
<p>I22</p>	<p>Regulation 40 Specific documentation requirements for corrosive substances</p>	<p>The documentation provided with corrosive substances must include the following information:</p> <ul style="list-style-type: none"> • its general degree and type of corrosive hazard (e.g. highly corrosive to the skin) • a full description of the circumstances in which it may cause unintentional damage to tissue or metallic objects • a full description of the potential consequences of any damage it may cause to tissue or metallic objects • a full description of the steps to be taken to prevent unintentional damage to tissue or metallic objects • if a substance is in Class 8.2 or 8.3, its pH or pH range 	
<p>I23</p>	<p>Regulation 41 Specific documentation requirements for ecotoxic substances</p>	<p>The documentation provided with ecotoxic substances (other than an ecotoxic substance with a hazard classification of 9.1D, 9.2D, or 9.3C) must include the following information:</p> <ul style="list-style-type: none"> • its general degree and type of ecotoxic hazard (e.g. highly ecotoxic to terrestrial vertebrates) • a full description of the circumstances in which it may harm living organisms and the extent of that harm • a full description of the steps to be taken to prevent harm to living organisms • a summary of the available acute and chronic (ecotoxicological) 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>data used to define the (ecotoxicological) subclass or subclasses in which it is classified</p> <ul style="list-style-type: none"> • its bio-concentration factor or octanol-water partition coefficient • its expected soil or water degradation rate • any EELs set by the Authority <p>Comparison with existing requirements</p> <p>The Pesticides Act 1979 focused on the circumstances which might lead to the poisoning of livestock and “beneficial” animals or plants. The HSNO controls extend this concern to include unintentional harm to all living organisms. There is a new emphasis on prevention of harm – a requirement to define the measures to be taken to avoid harm.</p>	
I25	Regulation 43 Specific documentation requirements for flammable substances	<p>The documentation provided with flammable substances must include the following information:</p> <ul style="list-style-type: none"> • its general degree and type of hazard • a full description of the circumstances in which it may be ignited unintentionally • the likely effect of an unintentional ignition • a full description of the steps to be taken to prevent an unintentional ignition • if it is a gas, its lower and upper explosive limits, expressed as volume percentages in air • if it is a liquid, its lower and upper explosive limits, expressed as volume percentages in air or its flash point (and flash point methodology) and auto-ignition temperature • if it is a self-reactive solid, its self-acceleration decomposition temperature and heat of decomposition per unit mass. 	
I28	Regulation 46 Specific	<p>The documentation provided with toxic substances must include the following information:</p>	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	documentation requirements for toxic substances	<ul style="list-style-type: none"> • its general degree and type of toxic hazard • a full description of the circumstances in which it may harm human beings • the kinds of harm it may cause to human beings • a full description of the steps to be taken to prevent harm to human beings • if it will be a liquid during its use, the percentage of volatile substances in it, and the temperature at which that percentage was measured • a summary of the available acute and chronic (toxic) data used to define the (toxic) subclass or subclasses in which it is classified • the symptoms or signs of injury or ill health associated with each likely route of exposure • the dose, concentration, or conditions of exposure likely to cause injury or ill health • any TELs or WESs set by the Authority. 	
I29	<p>Regulations 51 – 52</p> <p>Duties of persons in charge of places in respect of signage</p>	<p>These controls specify the requirements for signage, in terms of content, presentation and positioning at places where hazardous substances are held in quantities exceeding those specified in Schedule 3 of the <i>Hazardous Substances (Identification) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity applies.</p> <p>Signs are required:</p> <ul style="list-style-type: none"> • at every entrance to the building and/or location (vehicular and pedestrian) where hazardous substances are present • at each entrance to rooms or compartments where hazardous substances are present • immediately adjacent to the area where hazardous substances are located in an outdoor area 	

Hazardous Substances (Identification) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>The information provided in the signage needs to be understandable over a distance of 10 metres and be sufficient to:</p> <ul style="list-style-type: none"> • advise that the location contains hazardous substances • describe the general type and degree of hazard of the substance (e.g. highly flammable) • where the signage is immediately adjacent to the hazardous substance storage areas, describe the precautions needed to safely manage the substance (e.g. a 'No Smoking' warning near flammable substances). 	
I30	Regulation 53 Advertising corrosive and toxic substances	<p>Any advertisements for a Class 6 substance must provide information identifying that it is toxic, specify the degree of toxicity and the need to restrict access by children.</p> <p>Any advertisement for a Class 8 substance must include information that identifies the substance is corrosive and specifies the need to restrict access by children (unless the substance is to be used in a place of work where children may not lawfully be present).</p> <p>Comparison with existing requirements</p> <p>The Toxic Substances Act 1979, Regulation 34 specified controls on the advertising of toxic substances, and the Toxic Substances Regulations 1983, Regulations 7 – 14, specified the requirements for advertisements.</p>	

Hazardous Substances (Packaging) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
<p>These regulations apply to an item of packaging that has a capacity of 450L or less and a net mass of contents of 400kg or less.</p> <p>Schedule 1 of the <i>Hazardous Substances (Packaging) Regulations 2001</i> provides the test methods for packaging that is required to be tested accordance with this schedule. The tests correlate to packaging requirements equivalent to UN Packing Group I (PG I).</p> <p>Schedule 2 of the <i>Hazardous Substances (Packaging) Regulations 2001</i> provides the test methods for packaging that is required to be tested accordance with this schedule. The tests correlate to packaging requirements equivalent to UN Packing Group II (PG II).</p> <p>Schedule 3 of the <i>Hazardous Substances (Packaging) Regulations 2001</i> provides the test methods for packaging that is required to be tested accordance with this schedule. The tests correlate to packaging requirements equivalent to UN Packing Group III (PG III).</p>			
Exclusions	Regulation 4	<p>These regulations do not apply to:</p> <ul style="list-style-type: none"> • aerosol or gas containers, containers designed for mechanical handling (when certified), containers permanently fixed in place (including permanently fixed to a vehicle) • any substance that is contained within the fuel system of a vehicle, ship or aircraft. • a distribution system, gas installation or gas appliance, subject to the Gas act 1992 and in which fuel gas is supplied or used. 	
P1	<p>Regulations 5, 6, 7 (1), 8 General packaging requirements</p>	<p>These controls relate to the ability of the packaging to retain its contents, allowable packaging markings with respect to design approvals, factors affecting choice of suitable packaging, and compatibility of the substance with any previous contents of the packaging.</p> <p>Regulation 5 – Ability to retain contents</p> <p>Packaging for all hazardous substances must ensure that, when the package is closed, there is no visible release of the substance, and that it maintains its ability to retain its contents in temperatures from –10°C to +50°C. The packaging must also maintain its ability to retain its remaining contents if part of the contents is removed from the package and the packaging is then re-closed. The packaging in direct contact with the substance must not be significantly affected or weakened by contact with the substance such that the foregoing requirements cannot be met.</p>	

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Regulation 6 – Packaging markings</p> <p>Packages containing hazardous substances must not be marked in accordance with the UN Model Regulations unless</p> <ul style="list-style-type: none"> • the markings comply with the relevant provisions of that document, and • the packaging complies with the tests set out in Schedule 1, 2 or 3 respectively of the <i>Hazardous Substances (Packaging) Regulations 2001</i>, and • the design of the packaging has been test certified as complying with those tests. <p>Regulation 7(1) – Requirements when packing hazardous substance</p> <p>When packing any hazardous substance, account must be taken of its physical state and properties, and packaging must be selected that complies with the requirements of Regulation 5, and Regulations 9 – 21.</p> <p>Regulation 8 – Compatibility</p> <p>Hazardous substances must not be packed in packaging that has been previously packed with substances with which it is incompatible.</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods Act 1974 (Sections 28 and 29) required containers and container markings for dangerous goods to meet prescribed requirements and to be approved by the Chief Inspector of Dangerous Goods.</p> <p>The Dangerous Goods Act (Sections 28 and 29) required containers and container markings for dangerous goods to meet prescribed requirements. Defective gas cylinders had to be destroyed [Dangerous Goods (Class 2 – Gases) Regulations 1980]. Repair and re-use of containers for flammable liquids were also controlled [Dangerous</p>	

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Goods (Class 3 – Flammable Liquids) Regulations 1985].</p> <p>The Toxic Substances Regulations 1983, Regulation 17 (2), required bulk containers and any container used to pack, store, sell or transport the substance to comply with certain requirements to safely contain the substance. This applied to any substance classified as toxic or corrosive in the Transport Recommendations.</p> <p>The Toxic Substances Act also required any standard poison or harmful substance (equivalent to HSNO 6.1D and 6.1E substances) to be kept out of the reach of children. HSNO requires a child resistant container.</p>	
P3	Regulation 9 Requirement for substances packed in limited quantity	When certain hazardous substances are packaged in limited quantities, there is provision for them to be packaged to a lesser performance standard (as specified in Schedule 4 of the <i>Hazardous Substances (Packaging) Regulations 2001</i>) than normally required. A list of those hazardous substances and the maximum quantity of substance per package that may be packaged to this lesser performance standard is provided in Schedule 5 of the <i>Hazardous Substances (Packaging) Regulations 2001</i> .	
P13	Regulation 19 Packaging requirements for toxic substances (Class 6)	<p>The packaging requirements for toxic substances (Class 6) are as follows:</p> <ul style="list-style-type: none"> • 6.1A substances must be packaged according to Schedule 1 (<i>Hazardous Substances (Packaging) Regulations 2001</i>). • 6.1B, 6.6A, 6.7A, 6.8A or 6.9A substances in quantities over 0.5 kg or 0.1 L should be packaged according to Schedule 2 (<i>Hazardous Substances (Packaging) Regulations 2001</i>), but may be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities equal to or less than 0.5 kg or 0.1 L. • 6.1C, 6.5A, 6.5B, 6.6B, 6.7B, 6.8B, 6.8C or 6.9B substances in quantities over 3 kg or 1L should be packaged according to Schedule 3 (<i>Hazardous Substances (Packaging) Regulations 2001</i>), 	

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>but may be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities equal to or less than 3 kg or 1L.</p> <ul style="list-style-type: none"> • 6.3A, 6.3B, 6.4A and 6.1D substances should be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities less than 450 L or 400 kg. • There is a provision that packages containing less than 0.5 L (500 mL) of a Class 6.1D, 6.3A, 6.3B, 6.4A substance do not have to comply with the drop test performance standard contained in Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) provided the packaging complies with the requirements of Regulations 5(1) (a), (b) and (e), and there is a warning statement on the outside of the package that the package may not withstand a drop of 0.5 m [Regulation 9 (3)-(5)]. • Any substance of hazard classification 6.1D, 6.1E, 6.3A, 6.3B or 6.4A that is offered for sale in a package of less than 2.5 L or 2.5 kg must be in child resistant packaging (i.e. toxic substances liable to be in homes). However, if the substance is for use in a place of work to which children do not have access, this requirement is not mandatory. <p>Comparison with existing requirements</p> <p>The Dangerous Goods (Class 2 – Gases) Regulations 1980 gave specific provisions for the handling, storage and conveyance of the toxic gases chlorine and ammonia.</p> <p>The Toxic Substances Act 1979 required that a standard poison or harmful substance had to be kept out of the reach of children. HSNO is much more specific in requiring the use of “child resistant” containers. “Child resistant” is defined in the HSNO Act (see Appendix 8 of the <i>(Blue) Guide to the Controls Regulations for Consultation on the Transfer of Registered Pesticides</i> or Regulation 3 of the <i>Hazardous Substances (Packaging) Regulations 2001</i>).</p>	

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		The requirements for making packaging child resistant are specified in the New Zealand Standard NZS 5285:1991.	
P14	Regulation 20 Packaging requirements for corrosive substances (Class 8)	<p>The packaging requirements for corrosive substances (Class 8) are as follows:</p> <ul style="list-style-type: none"> • 8.2A substances must be packaged according to Schedule 1 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) • 8.2B substances must be packaged according to Schedule 2 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities of more than 1 kg or 0.5 L, but may be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities equal to or less than 1 kg or 0.5 L • 8.1A, 8.2C, and 8.3A substances must be packaged according to Schedule 3 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities of more than 2 kg or 1 L, but may be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities equal to or less than 2 kg or 1 L • Any substance of hazard classification 8.2B, 8.2C, or 8.3A that is offered for sale in a package of less than 2.5 kg or 2.5 L must be in child resistant packaging (i.e. corrosive substances liable to be in homes). However, if the substance is for use in a place of work to which children to not have access, this requirement is not mandatory. <p>Comparison with existing requirements</p> <p>The Toxic Substances Act required that a standard poison or harmful substance had to be kept out of the reach of children. HSNO is much more specific in requiring the use of “child resistant” containers. “Child resistant” is also defined in the HSNO Act (see Appendix 8 of the <i>(Blue) Guide to the Controls Regulations for Consultation on the</i></p>	

Hazardous Substances (Packaging) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p><i>Transfer of Registered Pesticides</i> or Regulation 3 of the <i>Hazardous Substances (Packaging) Regulations 2001</i>).</p> <p>The requirements for making packaging child resistant are specified in the New Zealand Standard NZS 5285:1991.</p>	
P15	Regulation 21 Packaging requirements for ecotoxic substances (Class 9)	<p>The packaging requirements for ecotoxic substances (Class 9) are as follows:</p> <ul style="list-style-type: none"> • 9.1A–C, 9.2A–C, 9.3A–C and 9.4A–C substances must be packaged according to Schedule 3 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities of more than 5 kg or 5 L, but may be packaged according to Schedule 4 when in quantities equal to or less than 5 kg or 5L. However, there is a provision that packages containing less than 0.5 L (500 mL) of a Class 9.1C or 9.2C substance do not have to comply with the drop test performance standard contained in Schedule 4 provided the packaging complies with the requirements of Regulations 5(1) (a), (b) and (e), and there is a warning statement on the outside of the package that the package may not withstand a drop of 0.5 m. • 9.1D and 9.2 D substances should be packaged according to Schedule 4 (<i>Hazardous Substances (Packaging) Regulations 2001</i>) when in quantities less than 450 L or 400 kg. However, there is a provision that packages containing less than 0.5 L (500 mL) do not have to comply with the drop test performance standard contained in Schedule 4 provided the packaging complies with the requirements of Regulations 5(1) (a), (b) and (e), and there is a warning statement on the outside of the package that the package may not withstand a drop of 0.5 m [Regulation 9 (3)-(5)]. 	
PG3	Schedule 3	Packaging requirements equivalent to UN Packing Group III	Regulation applies to all substances listed in section 6 of this transfer report.

