SM012 State Highway Control Manual

Part 9 - Consolidated Heavy Motor Vehicles Sections

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Other Statutory Controls

Purpose	Situations often arise where action is required to meet an immediate situation. Provision is made in various regulations for prompt action to be initiated without the need for a bylaw or more formal control measures.
Traction Engine permits	System Managers or the Alliance Manager (WTA) may issue permits under Clauses 1 and 2 of regulation 10 of HMV Regulations 1974. Guidance for the issuing of a permit is contained in the *Overweight Permit Manual*, NZTA.
Emergency prohibition of heavy motor vehicles	The National Managers Maintenance and Operations or System Design are authorised to prohibit heavy motor vehicles from using State highways in terms or regulation 10(3) of the HMV Regulation 1974. The National Manager Maintenance and Operations is authorised to prohibit heavy motor vehicles from using State highways for a specified period no greater than 12 months in terms or regulation 10(4) of the HMV Regulation 1974. These powers must be used sparingly and only to prevent extraordinary damage to the highway, as a result of an emergency resulting from climatic conditions or other unusual circumstances, as referred to in regulation 10(5) of the HMV Regulations 1974. All cases where this regulation is invoked are to be reported to the General Manager Transport Services, for information.
Road construction zones	System Managers, Alliance Manager (WTA), Regional Managers and Portfolio Manager – Portfolio E (Special Projects) are authorised to declare Road Construction Zones on State highways in accordance with regulation 12 of the HMV Regulations 1974. The zone can be applied to construction or maintenance works. The purpose of such a notice is to be able to run special or non-standard vehicles on the whole or part of a section of the highway being reconstructed. It is not intended that it should allow overloading of vehicles beyond the manufacturers' recommended limits as this may be detrimental to vehicle safety. The specific types and particular limits of these vehicles must be stated on the notice. The boundaries of any road construction zone shall not extend beyond the specific section of road under construction but may be of lesser length. The length of the zone should only be that part of the site for which any resultant damage from these vehicles will not be critical in the future management of the highway. The limitations on access within the zone for all or any particular type(s) of vehicles must be stated on the notice. The construction zone will also need to apply when the particular vehicles are being used on any haul road within the road reserve, even if the carriageway itself is not utilised. The Regulations require that a copy of the notice (and any amendment to it) is lodged with the Agency. This requirement is to advise a change in allowed vehicle standards on a road and therefore a copy of any State highway notice must be sent to the appropriate officer in the Regulatory Group within the Agency.

	NZ Police (CVIU) is also to be advised of all construction zones and be sent a signed copy of the notice. The CVIU may also be consulted if there are concerns about the vehicles requested to be included in the notice.
Control of damage and nuisance	System Managers or the Alliance Manager (WTA) are authorised under s51 of the GRP Act to grant permission and set conditions for activities which would otherwise be unlawful and seek Court action in respect of offences.
Special motor vehicle crossings	Regulation 2A of the Motor Vehicle Registration and Licensing Regulations includes a category of motor vehicles exempt from payment of registration and annual licence fee. A written deed of grant is required specifying the type of vehicle, crossing points or sections of highway to be used. The deed shall include provisions to make good damage and to operate traffic control devices on the highway. Details of the agreement required to be completed are set out on pages 4 and 5 below. All such proposals require the approval of the Board.

Conditions for Motor Vehicle Crossing Licenses on Highways

In this Section	This section contains the recommended special conditions to be used in a licence to occupy granting limited access permission for vehicles that do not pay road user charges, and also qualify for a full refund of motor spirits duty, to cross State highways.
Licence to Occupy	Agreements should be based on the *Licence to Occupy* long form agreement included in Part 4 – Consolidated Agreements Section, pp.13-22. The conditions below should be used as a basis for replacing the Special Conditions contained in that agreement.