Hazardous Substances (Disposal) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Pollution control has been addressed to varying degrees in several Acts (Resource Management Act, Marine Pollution Act etc.). Discharge of a Class 6 or 8 substance into the environment would most likely require a resource consent. Any discharge to water, to land in circumstances where it may enter water, to air or to land is managed by regional councils, either through rules in regional plans or resource consents under section 15 of the Resource Management Act.</p> <p>Discharges to landfills are managed by landfill operators, usually under specified conditions on resource consents issued under the Resource Management Act.</p> <p>Discharges to sewer systems are managed by territorial local authorities using trade waste by-laws promulgated under the Local Government Act.</p> <p>Exports of hazardous waste from New Zealand are subject to the Basel Convention, administered in New Zealand by the Ministry of Economic Development with advice from the Ministry for the Environment</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods Act 1974 did not address the disposal of dangerous goods. There may not have been a legislative requirement except through pollution control (Resource Management Act, Marine Pollution Act etc.). Under the Local Government Act 1974, a Regional Council might take responsibility for establishing and managing sites for the disposal of hazardous wastes.</p> <p>The Dangerous Goods Regulations 1985, Regulation 34, requires that containers that have contained dangerous goods of Class 4 or 5 cannot be disposed of until all reasonable precautions have been taken to ensure no hazard remains.</p> <p>The Toxic Substances Regulations 1983, Regulation 23(3), required all toxic substances to have a label on the container with the appropriate precautions to be taken in the disposal of the container. Regulation 17 requires deadly poison containers to be disposed of appropriately. Note: There was no disposal regulation for the toxic substance itself.</p>	
	Regulation 4	These regulations do not apply to any substance that is contained within the fuel system of a vehicle, ship or aircraft.	
D2	Regulation 6 Disposal requirements for flammable substances	<p>Flammable substances (Classes 2, 3 and 4) must be disposed of by:</p> <ul style="list-style-type: none"> treating the substance so that it is no longer a hazardous substance. Treatment does not include depositing the substance in a landfill or sewage facility but can include controlled burning providing that the performance requirements as set out in Regulation 6 (3)(b) of the <i>Hazardous Substance (Disposal) Regulations 2001</i> for protecting people and the environment are met, or exporting the substance from New Zealand as a hazardous waste. <p>However, there is provision for flammable gases (Class 2.1.1), aerosols (Class 2.1.2), liquids (Class 3.1) and readily combustible solids (Class</p>	

Hazardous Substances (Disposal) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>4.1.1) to be discharged into the environment as waste or deposited in a landfill, provided the discharge location is managed so that:</p> <ul style="list-style-type: none"> • the substance will not at any time come into contact with any substances with explosive or oxidising properties, and • there is no ignition source in the vicinity of the disposal site, and • in the event of an accidental fire, harm to people or the environment does not occur – the performance requirements for this are set out in Regulation 6 (3)(b) of the <i>Hazardous Substances (Disposal) Regulations 2001</i>. <p>Conversely, desensitised explosives (Classes 3.2 and 4.1.3), self-reactive solids (Class 4.1.2), spontaneously combustible solids (4.2) and substances that are dangerous when wet (Class 4.3) may not be deposited in a landfill under any circumstances.</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods Act 1974 did not directly address the disposal of dangerous goods. It had regulations governing the disposal, cleaning and re-use of containers which had been used for dangerous goods.</p>	
D4	<p>Regulation 8</p> <p>Disposal requirements for toxic and corrosive substances</p>	<p>A Class 6 or 8 substance must be disposed of by:</p> <ul style="list-style-type: none"> • treating the substance so that it is no longer a hazardous substance, including depositing the substance in a landfill, incinerator or sewage facility. However, this does not include dilution of the substance with any other substance prior to discharge to the environment, or • discharging the substance to the environment provided that after reasonable mixing, the concentration of the substance in any part of the environment outside the mixing zone does not exceed any TEL (Tolerable Exposure Limit) set by the Authority for that substance, or • exporting the substance from New Zealand as a hazardous waste 	

Hazardous Substances (Disposal) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Comparison with existing requirements</p> <p>The Toxic Substances Act provided for the disposal of poisons to other users or licensees (for the purpose of use). There was no disposal regulation for the toxic substance itself, except that the Toxic Substances Regulations 1983 did require polychlorinated biphenyls (PCBs) to be disposed of responsibly.</p> <p>Discharges to landfills are managed by landfill operators, usually under specified conditions on resource consents issued under the Resource Management Act.</p> <p>Discharges to sewer systems are managed by territorial local authorities using trade waste by-laws promulgated under the Local Government Act.</p> <p>Exports of hazardous waste from New Zealand are subject to the Basel Convention, administered in New Zealand by the Ministry of Economic Development with advice from the Ministry for the Environment.</p>	
D5	<p>Regulation 9</p> <p>Disposal requirements for ecotoxic substances</p>	<p>A Class 9 substance must be disposed of by:</p> <ul style="list-style-type: none"> • treating the substance so that it is no longer a hazardous substance, including depositing the substance in a landfill, incinerator or sewage facility. However, this does not include dilution of the substance with any other substance prior to discharge to the environment, or • discharging the substance to the environment provided that after reasonable mixing, the concentration of the substance in any part of the environment outside the mixing zone does not exceed any EEL (Environmental Exposure Limit) set by the Authority for that substance, or • exporting the substance from New Zealand as a hazardous waste 	
D6	<p>Regulation 10</p> <p>Disposal</p>	<p>This control gives the disposal requirements for packages that contained a hazardous substance and are no longer to be used for that</p>	

Hazardous Substances (Disposal) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	requirements for packages	<p>purpose. Such packages must be either decontaminated/treated or rendered incapable of containing any substance (hazardous or otherwise) and then disposed of in a manner that is consistent with the disposal requirements for the substance. In addition, the manner of disposal must take into account the material that the package is manufactured from.</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods Regulations 1958 and the Dangerous Goods (Class 4 – Flammable Solids and Substances and Class 5 - Oxidising Substances) Regulations 1985 had regulations governing the disposal, cleaning and re-use of containers which had been used for dangerous goods.</p> <p>The Toxic Substances Regulations 1983, Regulation 17 specified disposal of deadly poison containers.</p>	
D7	Regulations 11, 12 Information requirements	<p>These controls relate to the provision of information concerning disposal (essentially on the label) that must be provided when selling or supplying a quantity of a hazardous substance that exceeds the trigger levels as specified in Schedule 1 of the <i>Hazardous Substances (Disposal) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>Information must be provided on appropriate methods of disposal and information may be supplied warning of methods of disposal that should be avoided i.e. that would not comply with the <i>Hazardous Substances (Disposal) Regulations 2001</i>. Such information must be accessible to a person handling the substance within 10 seconds and must comply with the requirements for comprehensibility, clarity and durability as described in Regulations 34-36 of the <i>Hazardous Substances (Identification) Regulations 2001</i> (Code I1).</p> <p>Comparison with existing requirements</p> <p>Regulation 23(3)(b) of the Toxic Substances Regulations 1983 required</p>	

Hazardous Substances (Disposal) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		a disposal statement for the container on the label of deadly and dangerous poisons.	
D8	Regulations 13, 14 Documentation requirements	<p>These controls relate to the provision of documentation concerning disposal (essentially in a Material Safety Datasheets (MSDS)) that must be provided when selling or supplying a quantity of a hazardous substance that exceeds the trigger levels as specified in Schedule 2 of the <i>Hazardous Substances (Disposal) Regulations 2001</i>.</p> <p>The documentation must describe one or more methods of disposal (that comply with the <i>Hazardous Substances (Disposal) Regulations 2001</i>) and describe any precautions that must be taken. Such documentation must be accessible to a person handling the substance at a place of work within 10 minutes and must comply with the requirements for comprehensibility and clarity as described in Regulations 48(2), (3) and (4) of the <i>Hazardous Substances (Identification) Regulations 2001</i> (Code I21).</p>	

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
Exclusion	Regulation 4	These regulations do not apply to substances used for motive power or control of vehicles, aircraft or ships which are contained in the fuel or electrical systems of vehicles, aircraft or ships.	
EM1	Regulations 6, 7, 9 – 11 Level 1 emergency management information: General requirements	<p>These controls relate to the provision of emergency management information (essentially on the label) that must be provided with any hazardous substance when present in quantities exceeding the trigger levels as listed in Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>Regulation 6 describes the duties of suppliers, Regulation 7 describes the duties of persons in charge of places, Regulation 9 describes the requirement for the availability of the information (10 seconds) and Regulation 10 gives the requirements relating to the presentation of the information with respect to comprehensibility, clarity and durability. These requirements correspond with those relating to secondary identifiers required by the <i>Hazardous Substances (Identification) Regulations 2001</i> (Code I1, Regulations 6, 7, 32 – 35, 36(1) - (7)).</p> <p>Regulation 11 provides for the option of complying with the information requirements of the transport rules when the substance is being transported.</p> <p>Comparison with existing requirements</p> <p>The Toxic Substances Regulations 1983, Regulations 23 and 24, required warning of the hazards and treatment of the effects to be on the label of the substance for deadly, dangerous and standard poisons, whereas HSNO requires this information to be locatable within 10 seconds.</p>	<p>Regulation applies.</p> <p>Regulations 6 and 7 make reference to Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <p>However, due to an error in the printing of the regulations there is no reference in Schedule 1 to toxic or ecotoxic substances.</p> <p>It is recommended that the appropriate emergency information is maintained. However, it is expected that the regulations will be amended to correct this omission before these substances are transferred.</p>
EM2	Regulation 8(a) Information requirements	The following information must be provided with Class 8.2 and 8.3 substances when present in quantities exceeding the trigger levels as listed in Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i> .	<p>Regulation applies.</p> <p>Regulation 8(a) makes reference to Schedule 1 of the <i>Hazardous Substances (Emergency</i></p>

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	for corrosive substances	<ul style="list-style-type: none"> • A description of the usual symptoms of exposure • A description of the first aid to be given • A 24-hour emergency service telephone number <p>This information must be available to the person handling the substance within 10 seconds (e.g. available on the label).</p>	<p><i>Management) Regulations 2001.</i></p> <p>However, due to an error in the printing of the regulations there is no reference in Schedule 1 to toxic or ecotoxic substances.</p> <p>It is recommended that the appropriate emergency information is included on the label. However, it is expected that the regulations will be amended to correct this omission before these substances are transferred.</p>
EM4	Regulation 8(c) Additional information requirements for flammable substances	<p>The following information must be provided with flammable substances when present in quantities equal to or greater than the trigger levels as listed in Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <ul style="list-style-type: none"> • A description of the material and equipment needed to put out a fire involving it • For those substances subject to temperature control under the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i> (i.e. any Class 3.2, 4.1.1, 4.1.2, 4.1.3, 4.2 or 4.3 substance), a warning of the temperature at which it is likely to ignite. <p>Comparison with existing requirements:</p> <p>The Dangerous Goods (Labelling) Regulations 1978 required the labels to describe the nature of the hazard (e.g. flammable gas) and instructions about safe storage.</p> <p>The Health and Safety in Employment Act 1992 and the Dangerous Goods (Class 4 and 5) Regulations 1985 require employers or managers to ensure that their employees are aware of hazards and (in the case of the Dangerous Goods Regulations) are instructed in how to handle dangerous goods.</p>	
EM6	Regulation 8(e)	The following information must be provided when a toxic substance of	Regulation applies.

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	Information requirements for toxic substances	<p>Class 6.1, 6.3, 6.4 or 6.5 is present in quantities exceeding the trigger levels as listed in Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <ul style="list-style-type: none"> • A description of the usual symptoms of exposure • A description of the first aid to be given to a person exposed to it • A 24-hour emergency service telephone number <p>Comparison with existing requirements:</p> <p>Under the Toxic Substances Regulations 1983, symptoms of exposure were required for Deadly and Dangerous Poisons, and first aid statements required for all scheduled toxic substances.</p>	<p>Regulation 8(e) makes reference to Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <p>However, due to an error in the printing of the regulations there is no reference in Schedule 1 to toxic or ecotoxic substances.</p> <p>It is recommended that the appropriate emergency information is included on the label. However, it is expected that the regulations will be amended to correct this omission before these substances are transferred.</p>
EM7	Regulation 8(f) Information requirements for ecotoxic substances	<p>The following information must be provided with ecotoxic substances when present in quantities exceeding the trigger levels as listed in Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <ul style="list-style-type: none"> • a description of the parts of the environment likely to be immediately affected by it • a description of its typical effects on those parts of the environment • a statement of any immediate actions that may be taken to prevent the substance from entering or affecting those parts of the environment. 	<p>Regulation applies.</p> <p>Regulation 8(f) makes reference to Schedule 1 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>.</p> <p>However, due to an error in the printing of the regulations there is no reference in Schedule 1 to toxic or ecotoxic substances.</p> <p>It is recommended that the appropriate emergency information is included on the label. However, it is expected that the regulations will be amended to correct this omission before these substances are transferred.</p>
EM8	Regulations 12–16, 18–20 Level 2 emergency management information	<p>These controls relate to the duties of suppliers and persons in charge of places of work with respect to the provision of emergency management documentation (essentially Material Safety Datasheets (MSDS)) that must be provided where hazardous substances are sold or supplied, or held in a workplace, in quantities equal to or greater than the quantities specified in Schedule 2 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i> Where a substance triggers more than</p>	

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
	requirements	<p>one hazard classification, the most stringent quantity generally applies.</p> <p>Regulations 12 and 13 describe the duties of suppliers, Regulation 14 describes the duties of persons in charge of places of work, Regulation 15 provides for the option of complying with documentation requirements of the transport rules when the substance is being transported and Regulation 16 specifies requirements for general contents of the documentation.</p> <p>Regulation 18 provides accessibility requirements (documentation to be available within 5 minutes) and Regulation 19 provides requirements for presentation with respect to comprehensibility and clarity. These requirements correspond with those relating to documentation required by the <i>Hazardous Substances (Identification) Regulations 2001</i> (Control Code I21).</p>	
EM9	Regulation 17 Extra content for flammable and oxidising substances and organic peroxides	There is an additional requirement for flammable and oxidising substances and organic peroxides that a description be provided of the steps to be taken to control any fire involving the substance, including the types of extinguishant to be used.	
EM10	Regulations 21 – 24 Fire extinguishers	<p>Every place (including vehicles) where explosive, flammable or oxidising substances are held in a place of work in quantities exceeding those specified in Schedule 3 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>, must have the specified number of fire extinguishers (either one or two as detailed in Schedule 3) [Regulation 21]. The intention of these general requirements is to provide sufficient fire-fighting capacity to stop a fire spreading and reaching hazardous substances, rather than providing sufficient capacity to extinguish any possible fire involving large quantities of hazardous substances.</p> <p>Each fire extinguisher must be located within 30 m of the substance, or,</p>	

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>in a transportation situation, in or on the vehicle [Regulation 22]. The performance measure for an extinguisher is that it must be capable of extinguishing a fully ignited pool of flammable liquid (50 mm deep and at least 6 m² in area), before the extinguisher is exhausted, and when used by one person [Regulation 23].</p> <p>Comparison with existing requirements</p> <p>The fire extinguishing equipment required where Class 2 (Gases) dangerous goods were stored, handled, conveyed or used were described in Regulations 117-130 of the Dangerous Goods (Class 2 – Gases) Regulations 1980 and Regulations 171-191 of the Dangerous Goods (Class 3 - Flammable Liquids) Regulations 1985. The Dangerous Goods Regulations 1958 focused more on the type of container and the location of the substance than on the nature of the substance itself.</p>	
EM11	<p>Regulations 25 – 34</p> <p>Level 3 emergency management requirements – emergency response plans</p>	<p>These regulations relate to the requirement for an emergency response plan to be available at any place (excluding aircraft or ships) where hazardous substances are held (or reasonably likely to be held on occasion) in quantities equal to or greater than those specified in Schedule 4 (<i>Hazardous Substances (Emergency Management) Regulations 2001</i>). Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>The emergency response plan must describe all of the likely emergencies that may arise from the breach or failure of controls. The type of information that is required to be included in the plan is specified in Regulations 29 – 30. Requirements relating to the availability of equipment, materials and people are provided in Regulation 31, requirements regarding the availability of the plan are provided in Regulation 32 and requirements for testing the plan are described in Regulation 33.</p> <p>Comparison with existing requirements</p>	

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		The Dangerous Goods Act 1974 and the Toxic Substances Regulations 1983 told people how to deal with potential spillages or accidents after they had occurred. HSNO requires there to be a plan in place ahead of any problem.	
EM12	Regulations 35 – 41 Level 3 emergency management requirements – secondary containment	<p>These regulations relate to the requirement for a secondary containment system to be installed at any fixed location for pooling substances (liquids or likely to liquefy in a fire) hazardous substances are held in quantities above those specified in Schedule 4 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>Regulation 37 prescribes requirements for places where hazardous substances are held above ground in containers each holding up to 60 L or less. Regulation 38 prescribes requirements for places where hazardous substances are held above ground in containers each holding between 60 L and 450 L. Regulation 39 prescribes requirements for places where hazardous substances are held above ground in containers each holding more than 450 L. Regulation 40 prescribes requirements for places where hazardous substances are held under ground. Regulation 41 prescribes requirements for secondary containment systems that contain substances of specific hazard classifications, e.g. there is a requirement to prevent substances from coming into contact with incompatible materials, and a requirement to exclude energy sources when Class 1, 2, 3, 4 or 5 substances are contained).</p> <p>Comparison with existing requirements</p> <p>The Dangerous Goods (Class 3 – Flammable Liquids) Regulations 1985 defined “compounds” that were secondary containment systems. For above-ground tanks, for example, the compound was to be of sufficient capacity to contain the full volume of the dangerous goods held in the tank (Regulation 61).</p> <p>Organic peroxides (in quantities exceeding 25kg) were required to be</p>	

Hazardous Substances (Emergency Management) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		held in buildings that could retain any spillage in the building [Dangerous Goods (Class 4 – Flammable Solids or Substances and Class 5 – Oxidising Substances) Regulations 1985; Regulation 24].	
EM13	Regulation 42 Level 3 emergency management requirements – signage	<p>These controls relates to the provision of emergency management information on signage at places where hazardous substances are held at quantities equal to or greater than the quantities specified in Schedule 5 of the <i>Hazardous Substances (Emergency Management) Regulations 2001</i>. Where a substance triggers more than one hazard classification, the most stringent quantity generally applies.</p> <p>The signage must advise of the action to be taken in an emergency and must meet the requirements for comprehensibility and clarity as defined in Regulations 34 and 35 of the <i>Hazardous Substances (Identification) Regulations 2001</i>.</p> <p>Comparison with existing requirements</p> <p>Signage required by the Dangerous Goods Act 1974 indicated the hazard (e.g. “Organic peroxides. Flammable. Keep fire and combustibles away”) rather than the emergency management measures.</p>	

Hazardous Substances (Tracking) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
Exclusion	Regulation 7	These regulations do not apply to any substance required for the motive power or control of a vehicle, aircraft or ship if the substance is contained within the fuel, electrical or control system, or to any fuel gas supplied or used in a distribution system, gas installation, or gas appliance that is subject to the Gas Act 1992.	
TR1	Regulations 4(1), 5, 6 General tracking requirements	<p>Some (highly) hazardous substances are subject to tracking requirements, i.e. the location and movement of the substance must be recorded at each stage of its lifecycle until its final disposal. The hazard classifications of the substances requiring tracking are listed in Schedule 1 of the <i>Hazardous Substances (Tracking) Regulations 2001</i>. The type of information to be recorded is specified in Schedule 2 of the <i>Hazardous Substances (Tracking) Regulations 2001</i> and includes a requirement to identify the approved handler and provision of information on the identification, quantity, location and disposal of the substance.</p> <p>The record must meet the location and presentation requirements specified in Part 2 of the <i>Hazardous Substances (Identification) Regulations 2001</i>, i.e. it must be accessible within 10 minutes and meet the performance standards for comprehensibility and clarity. The record must be kept for a period of 12 months after the substance has been transferred to someone else. If the substance is discharged into the environment or disposed of, the record must be kept for 3 years.</p> <p>Regulation 6 provides requirements for the transfer of hazardous substances from one place to another.</p> <p>Comparison with existing requirements</p> <p>Under the Dangerous Goods Act (1974) and Dangerous Goods (Class 3 - Flammable Liquid) Regulations 1985, Class 3 substances, and particularly Class 3a and 3b substances, were managed at the importation point (e.g. the consignee had a duty to prevent accumulation of Class 3 liquids on a wharf – Regulation 9) and subsequently by the owner, by the person in charge of a transport vehicle or the bulk storage licensee. The owner of a Class 3 Dangerous</p>	These regulations apply to substances that trigger this control on the basis of a toxic classification, but do not to substance that trigger this control on the basis of an ecotoxic classification only. See section 7.3, control code TR1.