1. THAT all travelling along the said highway with the said vehicles shall be confined to _____ the road reserve between RP _____ and RP _____.
2. THAT the grantee will meet all reasonable costs necessary in the opinion of the System Manager of NZTA to provide and maintain this access path along the western shoulder of the said highway.
3. THAT the grantee shall agree to meet reasonable capital and maintenance costs necessary in the opinion of the System Manager for any works considered necessary to accommodate the movement when the State highway is reconstructed including the construction of properly designed concrete crossing strips to be incorporated in the reconstruction of the pavement as required.
4. THAT the grantee shall be responsible for the costs of providing any traffic control signs and/or any other measures found to be necessary in the opinion of the System Manager to ensure the safety of traffic using the State highway.
5. THAT the grantee shall make good to the satisfaction of the System Manager at the grantee's own cost any damage to the said highway caused by the passage of the said vehicles within the boundaries of the legal road reserve permitted to be used by termination the grantee shall at the grantee's own cost restore the said highway if so required by and to the satisfaction of the System Manager.
6. THAT the grantee shall in exercising the rights hereby granted cause as little obstruction as possible to the use of the said highway by the public, and in particular will ensure, to the satisfaction of the System Manager, that the headlights of the said vehicles do not cause hazard to other users of the said highway.
7. THAT the grantee indemnifies the Board from and against all costs, actions, demands, suits, damages and proceedings of any kind for or in respect of any loss or damage that may directly or indirectly result by reason of the rights hereby granted and for that purpose shall take out policies of insurance fully assuring the Board and the grantee against all claims and liabilities whether under any statute or at common law which may arise from the grantee's exercise of its rights under this agreement.

AND it is hereby agreed and declared by and between the parties hereto:

8 THAT the Board may at any time during the continuance of the right hereby granted by written notice to the grantee require the grantee at its sole expense in all things to comply with any further conditions on the use of the said crossing places or other rights as the Board may consider necessary to ensure the safe and efficient use of the said highway.

9. THAT this grant is at all times subject to the provisions of section 48 of the Public Works Act 1981 as if this grant were a grant of easement within the meaning of that section.

10. THAT the grantee shall not acquire any vested right by virtue of the right hereby granted.

11. THAT the grantee shall not without the prior consent in writing of the Board assign, transfer, underlet, or part with its rights under this agreement and the grantee shall use rights hereunder only in connection with and for the purpose of the present business of the grantee.

12. THAT the grantee shall not have any claim whatsoever against the Board, its agents, representatives and contractors in respect of any alterations or work done on the said highway or road reserve which interferes with the grantee's rights under this agreement, nor shall the grantee be entitled to any compensation at any time should this agreement be terminated by the Board.

13. THAT any power may be exercised, or approval given hereunder on behalf of the Board by the System Manager or other person acting under his express or implied authority.

14. THAT should the grantee in the exercise of its rights under this agreement be found in the opinion of the System Manager to constitute a danger to other road users, then the Board may terminate this agreement immediately by written notice to the grantee.

15. THAT in the construction of these presents when any notice is to be given by the Board that such notice be signed by some person acting under the Board's express or implied authority and sent by post or telegram addressed to the grantee's duly registered office.

Bridge Restrictions for Legal Loads and Overweight Permit Procedures

Overview

Bridges are a vital component of the State highway network. Unlike carriageways, bridges can be subject to sudden catastrophic failure if overloaded. This section deals with policy and procedures required to restrict loads on bridges not capable of safely carrying normal highway loadings.

In this section

In this section the following topics will be covered:

Bridge Restrictions for Legal Loads and Overweight Policy

Purpose

Restrictions must be applied where the legal maximum weight and/or speed limits allowed by the Heavy Motor Vehicle (HMV) Regulations 1974 would exceed the structural capacity of the bridge leading to premature structural deterioration or failure.

Methods for applying restrictions

There are two methods of applying load restrictions:

A. Restrictions applied under the HMV Regulations.

B. Restrictions by NZTA Bylaw.

Responsibility

The National Managers Programme and Standards is responsible for the rating and posting of restrictions for all State highway bridges (including railway overbridges) except combined road-rail bridges for which the responsibility is retained by KiwiRail.

KiwiRail controlled bridges

The list of KiwiRail combined road-rail bridges is given in the table below:

State Highway	Route Position	Name
2	243/10.82	Pekatahi
6	282/13.80	Inangahua
6	463/0.00	Arahura

Overweight permits

Special permits can be issued for specific loadings in excess of the HMV regulations and/or in excess of any legal bridge restriction. Such permits usually impose special conditions so as to limit stresses on critical bridge members.

Examples of possible conditions are:

A. Limit vehicle speed to reduce impact stresses.

B. Position the load on the bridge so as to minimise live load stresses.

The procedures to be followed for issuing overweight permits are specified in *Overweight Permit Manual,* NZTA.

Over-dimensional loads on State highways

Permits for overdimension loads are issued by the Agency's Over-dimension Permit Issuing Agency (OPIA), who may be contacted at OPIA@nzta.govt.nz. Application for a permit can be made on the form that can be downloaded from https://www.nzta.govt.nz/assets/Commercial-Driving/Application-for-an-overdimension-permit.pdf.

For motorways, comment must be given by the System Manager.

Broad guidelines for over-dimension permit issuing are contained in Section 1 of the *Overweight Permit Manual,* NZTA.

HMV Regulation Restrictions

Introduction	The HMV Regulations 1974 specify a legal procedure to be followed to restrict a load on a bridge. This is the preferred method of restricting loads on bridges and the alternative method using NZTA Bylaw restrictions should only be used in exceptional cases (see page 11 below under *NZTA Bylaw Restrictions for Bridges*).
Engineer's Certification	Weight and speed limits applied under the provisions of the HMV Regulations require a certificate from an engineer (who is a Chartered Professional Engineers). The certificate shall state that, as a result of a detailed inspection and analysis of the bridge, the engineer is of the opinion that if either of the following conditions pertains, then the loads would so over-strain the bridge as to be likely to cause its ultimate failure. A. The use of the bridge by vehicles exceeding in weight the proposed weight limits; or B. The use of the bridge by vehicles travelling at a speed exceeding the proposed speed limit.
Certificate advice to Chief Executive	The National Manager Programme and Standards has delegated authority to impose restrictions, but the Chief Executive must be advised of the proposed restriction prior to the posting of action being taken. A copy of all weight and speed restriction certificates shall be forwarded to the Chief Executive for reporting to the Board. The certificate must state the actual limits that are posted. A new certificate must be issued if the limits are changed. A new certificate is not required if a restriction is imposed without change.
Legal requirements	For a bridge restriction applied under the HMV Regulations to become effective it must be: A. Published in a newspaper circulating in the district in which the bridge is situated; and B. Indicated on signs erected and maintained near each end of the bridge.
Newspaper publication	Newspaper publication must be in the format and using the headings given from Form D in the First Schedule of the Regulations. The weight restrictions must be in the same terms as required for the signs. Three newspaper columns should be requested for the notice. The notice shall be issued in the name of the National Manager Programme and Standards.
Bridge signs	Signs erected at the bridge shall be RH-4 signs as defined in the *Manual of Traffic Signs and Markings*, NZTA. Refer to Regulation 11(b) of the HMV Regulations 1974 for values to be used in the panels.

Posting advice	One full page of the newspaper showing the notification shall be forwarded to the Senior Manager Safer Commercial Transport within seven days of the publication together with advice that an Engineer's Certificate has been obtained. One full page showing the notification shall also be forwarded to the Chief Executive NZTA by minute on a copy of the advice to the Police Commissioner.

Ongoing Requirements for Bridge Restrictions

Introduction	Existing bridge restrictions may need changing or removal as situations change. Bridge restrictions imposed under the HMV Regulations are only valid for a period of 12 months and must be reimposed annually if they are to serve for a longer period.
Changing or re-imposing a restriction	The procedure is exactly the same as for the original restriction.
Standardised removal date	The NZTA requires that all State highway bridge restrictions be revised and renewed by 1 October each year. A schedule of renewed bridge restrictions shall be forwarded to National Manager Programme and Standards by 30 June each year for reporting to the Chief Executive. All bridge restrictions shall be reimposed by the beginning of October even though they may have been in operation for only a few months.
Removal of restrictions	Restrictions that are no longer required for whatever reason shall be removed by taking both of the following two actions: A. Publishing notification of the removal in some newspaper circulating in the district in which the bridge is situated. B. Removing the signs at the bridge. Existing restrictions may be removed at any time. One full page of the newspaper notice shall be forwarded to the Senior Manager Safer Commercial Transport and the National Manager Programme and Standards, as required for the imposition of restrictions.

NZTA Bylaw Restrictions for Bridges

When to use	A bylaw under section 61(3) of the Government Roading Powers Act 1989 (reference section 22AB sub-section (1)(zh) Land Transport Act 1998) can be used where the HMV Regulation procedure causes undue restriction to certain types of axle configurations.
Justification	Information as to the form of weight restrictions proposed and the benefit to be gained in comparison to the HMV Regulation procedure is to be supplied to the General Manager Transport Services to seek approval to proceed.
Bylaw procedures	The power to make bylaws has been delegated by the Board to the General Manager Transport Services. Once a bylaw is gazetted, appropriate signs must be erected and maintained near each end of the bridge. The bylaw shall be published in a newspaper circulating in the district in which the bridge is situated.
Expiry date	Bridge restrictions applied by means of a bylaw do not need to be reimposed each year. They must however be reassessed each year prior to 1 October and the assessment of ongoing need advised to the National Manager Programme and Standards.