Hazardous Substances (Tracking) Regulations 2001

Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
		<p>Good was required to notify the Chief Inspector of Dangerous Goods if there was leakage to the environment during pumping operations (Regulation 92).</p> <p>Under the Toxic Substances Regulations 1983, Regulation 50, a record of the sale of a deadly or dangerous poison had to be kept in a "Sale of Poisons" book.</p>	

Hazardous Substances (Personnel Qualifications) Regulations 2001			
Control Code	Regulation	Explanation and comparison with existing requirements	Recommended controls
AH1	<p>Regulations 4 – 6</p> <p>Approved Handler requirements (including test certificate and qualification requirements)</p>	<p>Some (highly) hazardous substances are required to be under the control of an approved handler during specified parts of the lifecycle. An approved handler is a person who holds a current test certificate certifying that they have met the competency requirements specified by the <i>Hazardous Substances and New Organisms (Personnel Qualification) Regulations 2001</i> in relation to handling specific hazardous substances.</p> <p>The specific classes and quantities of hazardous substances that trigger approved handler requirements are listed in the schedules of the relevant property controls, in the <i>Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001</i> and <i>Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001</i>.</p> <p>Regulation 4 describes the test certification requirements, Regulation 5 describes the qualification (competency and skill) requirements, and Regulation 6 describes situations where transitional qualifications for approved handlers apply.</p> <p>Comparison with existing requirements</p> <p>The designation “Approved Handler” is new. The Dangerous Goods Regulations put responsibility for control variously on the manager of a business handling dangerous goods, the dangerous goods licensee and Dangerous Goods Inspectors.</p>	<p>These regulations :</p> <p><u>may apply</u> to substances that are used in a wide - dispersive manner (this will be assessed before these substances are transferred)</p> <p><u>will apply</u> to substances used by a commercial contractor, regardless of the manner of use.</p> <p>See section 7.3, control code AH1.</p>

Annex 1 – Workplace Exposure Standards

Around 700 substances have been assigned workplace exposure standards (WES) by the Occupational Safety and Health Service (OSH). These are contained in the publication *Workplace Exposure Standards Effective from 2002*, available in hard copy from OSH or online at <http://www.osh.govt.nz/order/catalogue/pdf/wes2002.pdf>.

WESs have been set by OSH under the Health and Safety in Employment Act 1992. Where these exist for a substance covered by this transfer report, it is proposed that they be adopted under the HSNO Act. WES values for the active ingredients in a substance are given in Table 1. Where WESs have been set for components that apply to substances used as phenoxy herbicides, these are given in Table 2.

Table 1: Workplace Exposure Standards for active ingredients used in phenoxy herbicides

Active Ingredient	TWA	Ceiling	STEL
2,4-D	10 mg/m ³		

Table 2: Workplace Exposure Standards for components used in phenoxy herbicides

Component	TWA	Ceiling	STEL
Diethanolamine (skin, 2001)	3 ppm (13 mg/m ³)		
Dimethylamine	10 ppm (18 mg/m ³)		
Ethanolamine	3 ppm (7.5 mg/m ³)		6 ppm (15 mg/m ³)
1-Methyl-2-pyrrolidone (skin, 2001)	25 ppm (130 mg/m ³)		75 ppm (309 mg/m ³)
Perlite	10 mg/m ³		
Potassium hydroxide		2 mg/m ³	
1,2-Propanediol	Vapour & particulates	150 ppm (474 mg/m ³)	
	Particulates only	10 mg/m ³	
1,2,3-Propanetriol	10 mg/m ³		
Sodium hydroxide		2 mg/m ³	
Triethanolamine	5 mg/m ³		

Notes to Tables 1 and 2

For substances where there is likely to be exposure to dust and particulates, OSH have set a WES-TWA for “Particulates not otherwise classified” of 10 mg/m³. Exposure to dust and particulates is controlled under the Health and Safety and Employment Act 1992.

TWA – Time Weighted Average. The time weighted average exposure standard designed to protect the worker from the effects of long-term exposure.

Ceiling – A concentration that should not be exceeded during any part of the working day.

STEL – Short Term Exposure Limit – The 15-minute average exposure standard. Applies to any 15-minute period in the working day and is designed to protect the worker against adverse effects of

irritation, chronic or reversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both short-term and time-weighted average exposures apply.

ppm - Parts of vapour or gas per million of contaminated air by volume at 25°C and 760 torr.
mg/m³ - Milligrams of substance per cubic metre of air.

Inspirable dust is the portion of airborne dust that is taken in through the mouth and nose during breathing (TWA (as Particulates not other classified) 10 mg/m³).

Respirable dust corresponds to the fraction of total inspirable dust that is able to penetrate and deposit in the lower bronchioles and alveolar region (TWA (as Particulates not other classified) 3 mg/m³).

_(skin) – Skin absorption (see Section 8 of *Workplace Exposure Standards* for more information).

Annex 2 – List of Trade Name Products

The following table sets out the trade name products covered by the generic substance descriptions being considered for transfer.

Trade Name	Pesticide Registry Number	Generic Substance Description
2,4-DB Herbicide	P000179	A soluble concentrate containing 400 g/litre 2,4-DB as the sodium salt.
Agpro Liberate	P005325	A suspension concentrate containing 17 g/litre haloxyfop [(R)-isomer] as the methyl ester and 500 g/litre terbuthylazine.
Agrichem 2,4-D	P004425	A water soluble powder containing 800 g/kg 2,4-D as the sodium salt.
Agritone 720	P005707	A soluble concentrate containing 720 g/litre MCPA as the dimethylamine salt.
Amicide 625	P006025	A soluble concentrate containing 625 g/litre 2,4-D as the dimethylamine and diethanolamine salts.
Axall	P002799	An emulsifiable concentrate containing 75 g/l bromoxynil and 75 g/l ioxynil both as the octanoate and heptanoate esters and 345 g/l mecoprop as the isooctyl ester.
Banvine	P001057	A soluble concentrate containing 200 g/litre 2,4-D and 100 g/litre dicamba as amine salts.
Baton	P005070	A water soluble granule containing 800 g/kg 2,4-D as the dimethylamine salt.
Bromicide MA	P005673	An emulsifiable concentrate containing 200 g/litre bromoxynil as the octanoate ester and 200 g/litre MCPA as the ethyl ester.
Compitone Plus	P005646	A soluble concentrate containing 600 g/litre mecoprop-p as the dimethylamine salt.
Compitone Super	P005645	A soluble concentrate containing 310 g/litre dichlorprop-p, 160 g/litre MCPA and 130 g/litre mecoprop-p as dimethylamine salts.
Crop Care MCPA	P004867	A soluble concentrate containing 375 g/litre MCPA as the potassium salt.
Duplosan-DP	P003799	A soluble concentrate containing 600 g/litre dichlorprop (optically active isomer) potassium salt.
Duplosan-KV	P003898	A soluble concentrate containing 600 g/litre mecoprop-p (optically active isomer) as the potassium salt.
Duplosan Super	P004594	A soluble concentrate containing 310 g/litre dichlorprop-p, 160 g/litre MCPA and 130 g/litre mecoprop-p as dimethylamine salts.
Fertiliser 21:1:16 With Dicot Weed Control III	P005503	A granule containing 10.3 g/kg 2,4-D, 0.7 g/kg dicamba and 10.3 g/kg mecoprop.
Fruit Fed Stop Drop	P002252	A soluble concentrate containing 174 g/litre 2,4-D as the amine salt.
Fusilade	P003188	A water dispersible granule containing 250 g/kg fluzafop-p-butyl.
Gallant NF Herbicide	P004839	An emulsifiable concentrate containing 100 g/litre haloxyfop[(R)-isomer] as the methyl ester.

Trade Name	Pesticide Registry Number	Generic Substance Description
Garden King Kleen Lawn	P005462	A soluble concentrate containing 40 g/litre dicamba and 240 g/litre mecoprop as the amine salts.
Garden King Onehunga Weed Killer	P005463	An emulsifiable concentrate containing 200 g/litre bromoxynil as the octanoate ester and 200 g/litre MCPA as the ethyl ester.
Headland Spear	P004984	A soluble concentrate containing 500 g/litre MCPA as the dimethylamine salt.
Image	P005951	An emulsifiable concentrate containing 120 g/litre bromoxynil and 120 g/litre ioxynil as the octanoate esters and 360 g/litre mecoprop as the butoxyethanol ester.
Improved Turfix	P004372	A soluble concentrate containing 6.2 g/litre dicamba, 50 g/litre MCPA and 200 g/litre mecoprop as the dimethylamine salts.
Jolyn Clean Sweep	P004625	A soluble concentrate containing 375 g/litre MCPA as the potassium salt.
Lawn Weed Spray	P006101	A soluble concentrate containing 6.2 g/litre dicamba, 50 g/litre MCPA and 200 g/litre mecoprop as the dimethylamine salts.
Legend	P005005	A soluble concentrate containing 18.7 g/litre dicamba, 150 g/litre MCPA and 600 g/litre mecoprop as the dimethylamine salts.
Leopard 100 EC	P005756	An emulsifiable concentrate containing 100 g/litre quizalofop-p-ethyl.
Liquid Weed'N'Feed	P004201	A liquid containing 2.3 g/litre dicamba and 15 g/litre MCPA as amine salts.
MCPA 400	P000375	A soluble concentrate containing 375 g/litre MCPA as the potassium salt.
MCPA Herbicide	P000262	A soluble concentrate containing 375 g/litre MCPA as the potassium salt.
MCPB 400	P000265	A soluble concentrate containing 385 g/litre MCPB as the sodium salt.
MCPB Herbicide	P000268	A soluble concentrate containing 385 g/litre MCPB as the sodium salt.
Mecoprop 600A	P003786	A soluble concentrate containing 600 g/litre mecoprop as the potassium salt.
Pasture-Kleen Herbicide	P005106	An emulsifiable concentrate containing 520 g/litre 2,4-D as the ethylhexyl ester.
Pulsar	P004961	A soluble concentrate containing 200 g/litre bentazone and 200 g/litre MCPB as the sodium salt.
Puma S	P003945	An oil in water emulsion containing 69 g/litre fenoxaprop-p-ethyl.
Relay	P005149	An emulsifiable concentrate containing 520 g/litre 2,4-D as the ethylhexyl ester.
Salvo	P003176	A soluble concentrate containing 17 g/litre dicamba, 233 g/litre dichlorprop, 107 g/litre MCPA and 210 g/litre mecoprop as the dimethylamine salts.
Select	P005202	A soluble concentrate containing 25 g/litre MCPA and 375 g/litre MCPB as the sodium salts.
Thistle Killem	P005315	An emulsifiable concentrate containing 520 g/litre 2,4-D as the ethylhexyl ester.
Soft Touch	P004861	A soluble concentrate containing 385 g/litre MCPB as the sodium

Trade Name	Pesticide Registry Number	Generic Substance Description
		salt.
Thistrol Plus	P005956	A soluble concentrate containing 25 g/litre MCPA and 375 g/litre MCPB both as the dimethylamine salts.
Topik	P004546	An emulsifiable concentrate containing 240 g/litre clodinafop-propargyl.
Tricombi	P005192	A soluble concentrate containing 18.7 g/litre dicamba, 150 g/litre MCPA and 600 g/litre mecoprop.
Trimec	P003253	A soluble concentrate containing 18.7 g/litre dicamba, 150 g/litre MCPA and 600 g/litre mecoprop.
Tropotox Plus	P003275	A soluble concentrate containing 25 g/litre MCPA and 375 g/litre MCPB as the sodium salts.
Turfclean	P002981	A soluble concentrate containing 21 g/litre dicamba, 42 g/litre MCPA and 168.5 g/litre mecoprop as the diethanolamine salts.
Woody Weedkiller	P003390	A soluble concentrate containing 100 g/litre 2,4-D plus 50 g/litre dicamba as amine salts.

Annex 3 – Summary of Submissions

Table 1: Summary of submissions from the consultation

This table summarises the comments relating to the transfer of phenoxy herbicides made by submitters and responded to on an individual basis. Since our responses were sent to submitters, some further changes to the classifications and controls have been made as a result of:

- Further consideration of the 6.7B classification for chlorophenoxy herbicides following the receipt of additional information; and
- Approval of a revised policy on Approved Handler and Tracking requirements for ecotoxic substances by the Hazardous Substances Standing Committee (26 November 2003).

As a consequence, our initial responses detailed below may not reflect the final recommendations for classifications and controls.

Query	Response
Nufarm Limited New Zealand	
Queries on the classifications of specific phenoxy herbicides.	Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.
ERMA has classified chlorophenoxy herbicides as 6.7B. The IARC classification for chlorophenoxy acids was based on epidemiology of production. More recent evidence from Kogevinas et al (1997) relates this to dioxin contamination of early production, and is not relevant to current production.	<p>This 6.7B classification was based on the International Agency for Research on Cancer (IARC) classification for chlorophenoxy herbicides¹ which concluded:</p> <p>“Chlorophenoxy herbicides are possibly carcinogenic to humans (Group 2B)”</p> <p>IARC Group 2B is equivalent to the HSNO (and GHS) classification of 6.7B - substances that are suspected human carcinogens. For transfer to the HSNO framework, the 6.7B classification was extended to include 2,4-DB and MCPB which are not listed in the original IARC monograph, but which are considered, on the basis of structure, to reasonably included.</p> <p>The IARC conclusion was based on a significantly increased risk of Soft-Tissue Sarcoma (STS) and Non-Hodgkin’s Lymphoma (NHL) and a slight increased risk of all cancers to people exposed to chlorophenoxy herbicides.</p> <p>While more recent studies (e.g. Kogevinas et al 1997²) have indicated that the increased risk of STS may be related to contamination of phenoxy herbicides with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), this does not account for the increased risk of NHL.</p> <p>This issue was discussed with Professor Neil Pearce, Director of the Centre for Public Health Research, Massey University (Wellington Campus). Professor Pearce is a co-author of the Kogevinas study and has worked with IARC on a number of occasions. Professor Pearce presented a paper on agricultural exposures and NHL, to the Oxford Symposium in Nov 2002³. The paper considered a number of studies</p>

Query	Response
	<p>where there was no TCDD contamination and yet there was an increased incidence of NHL. It is his conclusion in both this paper and in discussions with him, that the increased risk of NHL, despite the absence of TCDD contamination, provides justification to maintain the IARC 2B classification for chlorophenoxy herbicides. We support this conclusion. Therefore, we have retained 6.7B classification for these substances.</p> <p>¹ IARC. Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man. Geneva: World Health Organization, International Agency for Research on Cancer, Supplement 7: (1987) (p.156)</p> <p>² Cancer mortality in workers exposed to phenoxy herbicides, chlorophenols, and dioxins. An expanded and updated international cohort study. Kogevinas et al. Am J Epidemiol. 1997 Jun 15;145(12):1061-75.</p> <p>³ Agricultural Exposures and Non-Hodgkin's Lymphoma. N.E. Pearce, D. Mclean. Proceedings of the International Symposium on Agricultural Exposures and Cancer, Green College, Oxford, United Kingdom. 19-12 November 2002.</p>
<p>Many of our products are manufactured by the neutralisation of phenoxy acids with dimethylamine, potassium hydroxide or sodium hydroxide to form salt solutions of with pH 8 - 9.5. These products are not classified as a skin corrosives or irritants by pH. At pH 9.5 the free hydroxyl ion content is only 3×10^{-4} M and is not corrosive or irritant.</p> <p>Industrial experience over many years indicate there is no potential for irreversible skin damage and minimal risk of skin irritation during the synthesis, formulation, packaging, transport or end-use of chlorophenoxy products.</p>	<p>The original classifications were based on data for the phenoxy acids which indicated that they were skin irritants. However, the existence of acid/base neutralisation reactions during salt formation and the resulting reduction in skin irritation potential is accepted and therefore the 6.3 and 8.2 classifications have been removed.</p>
Dow AgroSciences	
<p>Queries on the classifications of specific phenoxy herbicides.</p>	<p>Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.</p>
<p>Equivocal epidemiology that may have been related to TCDD that is no longer present under current production methods. (Kogevinas et al 1997).</p> <p>TOXNET indicates relationship between soft tissue sarcomas and occupational exposure may be due to phenoxy acids, chlorophenols, their impurities or both.</p> <p>What is the ERMA basis for this classification?</p>	<p>See response to Nufarm</p>
<p>Many of our phenoxy acid salt products have been classified as skin corrosive or irritant. This appears to be on the basis of the data for parent phenoxy acids rather than evidence of corrosiveness/irritancy of the</p>	<p>The original classifications were based on data for the phenoxy acids which indicated that they were skin irritants. However, the existence of acid/base neutralisation reactions during salt formation and the</p>

Query	Response
<p>salts themselves.</p> <p>What is the ERMA basis for these classifications?</p>	<p>resulting reduction in skin irritation potential is accepted and therefore the 6.3 and 8.2 classifications have been removed.</p>
BASF	
<p>Queries on the classifications of specific phenoxy herbicides.</p>	<p>Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.</p>
<p>6.7B What is the basis of these classifications?</p> <p>The SDS for the substances do not carry any of the relevant EU risk phrases R40, R45, R49 relating to evidence of carcinogenicity. The hazard category 6.7B for these substances should therefore be rescinded.</p>	<p>See response to Nufarm</p>
<p>While the phenoxy acids are primary skin irritants, the salt formulations are not. Furthermore the SDS carry no EU risk phrases in this regard. Therefore the hazard category 6.3A for these formulations should be rescinded.</p>	<p>The original classifications were based on data for the phenoxy acids which indicated that they were skin irritants. There was a general lack of data regarding the irritancy of the salts themselves. However, the existence of acid/base neutralisation reactions during salt formation and the resulting reduction in skin irritation potential is accepted and therefore the 6.3 and 8.2 classifications will be removed.</p>
<p>The control T8 is applicable to substances used as vertebrate poisons only. Our products are herbicides used for selective weed control in cereals, clover, pastures and peas. This control should therefore be removed for our products.</p>	<p>The controls relating to signage requirements apply to class 6.1 substances that are (lawfully) laid outdoors for terrestrial vertebrate pest control. If a substance is <u>not</u> being used for terrestrial vertebrate pest control, then these regulations do not apply.</p>
<p>The requirement to set a specific application rate for the target area as part of control E2 is impracticable and inappropriate for our products (and for pesticides in general) for several reasons.....</p>	<p>No tolerable exposure limits (TEs) or environmental exposure limits (EELs) will be set for actives or components of Phenoxy herbicides at this time.</p> <p>Tolerable exposure limits and EELs may be set for these substances before they are transferred, at which time further consultation will be undertaken.</p> <p>Regulation 48 of the Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001 requires the setting of an application rate if an EEL is set for a substance designed for use as a biocide. The setting of application rates for substances will be considered in conjunction with the setting of an EEL for any actives or components of this group of pesticides.</p>
<p>The control code E4 is only applicable to substances formulated as granules, coated on seed or used as baits. Our products are water soluble concentrates for dilution and application as a spray; therefore the control E4 does not apply and should be removed from our products.</p>	<p>The intent of this control is to manage adverse effects on non-target species inadvertently foraging on substances in granular form or coated on seeds; for example, where a granular pesticide is laid on the soil surface and may therefore pose a risk to foraging birds and other vertebrates.</p> <p>This is a default control for all class 9.3 substances (ecotoxic to terrestrial invertebrates). Since your substances are not applied in granular form or coated on seeds, then the control itself is not deleted, but the regulations do not apply.</p>

Query	Response
Bayer New Zealand Ltd	
Queries on the classifications of specific phenoxy herbicides.	Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.
6.7B We don't have any data, what info do you have?	See response to Nufarm
Syngenta	
Queries on the classifications of specific phenoxy herbicides.	Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.
Kiwicare Corporation Ltd	
Queries on the classifications of specific phenoxy herbicides.	Queries responded to on an individual basis. Any resulting changes are recorded in Table 2 of this annex.
Turfclean is not a vertebrate poison, therefore should not have the control code T8 applied.	The controls relating to signage requirements apply to class 6.1 substances that are (lawfully) laid outdoors for terrestrial vertebrate pest control. If a substance is <u>not</u> being used for terrestrial vertebrate pest control, then these regulations do not apply.
From the data we have reviewed regarding the carcinogenicity, organ toxicity and reproductive toxicity it is clear that the data is inconclusive - some species show dose related effects, and some do not. Even repeat tests of the same species show variation. When coupled with the fact that the data on Human exposure is almost non-existent, it is a very tenuous scientific leap to try and relate animal studies to human effects. We are very concerned that is this inconclusive animal data is used to force the inclusion of possibly unwarranted labels, it will spell the death of some products. The average citizen is likely to have a knee jerk reaction to a "suspected carcinogen" label and bypass it immediately. The long term effect of this to a small company like ours is lower sales, less income and profits, which will lead to job losses. All needless when one considers that the actual risk to humans in normal exposure, when appropriate safety precautions are followed, is negligible.	<u>Carcinogenicity</u> See response to Nufarm
Wenita Forest Products	
Test certificates & Approved Handler qualification <u>must</u> be aligned to current industry training and standards (i.e. GROWSAFE). If a current GROWSAFE Certificate is held, this must be accepted and upheld as the transitional qualification and the 'Approved Handler' qualification can be sought when the GROWSAFE qualification expires.	Current industry training courses are being adapted to fit HSNO requirements so they are acceptable for training approved handlers. This includes Growsafe. We acknowledge the importance of Growsafe to the horticultural sector, and the avoidance of duplication with HSNO. ERMA NZ is also working with Growsafe to determine the applicability of current Growsafe certificates when assessing an application to become an approved handler under the transitional provisions. Wherever possible, we will be linking the approved handler regime to existing industry programmes.

New Zealand Vegetable and Potato Growers Federation	
We support the use of industry developed approved codes of practice as a method of achieving the controls applied.	Your support is noted. ERMA NZ is committed to working with industry groups to assist in the development of approved codes of practice.
The Federations will be working with the NZ Agrichemical Education Trust to make sure growers are able to comply with the proposed approved handler controls, through certification to an applicable GROWSAFE course.	As you are aware, current industry training courses are being adapted to fit HSNO requirements so they are acceptable for training approved handlers. This includes Growsafe. We acknowledge the importance of Growsafe to the horticultural sector, and the avoidance of duplication with HSNO. ERMA NZ is also working with Growsafe to determine the applicability of current Growsafe certificates when assessing an application to become an approved handler under the transitional provisions. Wherever possible, we will be linking the approved handler regime to existing industry programmes.
The horticulture industry is very aware of the impact of phenoxy herbicide spray drift and wishes to see the use of such products controlled in a manner that reduces that impact. We support Approved Handlers requirements (including test certificate and qualification requirements) as a default control for phenoxy herbicide use.	Your support is noted. ERMA NZ is committed to the development and implementation of controls that manage the risks, such as spray drift, associated with the use of pesticides. ERMA NZ is currently consulting on a paper relating to the application of Approved Handler and Tracking controls to products based on exposure.
Ministry of Health	
From a public health perspective the default controls are the status quo or more stringent than current controls. In several instances ERMA has already recognized that the default control triggered by the substance's classification is impractical and ERMA will be considering variations to these (refers to the application of tracking and approved handler controls to substances intended for domestic use i.e. home garden). There are no substances in this list where we would want to vary the default controls to further protect public health. Although 2,4-D use generates some public concern, particularly with respect to aerial spraying, this potential risk will be managed by setting a Tolerable Exposure Limit.	Your support of the proposed controls is noted.
Federated Farmers	
T3 & E5 Record Keeping Federated farmers would question the necessity and validity of the three year record keeping requirement for any of the products listed in this submission – including domestic and agricultural products. As far as we are aware, the use of these substances has not previously triggered a record keeping requirement, as they were not included under the dangerous or deadly poison classifications. As such, we are concerned that these new requirements will add costs, without any demonstrated need or benefit.	T3 is triggered by highly toxic and E5 by highly ecotoxic classifications. It is appropriate to keep track of substances with these hazardous properties. Record keeping (e.g. by use of a spray diary) should not be onerous. The regulations only require record keeping if the application or discharge is in a place where (a) members of the public may lawfully be present or (b) the substance is likely to leave the place of application or discharge. That is, this is not a blanket requirement on all farms and farmers. Each farmer will need to make a decision regarding record keeping on a case by case basis.

<p>We would assume that the T3 control has been triggered by the 6.9A HSNO classification, which is inappropriate for the following reasons:</p> <p>a) HSNO classification 6 (subclass 6.1 – 6.9) addresses the risk of any toxic hazards that may result from the use of the chemical substance in public areas. Many of the herbicides in question are used in a diluted form, which would probably not trigger the T3 control.</p> <p>b) In the rural environment, the only people exposed to the concentrated form of the chemicals are those mixing them before application. At this point in time, T2 and T5 regulations (protective clothing) may apply.</p> <p>c) For safety reasons, public access to farm work places is limited. The public are not given access to areas where they may be exposed to either concentrated formulations of these substances or areas where these substances are applied, so risk of exposure for members of the public is likely to be low or non-existent. Farms are a workplace – not a public park or walkway. As such T3 should not apply to the use of these substances on farms.</p> <p>We would further assume that the E5 control has been triggered by the HSNO classification relating to ecotoxic properties of the concentrated formulations (9.1 – 9.4). As such, this is inappropriate for herbicides used in the farming environment for the following reasons:</p> <p>a) The only significant risk of these substances entering the air or water on farms is when they are being applied, and this is in a diluted form. If the diluted form (usually less than 1% of the original concentration) was being classified, it would probably not trigger this control.</p> <p>b) The concentrated substances will not be discharged or applied undiluted, so it is unlikely that the concentrated formula will be discharged into the air or water.</p>	
<p>TR1 Tracking</p> <p>Federated Farmers would question the necessity and validity of this requirement for these substances – especially after they have been diluted for use.</p> <p>The use of these substances in the farming environment has not triggered a tracking requirement under previous legislation – as they did not trigger the dangerous or deadly poisonous classifications. As such we are concerned that these new requirements will add costs, without any demonstrated need or benefit.</p> <p>We would assume that the tracking control has been triggered by the 9.1A or 9.2A HSNO classifications that the concentrated substances attract. We believe the TR1 control is unnecessary for the following reasons:</p>	<p>ERMA New Zealand recently revised it's policy regarding the application of Tracking and Approved handlers controls to ecotoxic substances. Tracking will no longer be required for substances that trigger this control on the bases of the ecotoxic hazard only. As a consequence the tracking requirement has been deleted for all phenoxy herbicides except one substance which triggers the control on the basis of a 6.1C classification.</p>

<p>a) These substances are used in a diluted form, which would probably not trigger this control if they were being classified.</p> <p>b) The imposition of this added compliance regime for use of urea herbicides in the rural environment will not provide any benefits, but will impose costs (and additional environmental risks) to farming enterprises.</p> <p>Federated Farmers opposes the application of these tracking requirements for the use of products that did not previously require such controls. If this control is going to be applied in such a way, scientific and statistical justification should be given for doing so.</p>	
<p>T6 & E7 Requirements for Approved Handler</p> <p>AH1 Approved Handler</p> <p>The use of phenoxy herbicides is common in most sectors operating in the rural environment, and also in domestic households. As far as Federated Farmers is aware, there have been few or no serious incidences associated with the use of these products by farmers.</p> <p>We are concerned that the imposition of new restrictions on farmers when using these products will make the products economically unviable. This would lead to the wider use of a smaller number of economic alternatives, which in turn, would increase the risk of resistance occurring.</p> <p>Farmers and domestic users will have to comply with new ‘licensing laws’ to use products that they have historically used without incident, adding costs with no demonstrated need or benefits. Federated Farmers considers that this new compliance regime will be either:</p> <p>Unwieldy - if applied to both domestic and agricultural users</p> <p>Discriminatory – if only applied to commercial users, because it is “risk” (in terms of hazard and exposure) that is being addressed, and it is possible that this “risk” is lower in the agricultural environment.</p> <p>Federated Farmers strongly opposes the requirement for an approved handler ‘certificate’ or ‘license’ when using and handling phenoxy herbicides.</p>	<p>ERMA New Zealand recently revised it’s policy regarding the application of Tracking and Approved handlers controls to ecotoxic substances. Approved handlers will not be required for substances used in a non- or limited dispersive manner, unless they are being used by a commercial contractor. The approved handler requirements for substances used in a wide dispersive manner will be reviewed before these substances are transferred.</p>
<p>T8 Controls on Vertebrate Poisons</p> <p>We welcome the statement from ERMA that the T8 control only applies to chemicals when used as a vertebrate poison. As such it should be deleted from the default control requirements under the new legislation.</p> <p>This control would affect the ability of farmers to apply these herbicides in optimum weather conditions.</p>	<p>The controls relating to signage requirements apply to class 6.1 substances that are (lawfully) laid outdoors for terrestrial vertebrate pest control. If a substance is <u>not</u> being used for terrestrial vertebrate pest control, then these regulations do not apply. Therefore, the example given would not require signage</p>

<p>Management decisions such as this must be made when the conditions are just right, not three days after the signs have been put up. This control would be impractical and lead to higher risks of 'off target application' (spray drift) or ineffective application – requiring reapplication.</p>	
<p>E3 Controls for the protection of terrestrial invertebrates</p> <p>This control is similar to previous pesticide regulations, which stated that substances that were labelled as toxic to bees could not be used without a permit. As far as we are aware, the products listed were not previously labelled as being toxic to bees, so we assume that this is a new control for these two herbicides that applies to the ecotoxicity of the concentrated formulation. If this is so, Federated Farmers would like justification for this new control and clarification as to whether it will apply to the diluted concentrations applied to plant pests.</p> <p>Federated Farmers would also request clarification on what the specified period (after application) is likely to be for each of these products.</p>	<p>The E3 controls for these products are triggered by data for the following active ingredients:</p> <p><u>2,4-DB (9.4C)</u></p> <p>Effect of 4-(2,4-Dichlorophenoxy)butanoic acid on Apis mellifera (Honey Bee) ENDPOINT: 48 hour(s) LD50 of 14.5 ug/org (NR: NR) on Measurement: Mortality; Response Site: NR Reference Number: 344 Author(s): Office of Pesticide Programs Publication Year: 2000 Title: Environmental Effects Database (EEDB) Reference Source: Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. [ECOTOX]</p> <p><u>Bromoxynil Octanoate (9.4B)</u></p> <p>Species: honey bee Study Type: C (Acute Contact Study) % AI : Tech LD50 (48H) = 2 ug/bee NOEL: Not Reported Study Date: Not Reported [USEPA PESTICIDE DATABASE]</p> <p><u>Dicamba (9.4B)</u></p> <p>A study using Apis mellifera (Honey bee). The adult(s) were exposed for a duration of 48 hour(s) to 3,6-Dichloro-2-methoxybenzoic acid (CAS # 1918009) through an oral via capsule exposure route. ENDPOINT: 48 hour(s) LD50 of 3.6 ug/org (NR: NR) on Measurement: Mortality (Reference 344, Office of Pesticide Programs, 2000, Test Number 502365). Reference Number: 344 Author(s): Office of Pesticide Programs Publication Year: 2000 Title: Environmental Effects Database (EEDB) Reference Source: Environmental Fate and Effects Division, U.S.EPA, Washington, D.C. [ECOTOX]</p> <p>Where a product contains > 25% of a 9.4B ingredient, the product will attract a 9.4B classification.</p> <p>Where a product contains > 2.5% of a 9.4B ingredient, the product will attract 9.4C classification.</p> <p>Where a product contains > 25% of a 9.4C ingredient, the product will attract a 9.4C classification.</p>

	<p>Using the above rules and data has resulted in the 9.4 classifications for the specified phenoxy herbicides and attracted the E3 control.</p> <p>However, if these products are diluted and applied at the rates specified on the labels, then the E3 control will not apply.</p>
<p>E1 Controls limiting exposure to ecotoxic substances</p> <p>These EEL's have not been set yet, there will be further consultation at a later date at which point ERMA will establish EEL's for these herbicides, and as such we are not sure how these will be applied. Federated Farmers is concerned that we are being asked to agree to the application of a control that has not yet been established. As such Federated Farmers does not believe that it is appropriate to discuss the addition of this control until such time as the EEL's have been established for each substance.</p>	<p>We emphasise again the statement made in the consultation document that substances or components of substances for which it is appropriate that an EEL be set as part of the transfer process will be consulted upon at a later date.</p>
<p>T1 Controls limiting exposure to toxic substances</p> <p>These controls are similar to EEL's, but limit human exposure to substances, rather than just environmental exposure. The TEL's for these products have not been set yet. This consultation will occur at a later date. Maximum levels have already been set for food & drinking water under the drinking water standards and the Food Act. Federated Farmers are not sure whether these controls will duplicate or supersede these stated current controls or whether the new controls will apply to different media.</p> <p>Federated Farmers understands that the use of these substances has not previously triggered a requirement for this form of compliance regime except in the workplace. As such, we are concerned that these new requirements will add costs to farming businesses, without any demonstrated need or benefit.</p> <p>We would further assume that the T1 control has been triggered by the concentration of the active ingredients in concentrated herbicides, (which has in turn triggered a HSNO classification). We are of the opinion that controls limiting exposure of the public to toxic substances are inappropriate when these substances are applied on farms because:</p> <p>a) Farms are a workplace – not a public park or walkway, as such T1 should not apply to the use of these substances on farms.</p> <p>b) For safety reasons, public access to farm work places is limited. The public are not given access to areas where they may be exposed to either concentrated formulations of these substances or areas where these substances are applied, so the risk of exposure for members of the public is likely to be low or non-existent.</p>	<p>Substances or components of substances for which a TEL will be set as part of the transfer process will be consulted on at a later date.</p>

<p>c) In the rural environment, the only persons exposed to the concentrated formulation is those mixing the chemicals, and persons handling these substances are only ever 'exposed' to the concentrated formulations when mixing occurs, at which point the T2 & T5 regulations (protective clothing and workplace regulations) may apply.</p> <p>d) These substances are used in a diluted form, which would probably not trigger this control if they were being classified.</p> <p>Federated Farmers would question the necessity and validity of the T1 default control for the use of phenoxy herbicides when they are applied on farms.</p>	
<p>T2 Controls limiting of exposure to toxic substances in the workplace</p> <p>Federated Farmers supports in principal the adoption of a Workplace Exposure Standard (WES), equal to that which has been set by Occupational Health and Safety (OSH).</p> <p>We believe this is a far more appropriate control than Tolerable Exposure Limits, as farms are a work place and not a public area.</p>	<p>Your support for adopting WES set by OSH is noted.</p> <p>Please see also the Responses to Common Issues Raised by Submissions to Date on the Transfer of Pesticides for further information on TELs.</p>

Table 2: Additional Submissions on the Carcinogenicity of Chlorophenoxy Herbicides

Summary of Submissions
Nufarm Ltd NZ
Summary of new material concerning 6.7 (carcinogenicity) classification of phenoxy herbicides
<p>ERMA have proposed the classification of phenoxy herbicides as 6.7B – substances that are suspected human carcinogens. This classification is consistent with the 1987 IARC classification of phenoxy herbicides as 2B – possibly carcinogenic to humans. ERMA have accepted that some studies considered by IARC were conducted with phenoxy herbicides contaminated (in manufacture) with polychlorinated dibenzo-para-γ-dioxin and polychlorinated dibenzofuran.</p>
<p>Haydn Murdoch's letter dated 4 November, 2003 in response to Nufarm's submission regarding the transfer of phenoxy herbicides indicated ERMA remains concerned at epidemiological studies that link exposure to phenoxy herbicides with non-Hodgkin's lymphoma (NHL). In the letter specific reference was made to the 2002 paper by Pearce and McLean presented to International Symposium on Agricultural Exposures and Cancer and submitted for publication in Scand J Work Environ Health.</p>
<p>Since the IARC classification was published in 1987 more than 4,000 peer-reviewed toxicology studies and 140 epidemiological studies have been published, mostly concerning the phenoxy herbicide 2,4-D which is the most widely used phenoxy herbicide. Comprehensive reviews of studies have been published by the US EPA (1997), the International Programme on Chemical Safety (IPCS, 1996) and the European Commission (2001). These regulatory reviews were conducted by expert committees evaluating the weight-of-evidence.</p>
<p>The US EPA review followed four earlier reviews by various US EPA bodies. The review concluded the evidence for 2,4-D carcinogenicity was inadequate and cannot be interpreted as showing the presence or absence of a carcinogenic effect.</p>
<p>The US EPA Health Effects Division Carcinogenicity Peer Review Committee (CPRC) met on July 17, 1996 to discuss and evaluate the weight-of-evidence on 2,4-D with particular reference to its carcinogenic potential. The CPRC concluded that 2,4-D should remain as a Group D – not classifiable as to Human Carcinogenicity. That is, the evidence is inadequate and cannot be interpreted as showing the presence or absence of a carcinogenic effect.</p>
<p>The 1996 Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group considered the toxicology of 2,4-D. The Joint Meeting did not find evidence for carcinogenicity in animal studies and found the epidemiological studies inconsistent, raising doubt about causality of a relation between 2,4-D and non-Hodgkin's lymphoma.</p>
<p>2,4-D was reviewed in 2001 by the Standing Committee on Plant Health of the European Commission to consider the inclusion of 2,4-D in Annex I of Directive 91/414/EEC. The review concluded "no evidence of carcinogenicity".</p>
<p>Similar reviews by the Standing Committee on Plant Health of the European Commission have been completed for the phenoxy herbicides 2,4-DB (2002), mecoprop (2003) and mecoprop-P (2003). The outcomes of these reviews are shown in Table 1.</p>

Active substance	Carcinogenicity
2,4-D	no evidence of carcinogenicity
2,4-DB	no carcinogenic potential
mecoprop	overall no carcinogenic potential relevant for humans, (but increased liver tumour incidence in female mice at the highest dose tested in study on mecoprop-P)
mecoprop-P	overall no carcinogenic potential relevant for humans, (but increased liver tumour incidence in female mice at the highest dose tested)

Table 1: Summary of EU reviews of phenoxy herbicides

Recent reviews

A review was published in 2001 by Kennepohl and Munro , which concluded

The extensive database of metabolic, toxicological, and epidemiological studies on 2,4-D has provided no evidence that 2,4-D poses any health risk when used according to label directions.

Garabrant and Philbert in a later review found

Epidemiological studies provide scant evidence that exposure to 2,4-D is associated with soft tissue sarcoma, non-Hodgkin's lymphoma, Hodgkin's disease, or any other cancer. Overall the available evidence from epidemiologic studies is not adequate to conclude that any form of cancer is causally associated with 2,4-D exposure.

In 2002 Pearce and McLean presented a review of agricultural exposures and non-Hodgkin's lymphoma at the International Symposium on Agricultural Exposures and Cancer. With respect to NHL and phenoxy herbicides they concluded

... a number of studies have found small increased risks from high levels of exposure , including cohort studies of production workers and sprayers and the US studies of sprayers with frequent exposure. Thus, the Swedish studies have been confirmed qualitatively, though this "confirmation" occurs in some studies and not in others. ...

The Pearce and McLean review was cited by Murdoch in response to the Nufarm submission for classification under HSNO. This review was unable to include new data on the US Agricultural Health Study that was presented at the Symposium . This study showed

Other cancers such as brain and central nervous system cancers, thyroid cancer, Hodgkin's disease, non-Hodgkin's lymphoma, leukaemia, mesothelioma and other cancers occurred at frequencies expected based on the cancer risk of the populations in both Iowa and North Carolina.

The Pearce and McLean review did not reference the 2001 paper by Burns, Beard and Cartmill that updated a cohort study of workers potentially exposed to 2,4-D during manufacture. The authors of this study concluded

There was no evidence of a causal association between exposure to 2,4-D and mortality due to all causes and total malignant neoplasms. No significant risk due to NHL was found. ...

This paper is significant in the context of a classification by ERMA with respect to carcinogenicity. The User Guide to HSNO Thresholds and Classifications (part VI page 67) requires that " an epidemiological study in humans which shows evident toxicity has not occurred ... should be considered when determining whether classification of a substance is necessary".

Similarly, the Pearce and McLean review refers to the 1991 study of lymphoma in dogs by Hayes et al. which purportedly showed that dogs whose owners used the herbicide 2,4-D on their lawns four times a year or more (an excessive and unusual pattern of use) were twice more likely to develop canine malignant lymphoma compared to dogs whose owners did not use 2,4-D.

The study was immediately controversial in scientific circles, since it was in direct conflict with the extensive 2,4-D toxicology database. For example, in a study done by the U.S. Food and Drug Administration (Hansen et al, 1971), dogs were fed massive doses of 2,4-D (far in excess of what humans or animals could be exposed to in the environment) daily for two years, and these dogs did not develop cancer or any other serious disease.

Since the Hayes dog study was funded by the US government, the School of Veterinary Medicine at Michigan State University (MSU) was able to obtain copies of the raw data on which the study was based. They found that the data would not support the conclusions reached by the author, and that there was no association between 2,4-D and cancer in dogs. The author of the study was offered an opportunity to defend his study, which he declined. The MSU reanalysis was then published in the peer-reviewed journal, *Human and Animal Toxicology* (Kaneene. vol. 41 (3), 1999). A separate study in Italy also failed to show an association between 2,4-D exposure and canine lymphoma.

These papers are relevant to the weight-of-evidence with respect to an association between 2,4-D and canine lymphoma.

Subsequent to the reviews quoted above, De Roos et al re-examined three population based case-control studies of NHL conducted by the US National Cancer Institute during the 1980s in the US states of Nebraska, Iowa, Minnesota and Kansas. The new analysis found

Whereas an indicated effect of 2,4-D exposure on NHL was reported in NCI's Nebraska and Kansas studies, this analysis of the pooled data found no association with having ever used 2,4-D. ...

Alavanja et al reviewed the incidence of prostate cancer in the Agricultural Health Study cohort. An association between phenoxy herbicides and prostate cancer was not observed.

Conclusion

Following the IARC classification of phenoxy herbicides as "Group 2B – possibly carcinogenic to humans" in 1987, phenoxy herbicides, and in particular 2,4-D, have been the subject of numerous animal model studies and epidemiological studies.

Recent reviews by expert committees, using a regulatory weight-of-evidence approach, in the US, Europe and within the UN (WHO/FAO) have concluded that phenoxy herbicides, and in particular 2,4-D, do not present a cancer risk. Most other published reviews have reached the same conclusion. Recent papers have updated cohort studies investigating possible links between occupational exposure to pesticides and cancers. These papers have not shown any increased risk of cancer associated with phenoxy herbicide exposure.

Phenoxy herbicides should be classified as "not a carcinogen" under HSNO.

Dow Agrosciences

Dow AgroSciences supports the response to the HSNO Classification of phenoxy herbicides made by Nufarm. We believe it is unfortunate that the ERMA recommendations to the ERMA Board are based on the 1987 IARC assessment and the conclusion of a contributor to IARC rather than using the weight of evidence approach used by the regulators in every other country that has assessed the available 2,4-D data (since 1987) as well as the World Health Organisation (in 1996), IARC's parent organisation. The regulators in all other countries and the WHO concluded after assessing the preponderance of scientific evidence that the allegations that 2,4-D presents a cancer risk to humans are not supported. Since the 1987 IARC Monograph at least 4000 more animal studies and 140 epidemiologic studies have been conducted, some even more recent than those referenced by Pearce and McLean in their 2002 paper presented to the Oxford symposium and submitted to *Scand J Work Environ Health* for publication.

I trust that after considering the additional data provided by Nufarm that your recommendation to the ERMA Board will be that 2,4-D is not classifiable as a human carcinogen. Similarly the related phenoxy herbicides (MCP, 2,4-DB and MCPA) that you have also recommended to be classified as suspected human carcinogens have for the same reasons as 2,4-D never been classified as such by regulators in other countries.

I understand that the Global 2,4-D Taskforce, of which Dow AgroSciences is a member may also be writing to you about this matter.

Industry Task Force II on 2,4-D Research Data

The Industry Task Force II on 2,4-D Research Data* is responding to the HSNO proposed classification of phenoxy herbicides as 6.7B – substances that are suspected human carcinogens. This classification is not consistent with several world authoritative bodies, US EPA 1996, WHO 1996 and EU Commission 2001 (Annex I). Each of these agencies have reviewed the current 2,4-D body of scientific data and have concluded either “no evidence of carcinogenicity” or “inadequate evidence of carcinogenicity” for 2,4-dichlorophenoxyacetic acid (2,4-D).

It is our understanding that ERMA recommendations to the ERMA Board are based on the 1987 IARC assessment rather than using the weight of recent scientific evidence approach used by the regulators in several other countries. The 1987 IARC classification of chlorophenoxy herbicides should be interpreted in the specific context of more recent research by IARC, other expert panel reviews and the decisions of pesticide regulatory agencies.

The 1987 Supplement 7 summarized previous 1977 and 1986 IARC evaluations. The 1977 review examined the carcinogenic potential of two chlorophenoxy herbicides, 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) and 2,4 D. Globally most registrations for 2,4,5-T were withdrawn in the 1980’s because of possible contamination with polychlorinated dioxins, including 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD). 2,4-D has not been fully evaluated separately.

In 1986 IARC conducted a review of published studies on occupational exposures and classified chlorophenoxy herbicides in Group 2B. In the monograph Table 16, entitled “Chlorophenoxy herbicides and their major impurity considered in this monograph that have previously been evaluated in the IARC Monographs”, 2,4-D was listed separately. The review concluded there was “inadequate” data to classify 2,4-D for carcinogenicity in animals and for genetic activity in short-term tests.

Furthermore, it is important to note that in the 1987 monograph, Table 1 on page 60, 2,4 D was listed separately with no classification for human carcinogenicity and “I” (inadequate evidence) for animal carcinogenicity. Moreover, the footnote to Table 1 specifically states:

“This evaluation applies to the group of chemicals as a whole and not necessarily to all individual chemicals within the group.”

At no time has IARC classified 2,4-D as known, probable or possible human carcinogen.

In 1980 IARC established an international cohort of workers whose jobs involved producing or spraying chlorophenoxy herbicides. This cohort has since been enlarged to incorporate nearly every person involved in the production of chlorophenoxy herbicides in the world. The study team (which included Rodolfo Saracci, head of the Environmental Cancer Epidemiology Unit of IARC) examined cancer mortality of 21,863 workers in 36 cohorts in 12 countries. In workers exposed to chlorophenoxy herbicides, with minimal or no contamination by TCDD and higher chlorinated dioxins (n = 7,553), there was no elevated cancer risk (SMR = 0.96, 95% CI 0.87-1.06).

The conclusion of Kogevinas et al. is supported by the decisions of pesticide regulatory agencies in Canada, United States, Europe and elsewhere in the world as well as numerous expert panel reviews and current science. For example, the most recent review of the extensive toxicology and epidemiology of 2,4 D was completed in 2001 by Garabrant and Philbert of the University of Michigan School of Public Health. Their review concluded:

“Despite several thorough in vitro and in vivo animal studies, no experimental evidence exists supporting the theory that 2,4-D or any of its salts or esters damages DNA under physiologic conditions. Studies in rodents demonstrate a lack of oncogenic or carcinogenic effects following lifetime dietary administration of 2,4-D. Epidemiologic studies provide scant evidence that exposure to 2,4-D is associated with soft tissue sarcoma, non-Hodgkin’s lymphoma, Hodgkin’s disease or any other cancer. Overall, the available evidence from epidemiologic studies is not adequate to conclude that any form of cancer is causally associated with 2,4-D exposure.”

In light of the above, it is apparent that the scientific data base on carcinogenicity is comprehensive for the chlorophenoxy herbicides currently authorized for use in New Zealand. The more recent review of IARC data by Kogevinas (1997) and other global reviews must be considered. One would hope that given the seriousness of the issue at hand, ERMA would earnestly re-evaluate the current body of scientific evidence.

We point out that the 1977 Monograph on chlorophenoxy herbicides is now 26 years old, and even the most recent Supplement from 1987 is 16 years old. Large numbers of new studies and published papers on chlorophenoxy herbicides have become available in the intervening years in the areas of animal toxicology, genetic toxicology and human epidemiology. On 2,4-D, in particular, there are new rat and mouse lifetime bioassays, scores of genetic toxicology studies, and many other studies that have not been considered by IARC.

In summary, at no time has IARC evaluated or classified 2,4-D per se as a known (Group 1), probable (Group 2A) or possible (Group 2B) human carcinogen. The compound-specific evidence was deemed inadequate for evaluation

in every instance, and therefore, 2,4-D was neither classifiable nor classified individually. The 1987 Supplement is abundantly clear that the individual chemicals cannot be separated from the chlorophenoxy herbicides group based on the evaluation made.

*The Industry Task Force II on 2,4 D Research Data is made up of those companies owning the technical Canadian, and US registrations of 2,4-D herbicides. They are BASF Aktiengesellschaft (Germany), Dow AgroSciences (U.S.), Nufarm, Ltd. (Australia) and AGRO-GOR Corp., a U.S. corporation jointly owned by Atanor, S.A. (Argentina) and PBI-Gordon Corp. (U.S). The task force is organized under U.S. pesticide law to provide funding for new research studies required to respond to Canadian and international pesticide re-evaluation/re-registration programs. Referenced studies, which in accordance with federal statute, must be done by U.S. EPA Good Laboratory Practice (GLP) qualified laboratories.

Table 3: Changes to classifications

As a result of consultation and internal review, a number of changes have been made to the classifications for some substances. These changes and the reasons for them are outlined in the table below. The associated controls as a result of reclassification have been adjusted accordingly.

Substance	Change	Reason
P005951 Image	6.3A removed	Review of product testing data provided by the submitter.
P005951 Image	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product. Industrial experience of non-corrosivity of the product.
P005951 Image	6.7B removed	Expert review of additional information provided by industry.
P005463 Garden King Onehunga Weed Killer P005673 Bromicide MA	6.5B added	Review of additional skin sensitisation data for bromoxynil octanoate and ioxynil octanoate.
P005463 Garden King Onehunga Weed Killer P005673 Bromicide MA	6.7B removed	Expert review of additional information provided by industry.
P003253 Trimec P005192 Tricombi	6.7B removed	Expert review of additional information provided by industry.
P003253 Trimec P005192 Tricombi	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P003253 Trimec P005192 Tricombi	8.2B removed	Applying the mixture rules resulted in a skin corrosive classification (due to the skin corrosive properties of potassium hydroxide and monoethanolamine). Salt formation will result in reduced corrosivity of the end product. There is no data to indicate that the resultant salts are skin corrosive.
P004594 Duplosan Super P005645 Compitone Super	6.3A removed	Applying the mixture rules resulted in a skin irritant classification (due to the skin irritative properties of the phenoxy acids and the corrosive properties of dimethylamine). Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P004594 Duplosan Super P005645 Compitone Super	6.7B removed	Expert review of additional information provided by industry.
P004594 Duplosan Super P005645 Compitone Super	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P004594 Duplosan Super P005645 Compitone Super	9.1A to 9.1D	Re-examination of the mixture calculation.
P000262 MCPA Herbicide P000375 MCPA 400	6.3A removed	Applying the mixture rules resulted in a skin irritant classification (due to the skin irritative properties of MCPA). Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.

Substance	Change	Reason
P000262 MCPA Herbicide P000375 MCPA 400 P004625 Jolyn Clean Sweep P004867 CropCare MCPA	6.7B removed	Expert review of additional information provided by industry.
P000262 MCPA Herbicide P000375 MCPA 400 P004625 Jolyn Clean Sweep P004867 CropCare MCPA	9.1A added	Additional data for the toxicity to algae of MCPA was included in recalculation of the mixture classification.
P000262 MCPA Herbicide P000375 MCPA 400 P004625 Jolyn Clean Sweep P004867 CropCare MCPA	9.3B to 9.3C	Recalculation using the more appropriate additivity approach, rather than the summation approach, has resulted in the classification change for this substance.
P004625 Jolyn Clean Sweep P004867 CropCare MCPA	8.2B removed	Applying the mixture rules resulted in a skin corrosive classification (due to the skin corrosive properties of potassium hydroxide). Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts are skin corrosive.
P005707 Agritone	6.3A removed	Applying the mixture rules resulted in a skin irritant classification (due to the skin irritative properties of MCPA). Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P005707 Agritone	6.5B removed	Review of formulation test data provided.
P005707 Agritone	6.7B removed	Expert review of additional information provided by industry.
P005956 Thistrol Plus	6.7B removed	Expert review of additional information provided by industry.
P005956 Thistrol Plus	6.8B added	Data on the reproductive hazard of MCPB was initially overlooked for this substance.
P005956 Thistrol Plus	8.2C removed	The original classification was based on a statement on the registrant's MSDS which indicated that "Skin: The concentrate may cause irritation and possible damage if contact is prolonged or excessive". Applying the mixture rules resulted in a skin corrosive classification (due to the skin corrosive properties of potassium hydroxide). Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts are skin corrosive. The registrant states that this substance is not skin corrosive.

Substance	Change	Reason
P000265 MCPB 400 P000268 MCPB Herbicides P004861 Soft Touch	6.3A removed	The original classification was based on a statement on the one of registrant's MSDS which indicated that "Prolonged or repeated exposure may cause skin irritation, even a burn." However the mixture calculation resulted in a "No" classification for this substance and given that the registrants submitted that the substance is not a skin irritant, the 6.3A classification has been removed.
P000265 MCPB 400 P000268 MCPB Herbicides P004861 Soft Touch	6.7B removed	Expert review of additional information provided by industry.
P000265 MCPB 400 P000268 MCPB Herbicides P004861 Soft Touch	8.3A to 6.4A	The original classification was based on a statement on the one of registrant's MSDS which indicated that "May cause severe irritation with corneal injury which may result in permanent impairment of vision even blindness." However the mixture calculation resulted in a "6.4A" classification for this substance and given that the registrants submitted that the substance is not eye corrosive, the 8.3A classification will be changed to 6.4A.
P000265 MCPB 400 P000268 MCPB Herbicides P004861 Soft Touch	9.3B to 9.3C	Recalculation using the more appropriate additivity approach, rather than the summation approach.
P005646 Compitone Plus	6.7B removed	Expert review of additional information provided by industry.
P005646 Compitone Plus	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P005646 Compitone Plus	8.2B removed	Applying the mixture rules resulted in a skin corrosive classification (due to the skin corrosive properties of dimethylamine). Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts are skin corrosive. The registrant states that this substance is not skin corrosive.
P002252 Fruitfed Stop Drop	6.3A removed	Applying the mixture rules resulted in a skin irritant classification (due to the skin irritative properties of 2,4-D) Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P002252 Fruitfed Stop Drop P006025 Amicide 625	6.5B removed	Test data provided for a more concentrated formulation indicated a lack of sensitization potential.
P002252 Fruitfed Stop Drop P006025 Amicide 625	6.7B removed	Expert review of additional information provided by industry.
P006025 Amicide 625	8.2B removed	Test data provided for a similar formulation and evidence of neutralisation processes that result from salt formation.
P005070 Baton	6.1C to 6.1D	Re-examination of the mixture calculation.
P005070 Baton	6.3A to 6.3B	Based on the test data provided for the formulation.

Substance	Change	Reason
P005070 Baton	6.5B removed	Based on the test data provided for the formulation.
P005070 Baton	6.7B removed	Expert review of additional information provided by industry.
P005106 Pasture Kleen Herbicide P005149 Relay P005315 Thistle Killem	6.3A to 6.3B	The original classification was based on the irritation potential of 2,4-D. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants. However, other components of this mixture have sufficient skin irritancy to retain a 6.3B classification for this substance.
P005106 Pasture Kleen Herbicide P005149 Relay P005315 Thistle Killem	6.4A removed	The original classification was based on R41 for 2,4-D and other data for 2,4-D indicating a significant risk of damage to the eyes. However, the ethyl hexyl ester does not have this Risk Phrase or R36 and the ECB report indicates that the ethyl hexyl ester is a non-irritant to eyes, therefore the 6.4A classification for this component and the product has been removed.
P005106 Pasture Kleen Herbicide P005149 Relay P005315 Thistle Killem	6.7B removed	Expert review of additional information provided by industry.
P001057 Banvine	6.1D to 6.1E	The original classification of 6.1D was based on a mixture calculation using limited data for 2,4-D triethanolamine salt, this has been recalculated incorporating the supplied proprietary data.
P001057 Banvine	6.3A removed	Applying the mixture rules resulted in a skin irritant classification (due to the skin irritative properties of 2,4-D and dicamba). Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P001057 Banvine	6.5B removed	Consideration of the proprietary data provided for 2,4-D triethanolamine and information obtained for other 2,4-D amine formulations.
P001057 Banvine	6.7B removed	Expert review of additional information provided by industry.
P001057 Banvine	6.8B removed	Re-examination of the reproductive hazard data for dicamba.
P000179 2,4-DB Herbicide	6.5B added	Cross-referencing of data for 2,4-DB technical to 2,-4DB sodium.
P000179 2,4-DB Herbicide	6.7B removed	Expert review of additional information provided by industry.
P000179 2,4-DB Herbicide	9.1B to 9.1C	Review of test data provided for a similar formulation.
P005202 Select	6.3B removed	The original classification was based on the presence of sodium hydroxide. The sodium hydroxide is neutralised due to salt formation.
P005202 Select	6.7B removed	Expert review of additional information provided by industry.
P005202 Select	9.3B to 9.3C	Recalculation using the more appropriate additivity approach, rather than the summation approach.
P004839 Gallant NF Herbicide	6.1E removed	Review of test data provided for this formulation.
P004839 Gallant NF Herbicide	6.3B removed	Review of test data provided for this formulation.

Substance	Change	Reason
P004961 Pulsar	6.1D to 6.1E	Review of test data provided for the formulation.
P004961 Pulsar	6.3B added	Review of test data provided for the formulation.
P004961 Pulsar	6.7B removed	Expert review of additional information provided by industry.
P004961 Pulsar	9.3C removed	Review of test data provided for the formulation.
P003176 Salvo	6.3A to 6.3B	Review of test data provided for the formulation.
P003176 Salvo	6.7B removed	Expert review of additional information provided by industry.
P003176 Salvo	6.8B removed	Re-examination of the reproductive hazard data for.
P003799 Duplosan –DP	6.3A removed	The original classification was based on data for dichlorprop-p which indicated it was an R38 skin irritant. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants. Direct measurement of irritancy for the product, indicates it is non irritant.
P003799 Duplosan –DP	6.7B removed	Expert review of additional information provided by industry.
P003799 Duplosan –DP	9.1A to 9.1D	Review of test data provided for the formulation.
P003799 Duplosan –DP	9.3B to 9.3C	Review of test data provided for the formulation.
P003898 Duplosan-KV	6.1E to 6.1D	Review of test data provided for the formulation.
P003898 Duplosan-KV	6.3A removed	The original classification was based on mecoprop which is allocated R38 irritating to skin. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants. Direct measurement of irritancy for the product, indicates it is non irritant.
P003898 Duplosan-KV	6.7B removed	Expert review of additional information provided by industry.
P003898 Duplosan-KV	8.1A removed	The original classification was based on data that mecoprop is corrosive metal in the presence of water and a statement on the ACVM file that the product is corrosive to metals. Salt formation will lead to decreased corrosivity. Assurance by the registrant that the product is not metal corrosive.
P002799 Axall	6.5B added	Review of additional skin sensitisation data for bromoxynil octanoate and ioxynil octanoate.
P002799 Axall	6.7B removed	Expert review of additional information provided by industry.
P003275 Tropotox Plus	6.3A removed	The original 6.3A classification was based on the presence of sodium hydroxide. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P003275 Tropotox Plus	6.7B removed	Expert review of additional information provided by industry.
P002981 Turfclean	6.7B removed	Expert review of additional information provided by industry.
P002981 Turfclean	6.8B removed	Re-examination of the reproductive hazard data for dicamba.
P004546 Topik	6.7B removed	Review of the supplied study for clodinafop-propargyl.
P004546 Topik	6.8B to 6.8A	The EU review of data for 1-methyl-2-pyrrolidone.
P004984 Headland Spear	6.3A to 6.3B	The original classification was based on data for the skin irritancy of MCPA. Salt formation will result in reduced skin irritation potential of the end product. The other components of this mixture contribute sufficient skin irritancy potential to retain a 6.3B classification for this product.
P004984 Headland Spear	6.7B removed	Expert review of additional information provided by industry.

Substance	Change	Reason
P004984 Headland Spear	6.8B removed	An internal review of the data supporting the 6.8B classification of MCPA dimethylamine.
P005462 Garden King Kleen Lawn	6.7B removed	Review of the supplied study for clodinafop-propargyl.
P005462 Garden King Kleen Lawn	6.8B removed	An internal review of the reproductive/developmental data for dicamba.
P005462 Garden King Kleen Lawn	8.2B removed	Originally classified on skin corrosive data for dimethylamine. Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts skin corrosive.
P005005 Legend	6.7B removed	Review of the supplied study for clodinafop-propargyl.
P005005 Legend	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P005005 Legend	8.2B removed	This product was originally classified on skin corrosive data for potassium hydroxide and dimethylamine. Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts skin corrosive.
P005005 Legend	6.8B removed	An internal review of the reproductive/developmental data for dicamba.
P003786 Mecoprop 600A	6.7B removed	Review of the supplied study for clodinafop-propargyl.
P003786 Mecoprop 600A	8.2B removed	The original classification was based on the corrosivity of potassium hydroxide. Salt formation will result in reduced skin corrosivity of the end product. There is no data to indicate that the resultant salts skin corrosive.
P003786 Mecoprop 600A	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P003390 Woody Weedkiller	6.3A removed	Originally classified on skin irritancy data for the phenoxy acids. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P003390 Woody Weedkiller	6.5B removed	Review of data provided for the direct testing of other 2,4-D amine formulations.
P003390 Woody Weedkiller	6.7B removed	Review of the supplied study for clodinafop-propargyl.
P003390 Woody Weedkiller	6.8B removed	An internal review of the reproductive/developmental data for dicamba.
P003390 Woody Weedkiller	9.4C added	The internal review of data relating to the toxicity of dicamba to terrestrial invertebrates.
P004372 Improved Turfix P006101 Lawn Weed Spray	6.3A removed	Originally classified on skin irritancy data for the phenoxy acids. Salt formation will result in reduced skin irritation potential of the end product. There is no data to indicate that the resultant salts are irritants.
P004372 Improved Turfix P006101 Lawn Weed	6.7B to ND	Review of the supplied study for clodinafop-propargyl.

Substance	Change	Reason
Spray		
P004372 Improved Turfix P006101 Lawn Weed Spray	8.1A removed	The original classification was based on the corrosivity of mecoprop-p. Salt formation will degrade the corrosivity of the end product.
P004425 Agrichem 2,4-D	6.7B to ND	Review of the supplied study for clodinafop-propargyl.
P005503 Fertiliser 21:1:16 With Dicot Weed Control III	6.7B to ND	Review of the supplied study for clodinafop-propargyl.
P004201 Liquid Weed'N'Feed	6.7B to ND	Review of the supplied study for clodinafop-propargyl.

Table 4: Responses to common issues raised

From previous consultation documents on the transfer of pesticides, there were many questions asked that had a common theme. These questions and our response to them have been compiled into the following summary. Not all of these questions will be directly applicable to this transfer report on phenoxy herbicides, but nevertheless are included here as useful background information.

Control code or Classification	Regulations	Comment/submission	Response
<i>Hazardous Substances (Classes 6, 8, and 9 Controls) Regulations 2001</i>			
T1	<p>Regulations 11-27</p> <p>Limiting exposure to toxic substances</p>	<p>Setting of TELs are not appropriate for all substances.</p> <p>Queried whether levels will be reviewed if classifications are changed.</p>	<p>Agreed. All toxicity classifications trigger the T1 control . This control is designed to limit the extent to which the general public are involuntarily exposed to substances with toxic properties, whether that exposure is through the ingestion of residues (in water, foods, etc) or through inhalation or skin contact (it does not apply to a workplace to which the public do not have access).</p> <p>The decision on whether to set a TEL for a substance or components of a substance will take into account the likelihood and frequency of exposure (through environmental exposure, ingestion of water, food, etc) and the likelihood of an appreciable toxic effect occurring.</p> <p>At the present time, we are proposing not to set TELs. If they are set at a later date, further consultation will be undertaken.</p>
		<p>How would a TEL for a mixture be developed or applied; for example, for complex mixtures of components with similar toxicity?</p>	<p>If a substance is a mixture, a TEL may be set for the substance or one or more components of that substance based on the assessment of available toxicological data. Therefore it is possible for a substance as a mixture to have several TELs, one for each of the toxic components within the mixture. The calculation of a TEL is similar in process to that used to develop a Maximum Residue Limit for food. The known variables in this case are likely exposure (inhalation and dermal contact based on exposure parameter tables), average NZ bodyweight, and the amount allocated to the Potential Daily Exposure.</p>
		<p>Maximum levels have been set for food and drinking water for these products under the Drinking Water Standards and the Food Act. We are not sure whether these controls will duplicate or supersede these current controls, or whether the controls will apply to different media.</p> <p>These controls are inappropriate for farms because:</p> <ul style="list-style-type: none"> - Public access to farms is limited 	<p>No TELs are being set at this time. If TELs are set before these substances are transferred, further consultation will be undertaken.</p>

Control code or Classification	Regulations	Comment/submission	Response
		<ul style="list-style-type: none"> - The only person exposed to the concentrated formulation is the user. - Only the diluted form, which would probably not trigger this control, is used in the environment. 	
		We wish to participate in the proposed consultation process with regard to setting tolerable exposure limits.	The consultation for the setting of TELs and EELs will be widespread and will include all interested parties from previous rounds of consultation.
T2	<p>Regulations 29, 30</p> <p>Controlling exposure in places of work</p>	Care should be taken when interpreting air-sampling results as the WES only takes into consideration the inhalation component.	<p>A workplace exposure standard (WES) applies only to places of work that the public does not have access to.</p> <p>A WES is designed to protect persons in the workplace from the adverse effects of toxic substances through exposure by inhalation or dermal absorption. It is unlikely that other routes of exposure will be relevant in the workplace. There are also other HSNO controls to limit exposure, for example protective clothing.</p>
		Controls set for a substance should take into account potential for the substance to be absorbed through the skin – where a WES for a substance has a “skin” notation.	Workplace exposure standards for substances with a “skin” notation are generally set to take into account the potential for that substance to be absorbed through the skin.
		What is the proposed WES for the mixture?	<p>If a substance is a mixture made up of chemically distinct entities, a WES can be set for one or more of the components of that substance.</p> <p>In industrial hygiene practice, exposure to several components in a mixture can be measured and assessed in the same way as exposure to several different substances – using an additivity calculation for substances with similar toxicologic action, or assessment against individual WESs for substances that have independent toxic effects.</p>
		To establish a WES for a granulated product seems ludicrous.	<p>The requirement for a workplace exposure standard (WES) to be set is triggered by the toxic properties of a substance (Class 6 classification). If a granulated product did trigger Class 6, this control would not be relevant as it would not, under conditions of normal use, “become airborne and disperse in air in the form of inspirable or respirable dusts, mists, fumes, gases, or vapours” [Regulation 29]. For granulated products therefore this control is not relevant.</p> <p>Exposure to non-toxic airborne particulates in the workplace during manufacture or</p>

Control code or Classification	Regulations	Comment/submission	Response
			repackaging would be covered by the requirements of the Health and Safety in Employment Act 1992.
		Molluscides mostly used in the home garden all seem to have been assigned the T2 control requiring the setting of a WES - for what purpose?	The assigned controls cover the full life cycle of a substance – from import or manufacture through to disposal. If a WES is set, it is only applicable in the workplace (e.g., during manufacture of the product).
T3, E5	Regulations 5, 6 Requirements for keeping records of use.	This requirement is impractical and unnecessary for the use of these products (molluscicides) by home gardeners.	Agreed. These controls apply only where highly toxic or corrosive substances (class 6.1A, 6.1B, 6.1C, 6.6A, 6.7A, 6.8A, 6.9A, 8.2A or 8.2B) are used in places where the public may be present or where the substances may enter air or water and leave the place. These controls also apply to highly ecotoxic substances (class 9.1A, 9.2A, 9.3A, or 9.4A) if 3 kg or more of the substance is used within 24 hours in a place where the substance is likely to enter air or water and leave the place. These conditions would generally exclude home gardeners from these requirements.
		T3 requirement for records of use to be kept for three years will be very hard to enforce.	Regulation 5 of the <i>Hazardous Substances (Classes 6,8 and 9) Regulations 2001</i> requires that a person in charge of certain classes of toxic and ecotoxic substances must keep a written record of their application or discharge if they are used in places where the public may be present, or where the substance may enter air or water and leave the place. Regulation 6 requires that these records be kept for three years. These conditions mean that it is not a blanket requirement on all users, and are unlikely to apply to the domestic situation. Large scale users (e.g. in the agricultural sector) will require farmers to make a decision regarding the need for record keeping on a case by case basis. There is a level of self-compliance with this control, and enforcement will occur in the event of incidents (e.g. spray drift and damage to non-target crops).
		E5 – the 3kg limit for this control is quite high so will not apply to most home gardeners. However, in the event that it does occur, this will be hard to enforce.	The 3 kg limit is within a 24 hour period. We consider it highly unlikely that a domestic user would apply this amount of a pesticide in this time. See also comment above regarding self-compliance.
		Farmers do not support this proposal. These formulations are not highly toxic and so by definition records of use	T3 is triggered by highly toxic and E5 by highly ecotoxic classifications. It is appropriate to keep track of substances with these hazardous properties. Record keeping (e.g. by use of a spray diary) should not be onerous. The regulations only require record keeping if the

Control code or Classification	Regulations	Comment/submission	Response
		<p>should not be required.</p> <p>We question the validity of these requirements, particularly the T3 control. These substances have (relatively) low acute toxicity of the concentrated form, and are never applied (used) in their concentrated form. The only people exposed are the persons using them. Also, members of the public are not usually given access to farms, so repeated exposure to the public is likely to be low or non-existent.</p> <p>For E5 the only significant risk of these substances entering the air or water is when they are applied, in a diluted form. It is unlikely the diluted form (<1%) would trigger this control.</p>	<p>application or discharge is in a place where (a) members of the public may lawfully be present or (b) the substance is likely to leave the place of application or discharge. That is, this is not a blanket requirement on all farms and farmers. Each farmer will need to make a decision regarding record keeping on a case by case basis.</p>
		<p>Growers for export avocados are required to keep records of all agrichemical applications. These records are held by growers and packhouses. There is currently no industry requirement to hold these records for 3 years, although this could be accommodated. The industry is moving towards electronic spray diaries which means the Avocado Industry Council (AIC) as the industry body could hold the records on behalf of the growers.</p>	<p>Regulations 5 and 6 of the Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations 2001 require that where records need to be kept, they must be held for at least 3 years. Note that the regulations do not require record keeping for all hazardous substances in all situations. The regulations also do not specify who must hold the record for the 3 year period, and therefore would not preclude the AIC being the repository for this information.</p>
T4	<p>Regulation 7 Requirements for equipment to handle substances</p>	<p>We support the principle of well maintained spray equipment. We support the need for use and maintenance of the equipment if used as a contracted service but not for privately used equipment. We do not support the need for private equipment to have documentary evidence of maintenance.</p>	<p>This is not an onerous control and can be met by keeping a diary of maintenance that is done on the equipment.</p>
		<p>This product does not need any equipment to apply it</p>	<p>If no equipment is required (e.g. the substance is applied by hand) then the regulation does not apply.</p>

Control code or Classification	Regulations	Comment/submission	Response
T6, E7, AH1	<p>Regulation 9</p> <p>Approved handler requirements</p>	<p>The requirement for Class 6, 8, and 9 substances to be under the control of an approved handler or secured applies to any quantity of Class 6.1A, 6.1B, 6.1C, 8.2A, 9.1A, 9.2A, 9.3A, 9.4A;</p> <p>and</p> <p>Class 6.7A 10 kg or more (if solid); 10 L or more (if liquid)</p> <p>A large number of pesticide products are sold for use in the home garden and trigger this requirement.</p> <p>This control should be removed for home garden use products for both retail outlets and for the home gardener.</p>	<p>We agree that it is not possible or practical to require all home gardeners to become approved handlers for substances that are intended for domestic use. ERMA New Zealand is currently developing a policy regarding application of the Approved Handler control that, if it proceeds, will see this requirement being removed for domestic use substances.</p>
		<p>AH1 is a new control. There have been few or no serious incidents from the use of these products by farmers. We are concerned that the imposition of new restrictions on farmers will make these products economically unviable. Less suitable alternatives for 'knock-down' of plant pests may be used.</p>	<p>ERMA New Zealand recognises there are issues with the approved handler control for Class 9 substances. A discussion paper <i>Proposed process for varying approved handler and tracking controls for Part V applications and substances in transfer with toxic and/or ecotoxic classifications</i> is currently out for consultation that proposes new policy in this area.</p> <p>On the basis of the policy developed, the AH1 requirement for these substances will be reassessed.</p>
		<p>Test certificate and AH qualifications must be aligned to current industry standards (ie Growsafe). This will ensure employers do not have to duplicate training for staff. If a current Growsafe certificate is held, this should be upheld as a transitional qualification and the AH qualification can be sought when the Growsafe expires</p>	<p>Current industry training courses are being adapted to fit HSNO requirements so they are acceptable for training approved handlers. This includes Growsafe.</p> <p>ERMA NZ is also working with Growsafe to determine the applicability of current Growsafe certificates when assessing an application to become an approved handler under the transitional provisions.</p>
		<p>We assume AHs are comparable to licensees/responsible persons, as they need to be competent and pass written/oral exams.</p>	<p>Regulation 5 of the <i>Hazardous Substances (Personnel Qualifications) Regulations 2001</i> sets out the qualifications required for approved handlers. Regulation 4(4)(5) specify that an approved handler must satisfy a test certifier that they meet the above regulation.</p>
		<p>A further concern is how will this be managed and at what cost? Will there be contestability in provision of certification of approved handlers.</p>	<p>Approved Handlers will be certified by Test Certifiers, who are individuals working in a free market and therefore the market will determine charge. It is our intension to assist Test certifiers by providing guidelines where ever possible.</p>

Control code or Classification	Regulations	Comment/submission	Response
T7, E8, F2	Regulation 10 Restrictions on the carriage of hazardous substances on passenger service vehicles	Restriction of carriage of hazardous substances on public transport will be hard to enforce. Educating sales staff of the requirement for specific products will be difficult as well as explaining the control to the customer	Current trigger quantities for carriage on public service vehicles will be altered to continue to allow products purchased at retail outlets to be taken on public transport.
		Carriage restrictions. We have some concerns for T7/E8 controls for products used in the home garden market. The levels seem to be quite low and will be difficult to administer.	Current trigger quantities for carriage on public service vehicles will be altered to continue to allow products purchased at retail outlets to be taken on public transport.
		Is the Inter-island ferry a passenger service vehicle?	Strictly speaking, the Inter-Island ferry is a passenger service vehicle. However, the regulations state that “ <i>A person must not carry on a passenger service vehicle.....</i> ”, so this regulation would not apply to a vehicle carrying hazardous substances on the ferry, but would apply to a passenger carrying hazardous substances on the ferry.
T8	Regulation 28 Controls on vertebrate poisons	This control has been assigned to all Class 6.1 substances and is not relevant to substances that are not used for terrestrial vertebrate pest control (such as antifouling paints and molluscicides).	This comment is correct. The controls, relating to signage requirements, apply to Class 6.1 substances that are (lawfully) laid outdoors for terrestrial vertebrate pest control. If a substance is <u>not</u> being used for terrestrial vertebrate pest control, the T8 control itself is not deleted but rather the regulations do not apply.
E1	Regulations 32-45 Limiting exposure to ecotoxic substances	What are the proposed EELs for these substances?	No EELs are being set at this time. If EELs are set before these substances are transferred, further consultation will be undertaken. EELs may have been set by the Authority when a new substance is approved under Part V of the Act. The list of EELs that have been set by the Authority can be found on our website at http://www.ermanz.govt.nz/hs/hs-comp-tels-eels.asp . EELs set under Part V of the Act will not apply to transferred substances.
		If an EEL is applied to a pesticide product, are the Regional Councils then obliged to make the application of that pesticide an act that requires discharge consent?	EELs are enforceable under the HSNO Act and there is no obligation to require discharge consent under the Resource Management Act for this purpose. Regional Councils may also set a more stringent control value.
		Do EELs apply to ground water?	The EEL water values do apply to groundwater, but would only be of environmental relevance at the point where water was abstracted or entered surface water. Note that an EEL applies to “water” with the ability to specify ‘fresh’ or

Control code or Classification	Regulations	Comment/submission	Response
			'marine'.
		How will EELs be monitored?	<p>It is unlikely that EEL values will be <u>routinely</u> monitored or enforced, given the difficulties in taking and analysing samples, and linking these back to the user.</p> <p>However, setting an EEL value does provide clear unambiguous direction on what is unacceptable off site movement of an ecotoxic substance. This then serves as the basis for approving codes of practice which are the practical means by which the majority of end users will comply with the controls.</p>
		Who will enforce compliance with EELs?	Compliance with EELs will be enforced by agencies that currently have responsibility for enforcement under section 97 of the HSNO Act. Compliance could be demonstrated through adherence to a code of practice which may either be a HSNO approved code of practice, or a code which reflects industry best practice.
E2	Regulations 46-48 Restrictions on use within application area	How are application rates being set?	Because no EELs are being set, there is no requirement to set an application rate, and we are not proposing to set application rates for substances in transfer at this time.
		More information regarding the definition of an application area is required. Does it incorporate ground water beneath land that is an application area; is the entire soil column recognised as being part of the application area?	The application area does not include the groundwater beneath land that is an application area, unless there were very specific circumstances where a substance was to be directly injected into groundwater. The entire soil column would not be recognised as being part of the application area.
E4	Regulations 50, 51 Controls relating to the protection of terrestrial vertebrates	Why have these controls been assigned to substances that are not in granular form or coated on seeds?	<p>The intent of this control is to manage adverse effects on non-target species inadvertently foraging on substances in granular form or coated on seeds; for example, where a granular pesticide is laid on the soil surface and may therefore pose a risk to foraging birds and other vertebrates.</p> <p>This is a default control for all class 9.3 substances (ecotoxic to terrestrial invertebrates). If substances are not in granular form or coated on seeds, these regulations do not apply.</p>
		Controls relating to protection of terrestrial vertebrates – these don't apply to how my produce is used.	<p>The E4 control relating to the protection of terrestrial vertebrates is triggered as a default control for all 9.3 substances irrespective of use. Regulation 50 applies only to products in granular form or coated on seed. It does not apply to substances which are soluble concentrates.</p> <p>Regulation 51 applies to substances used as bait or part of a bait. Again, it does not apply to this substance.</p>

Control code or Classification	Regulations	Comment/submission	Response
			In these situations, the control itself is not deleted, but the regulations do not apply.
Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001			
F6	Regulations 60-70 Unintended ignition of flammable substances	The average home gardener will no longer be able to apply this product at home unless they are an approved handler.	The requirement of control F6 is being amended by a regulation change. Domestic users will not be required to be an approved handler when these substances are transferred.
F11	Regulation 76 Segregation of substances incompatible with Class 2,3 or 4 substances	As stated we are not permitted to allow flammable gases and flammable liquid to come in to contact, however our aerosol can formulation requires the mixing of these two at the time of manufacture and can packing. We use flammable gas LPG as the propellant and flammable solvents in the formulation. This is a standard type of international formulation. We ask for an exemption.	This control code relates to storage of incompatible substances, not the manufacturing process. Thus once manufactured a class 2.1.2A substance must be stored segregated from All class 1 substances Class 2.1.1 substances All class 3 substances All class 4 substances All class 5 substances
Hazardous Substances (Identification) Regulations 2001			
I1, I3, I8, I9, I16	Regulation 14(a) Priority identifiers for toxic substances	While applauding the allowance for less rigid labelling format, the unequivocal signal words "deadly Poison" and "Dangerous Poison" and "Poison" should be retained for Category A, B and C Classes 6.1 and 8.2, 8.3. Words "giving an indication that it is toxic" [HSNO Identification Regulation 14(a)] may not have sufficient immediate impact to prevent misadventure.	The Global Harmonisation System for classification and labelling of chemicals has internationally agreed that the word " Poison " is to be replaced by the word " Toxic ". We are aware that the NZCIC is currently producing a Code of Practice which will assist labelling to meet HSNO requirements in light of this international harmonisation initiative.
		To add to the label that pyrethrin is very toxic to invertebrates seems unnecessary as the product is called Insect Killer. That is its sole purpose. It will kill insects and spiders. We ask for an exemption for 9.4A	The classification is based on the intrinsic hazards of a substance. As this product is designed to kill insects it is given a 9.4 classification (in this case a 9.4A)
		It is unclear where the relevant information would be and how locatable it would be within 10 seconds unless it is a label attached to the container. This is particularly pertinent for	It is anticipated that this information will need to be on the product label to achieve the requirement to be available in 10 seconds.

Control code or Classification	Regulations	Comment/submission	Response
		first aid measures.	
		Who will advise on labelling requirements and when will this be available for design and printing?	NZCIC is developing a Code of Practice for Labelling. This will spell out labelling requirements more clearly. AGCARM are also developing a Code of Practice for labelling of pesticides.
		Product labels should be amended as stocks run down as opposed to dumping numerous current product labels. The second issue raised was the large compliance cost to amend and reprint labels in accordance with the HSNO regulations.	A draft of the NZCIC code is available at www.nzcic.org.nz .
I11, I16	Regulation 19 and 25 Secondary identifiers for corrosive and toxic substances	We do not agree that all formulations should have the toxic components listed on the label. Specific toxicological testing is conducted to determine the overall effect of the formulation in areas of toxicity and corrosion. It is misleading to have a statement for the components on the label. This should only be necessary if the formulation has not had sufficient toxicological testing to determine its toxicity.	The identification of all toxic components is a requirement under HSNO and is required of all new applications as well as products in transition. ERMA NZ respects confidentiality and will inform each registrant of what needs to be displayed on their labels (i.e. it will not be printed in the Transfer Report which is a public document). It is then up to the registrant to comply. Substances that are corrosive on their own but that are neutralized by another component in the formulation do not need to be on the label because that component is not causing the mixture to take on that particular hazardous property. Regardless of toxicological data on the mixture the regulations require the components contributing to the toxicity of the product be identified on the label, <u>but</u> only if they would cause the mixture to be toxic/corrosive independent of any other components. .
		Should this information be on the MSDS rather than the label? There is only so much room on a 2.5 kg box.	Brief statements are sufficient for these regulations. Many product labels would contain this information already.
I17	Regulation 26 Use of Generic Names	We agree, however only the active ingredient should be required on the label.	The identification of all toxic components is a requirement under HSNO. ERMA NZ respects confidentiality and will inform each registrant of what needs to be displayed on their labels (i.e. it will not be printed in the Transfer Report which is a public document). It is then up to the registrant to comply. The regulations require the components contributing to the toxicity of the product to be identified on the label, but only if they would cause the mixture to be toxic/corrosive independent of any other components.
I20	Regulation 36(8)	What is the definition of a permanent label under HSNO?	A permanent label is one that lasts the lifecycle of the substance.

Control code or Classification	Regulations	Comment/submission	Response
	Durability of information for class 6.1 substances	Does this mean that we have to emboss drums (which has implications for recycling them) or will a printed label meet the requirements?	Thus once the substance has been used or disposed of the label can be removed and the container reused, so long as in recycling the container the requirements of regulation 10 of the <i>Hazardous Substances (Disposal) Regulations 2001</i> are met.
		If the container is correctly labelled why is this control necessary?	This control is just stating the label information must be durable and not fade or wash off.
I21	Regulations 37-39, 47-50 Documentation required in places of work	Is ERMA saying that MSDS and Emergency Procedure Guides (EPG) information is now required for all pesticides sold in NZ? If so what format will be acceptable?	This documentation is only required in places of work. The regulations do not stipulate the format, just that the information must be available within 10 minutes. Thus an EPG and/or MSDS would suffice as long as it contains the required information. A Code of Practice for MSDSs is being developed and will clarify the requirements for MSDSs. Following the Code of Practice is one means of complying with the regulations.
I29	Regulations 51-52 Duties of persons in charge of places in respect of signage	How do we meet these requirements for a large warehouse with a wide range of products of various classes and categories?	Covered By Code of Practice 'Signage for Premises storing Hazardous Substances'. This Code of Practice has been submitted for approval. Once approved information regarding the Code of Practice will be posted on ERMA and NZCIC websites (ERMA Codes of Practice Focus Page - http://www.ermanz.govt.nz/news-events/focus/codes-practice.asp).
I30	Regulation 53 Advertising corrosive and toxic substances	If a substance is classified as a 6.5A and 6.5B, I30 control should be included	I30 is not required to be included. The I30 control refers to Regulation 53 (Advertising of corrosive and toxic substance) of the <i>Hazardous Substances (Identification) Regulations 2001</i> . This regulation is the equivalent to sections 7-14 of the Toxic Substances Regulations (1983) and therefore has been interpreted as only applying to substances classified as a 6.1.
		We do not understand the implications of making such information available to 'non-target' users by means of advertising. Are there specific examples for pesticides?	This regulation is continuing over a requirement of the Toxic Substances Act 1979 (s 34).
<i>Hazardous Substances (Packaging) Regulations 2001</i>			
P controls		Will current packaging be checked and approved?	The onus is on the manufacturer/supplier to ensure that the product has the correct packaging. HSNO does include an enforcement component; however this is not the role of ERMA NZ.

Control code or Classification	Regulations	Comment/submission	Response
P1	Regulations 5,6,7(1),8 General packaging requirements	We do not agree with the requirement for child resistant closures as product is packaged in large volumes.	Child resistant containers are only required for packages less than 2.5 kg or 2.5 litres. Also Reg 19(3) states that child resistant packaging does not apply if – a) the offer for sale is made in respect of a place of work to which children do not have access; and b) the substance is for use in that place of work. This means that child resistant packaging is required for home garden use products, but not those used in a workplace.
		Most of our plant protection home garden products do have child resistant containers; however these particular products do not. In the years that we have been selling these products there have been very few poisoning incidences.	The P1 control covers general packaging requirements that all hazardous substances are required to meet. The requirement for child resistant packaging is covered by control P13. The definition of child resistant is provided in the <i>Hazardous Substances (Packaging) Regulations 2001</i> . Manufacturers will need to consider whether their current packaging complies with this definition. ERMA NZ is encouraging the packaging industry to develop a Code of Practice for Child Resistant Packaging.
		Reg 8 is not acceptable. Any package that has contained an agricultural chemical should be destroyed.	Regulation 8 is a generic regulation that applies to a range of hazardous substances. There is nothing to stop a manufacturer recommending that their pesticide containers not be reused for storing other substances.
P13	Regulation 19 Packaging requirements for toxic substances (class 6)	These products are home and garden slug and control baits and have been in the retail market in NZ for many years now with packaging that is not in a child resistant container and which is not re-sealable once opened and partly used.	There has been a recommendation under the Toxic Substances legislation since 1998 (agreed to by the Toxic Substances Board) and a Code of Practice issued (Code of Practice for Child-resistant Packaging of Toxic Substances) which states that any substance with an oral LD ₅₀ between 200 and 5000 mg/kg body weight (Standard Poisons and Harmful Substances) which are packed in containers up to 2.5 litres or 2.5 kilograms, are required to be in a Child Resistant Package (refer page 10, part 2 of the Code). Although this is not legally binding, the intention was for this requirement to become legislation under the Toxic Substances Regulations 1983, which was superseded by the HS (Packaging) Regulations 2001.
			Regulation 9 allows for reduced packaging requirements for smaller packets and lower hazard substances. In these cases, substances have to meet the requirements of Schedule 4 of the <i>Hazardous Substances (Packaging) Regulations 2001</i> . Note: Regulation 9(3) allows for a substance not to meet the first test requirement of Schedule 4 if a warning statement to that effect is given on the packaging.
		Child resistant packaging is regulated for the first time under HSNO (previously it	A HSNO enforcement officer could determine if the packaging is child resistant by reference to NZS 5825:1991 (or similar international

Control code or Classification	Regulations	Comment/submission	Response
		was covered by a Code of Practice). How will it be enforced? There have been complaints about non-compliant packaging in the past.	standards), or by requiring certification by the packaging manufacturer.
		Why do 6.1D and 6.1E substances trigger child resistant packaging requirements while 6.1A, 6.1B 6.1C do not?	6.1A, 6.1B and 6.1C substances do not require child-proof packages as these trigger the Approved Handler regulations. Approved Handler management represents a higher level of control than the requirements for substances to be in child resistant packaging.
		Where do we find out information about child resistant packaging	A New Zealand Standard for Child Resistant Packaging exists (NZS 5825:1991).
PG	Schedules 1-3	Packing Group of a substance would depend on the risk classification of the substance in question. Although it is always prudent to assign a stricter PG, the implication that a product with stricter PG would need to comply, for example with stricter packing requirements should always be taken into consideration.	You are correct; the Packing Group depends on the risk classification of the substance in question. In assessing the risk we consider any existing packing group allocated (from Dangerous Goods classification) and the nature of the hazard that drives the packing group allocated (i.e. whether they present an acute or chronic hazard). The consultation process also allows registrants and other parties to comment on the packing group allocated.
		Some products trigger more than one packaging group requirement. Which one applies?	Strictly speaking, the more stringent packaging group requirement would apply. However, substances that have packaging controls assigned on the basis of their chronic toxicity or ecotoxicity may have different packaging controls to those assigned by the UN based on their physical hazards or acute toxicity. The packaging requirements assigned will generally align with those of the UN unless stricter controls are warranted.
<i>Hazardous Substances (Disposal) Regulations 2001</i>			
D controls		We agree with these controls, and are keen to know what changes are required under existing labelling.	The disposal information required on the label will be clarified in the Labelling Code of Practice.
D4	Regulation 8 Disposal requirements for toxic and corrosive substances	Currently the industry uses water to triple rinse containers. The water rinse is then added to the sprayer. It is not clear from the proposal whether water is considered an "other substance". It would be a concern if was deemed to be a prohibitive substance.	Control codes D4 and D5 relate to the disposal of toxic and ecotoxic substances, including product residues in packages. The regulations triggered by these controls do not preclude continuation of current industry practice of triple rinsing etc.

Control code or Classification	Regulations	Comment/submission	Response
D5	Regulation 9 Disposal requirements for ecotoxic substances	What is the definition of discharging to the environment? What if there is no EEL?	The definition of discharge is given in Regulation 3. For pesticides the application rate must not be exceeded. (Depending on the nature of the discharge a resource consent may be required under the RMA.) The RMA definition of discharge is to “emit, deposit or allow to escape”, this definition would influence how this is viewed under HSNO.
D8	Regulation 13 Documentation requirements	Disposal details for class 6 substances. The Guide to Controls Regs indicates this should be provided via an MSDS. The regulations do not specify an MSDS – why can't this be achieved via the product label?)	Regulation 13 requires that the documentation must comply with regulation 48(2), (3) and (4) of the <i>Hazardous Substances (Identification) Regulations 2001</i> . There is a requirement for the information to be available within 10 minutes (which has been interpreted to mean on an MSDS). However the regulations do not actually state the form in which this information needs to be presented.
		Who is responsible for making the MSDS available to the end user?	The supplier is responsible for making the MSDS available. However, they are only required in a place of work (ID Reg 37).
<i>Hazardous Substances (Emergency Management) Regulations 2001</i>			
EM1	Regulations 6, 7, 9-11 Level 1 emergency management information : General requirements	There is only limited space on a label to provide the necessary information. Wouldn't Emergency Provider Guidelines (EPG) be a better way of handling this?	Brief statements are sufficient for these regulations. Many product labels would contain this information already.
		Regulations 6 and 7 refer to Schedule 1 of the Emergency Management Regulations (Quantities requiring Level 1 Information). However, Schedule 1 does not list class 6, 8, and 9 substances.	Due to an error in the printing of the regulations, Schedule 1 of the Emergency Management regulations is incomplete. This will be corrected when the Controls regulations are amended.
EM2, EM6, EM7	Regulations 8(a), (e), (f) Information requirements for corrosive, toxic and ecotoxic substances	These regulations refer to Schedule 1 of the Emergency Management Regulations (Quantities requiring Level 1 Information). However, Schedule 1 does not list class 6, 8, and 9 substances.	Due to an error in the printing of the regulations, Schedule 1 of the Emergency Management regulations is incomplete. This will be corrected when the Controls regulations are amended.
EM8	Regulations 12-16, 18-20 Level 2 emergency management information requirements	The provision of Emergency Management Response Plans will be an additional cost to growers. However the Avocado Industry Council suggests that a generic template is developed, which can be added to, to take account of individual sectors and sites. The AIC is not clear how this	EM8 relates to the provision of emergency management documentation (essentially MSDS) that must be provided when certain quantities of hazardous substances are sold or supplied or held in a place of work. It is control Code EM11 that relates to emergency management plans. These are only required where quantities of hazardous substances greater than those specified in Schedule 4 (Emergency Management Regulations) are stored, or likely to be stored.

Control code or Classification	Regulations	Comment/submission	Response
		will be audited and by whom and what the cost will be to growers.	For example where > 3000 L (aggregate water capacity) of 2.1.2A substances are stored. If growers do not exceed the quantities specified in Schedule 4 then an emergency management plan will not be required. The NZCIC is currently developing a Code of Practice for Emergency Management Plans. We hope that a draft will be available by the end of 2003. This should include generic templates from which specific plans can be developed.
EM12	Regulations 35-41 Level 3 emergency management requirements – secondary containment	Uncertain as to what liquefiable means.	Liquefiable substances are those that are liquids or solids that may liquefy (i.e. become a liquid) in a fire. Substances that dissolve in water used to put out the fire are not included in this regulation. This regulation is being amended to make this clear.
Classification codes			
Classes 6.5A, 6.5B		With codes 6.5A and 6.5B it seems incongruous to have both A and B classifications. Surely the greater overrides the lesser.	While in most cases an A classification indicates a higher hazard than a B classification in the case of sensitisation the A and B classifications refer to different endpoints. In this case: <ul style="list-style-type: none"> ➤ 6.5A classification indicates this substance is a respiratory sensitising agent ➤ 6.5B classification indicates that this product is a skin sensitising agent. Further information on the HSNO Classifications is available from our office or on our website. The publication that may be of most use initially is the Summary User Guide to the HSNO Thresholds and Classifications of Hazardous Substances http://www.ermanz.govt.nz/resources/publications/pdfs/ER-UG-04-1.pdf
Class 9.1		Some of the 9.1 classifications are based on toxicity to algae. Our concern is the level of information ERMA intends to disseminate to the public about what this classification means. We are particularly concerned that people may take this to mean the product has broad aquatic toxicity, including aquatic organisms. There is a risk of misleading the public. It must be clear in the labelling that the concern is with aquatic plant toxicity only.	To clarify the issue of labelling of 9.1A substances, the wording on the label can be decided by the manufacturer/registrant. It is fine to indicate on the label that it is only toxic to aquatic plants, and not fish or crustacea etc. (Regulation 20 of the <i>Hazardous Substances (Identification) Regulations 2001</i>).
Class 9.2		Similarly this occurs with the 9.2 classification. We expect that ERMA will make a	HSNO soil classification criteria include soil mediated toxicity to terrestrial plants. The classification remains as a means of protecting

Control code or Classification	Regulations	Comment/submission	Response
		distinction between plant and earthworm or soil microbe effects.	non-target plants. The comment above for Class 9.1 regarding labelling applies.
General questions			
	Classifications	Have these classifications been peer reviewed before putting them into the public domain?	Substances have been classified on existing readily available information. In the case of pesticides, this includes information from registrants, ACVM files, and publicly available databases (including international regulatory agency databases). These classifications have been peer reviewed and also scrutinised during the setting of controls. It should be noted that classification is a means to setting controls and the focus is on ensuring that these are appropriate, taking into account the existing controls on a substance.
	Controls	We believe that there is considerable scope for modification of the controls to make them more user friendly and appropriate to the risks associated with the manufacture, transport, use, and disposal of substances.	The transfer process is not a full risk assessment process, but does take into account the existing controls on a substance. We agree that the regulations setting out the controls can be complicated and confusing and we are committed to producing more user friendly guidance.
	Biocidal catch-all	While the herbicidal action of this substance may mean that it is caught by the "biocidal" catch all, we contend that this classification is not appropriate if assessed on acute toxicity values falling between 1 and 100 mg/kg. The biocide catch-all seems too general and does not allow for low aquatic hazard pesticides to be excluded. If a biocide category is necessary it could have another schedule of 9.5 for any product not caught by 9.1-9.4.	Due to the use of this product as a herbicide, it is classified as stated in the Hazardous Substances (Classification) Regulations 2001 as 9.1D as it falls under the definition of " <i>a substance that is designed for biocidal action, other than a substance that is designed for biocidal action against a virus, protozoan, bacterium or an internal organism in humans or in other vertebrates, but does not meet the criteria for any hazard classification in class 9 other than 9.1D.</i> " This 9.1D classification is irrespective of the stated acute toxicity for this formulation.
	Transfer date	When will pesticides be transferred?	The transfer date for all registered pesticides is 1 July 2004. Note: There will be a lead time prior to the 'transfer' of the pesticides, where registrants/interest parties will be aware of the exact classification and controls required for specific products. A part of this lead in time will be to ensure that sufficient Approved handlers and Test Certifiers will be available.

Annex 4 – Outline of the Decision-making Process for the Transfer of Substances