Weight Enforcement Facilities

Introduction	Weight enforcement facilities are provided by the NZTA for use by NZ Police in their enforcement of legal weight limits and regulations on road user charges.
Policy	NZTA supports a programme of effective heavy motor vehicle enforcement leading to a reduction in the level of road user charge offending and overloading. For this reason, the NZTA constructs and maintains a number of weight enforcement facilities and associated equipment for use by the NZ Police. The NZTA has a strategy for the development of weight enforcement.
The strategy	The strategy for weight enforcement which has been agreed between NZ Police and the NZTA is for: A. New weighbridges at strategic and feasible locations on the heavy vehicle routes identified in the Weighright policy B. Adapting existing weighpits to take new portable scales or conversion to roadside weighing areas C. Forming roadside areas for random weighing using portable scales on lesser trafficked rural highways D. Further purchase of new portable scales E. Support for private information weighing facilities at areas such as service stations and truckstops F. Continued use of private weighbridges where practical G. Support for private weighing facilities at container ports
NZ Police resources	The enforcement of heavy vehicle regulations including weight and dimension limits, road user charges, safety, and driving hours is performed by a specialist resource within NZ Police known as the Commercial Vehicle Investigation Unit (CVIU). There are five units attached to the NZ Police regions. The activities of the CVIU are covered by an annual plan known as the Road Safety Programme (RSP) which provides funds from the National Road Fund for heavy vehicle enforcement and Road User Charges compliance and includes performance targets. NZ Police provide reports against these performance targets.
Responsibility Split with NZ Police	The RSP funds the human resources for operation of weighing facilities. This programme also funds electricity, telephone, water, and other consumables and operating expenses. NZ Police may also supply their officers with portable equipment such as laptop computers that may be required for their duties. The NZTA has agreed to fund the following items: • construction and upgrading of weighing facilities • maintenance and calibration of the weighing equipment and sites including weighbridge electronics but excluding portable scales

	• maintenance of building exteriors, surrounds, and sites • provision of secure accommodation required for police officers rostered at weighbridges including toilet facilities, water supply, car parking, lighting and other items necessary for the operation of the weighing facility These items are funded from the National Land Transport Programme.
Equipment Calibration	Section 197 of the Transport Act 1962 stipulates the requirements for weighing equipment and sites to be tested or surveyed. For weighbridges this activity is coordinated by NZ Police. NZ Police also arrange their own calibration for their portable scales.
Routine Maintenance	NZTA's System Managers are responsible for the routine maintenance of all weighbridge equipment, sites, and building exteriors via the network maintenance contracts.
Requests for funding	Funding for maintenance is provided by the NZTA through the State highway maintenance activity class in accordance with the Work Category 123 definition in the *Planning and Investment Knowledge Base*. Funding for new weight enforcement facilities and improvement to existing facilities is to be sought in accordance with the process on page 14 below through the road improvements activity class Work Category 321: New traffic management facilities in the *Planning and Investment Knowledge Base*.

Maintenance Plan Process for New Weight Enforcement Facilities and Improvements to Existing Facilities

Proposed Process for Development of a Maintenance Plan for Heavy Vehicle Enforcement on State Highways

Action	Date due by
1. Preliminary funding provision made in draft state highway programme. [NZTA HO and RO actions]	**1 November**
2. Regional liaison meetings between NZTA and CVIU.	15 December
3. Programme forwarded to Manager, Structures (MS), NZTA HO.	31 January
4. NZTA/Police liaison group at HO level, convenes to prioritise regional programme requests.	15 February
5. MS submits agreed programme to Senior Operations Adviser, NZTA HO, for inclusion in final State Highway Programme.	**28 February**
6. Programme approval secured with Regional Planning & Programmes	30 June
7. NZTA regions and CVIU at national level advised of approved programme.	**1 July**
8. NZTA regions advise local CVIU staff of approval and regional implementation plan.	15 July

Notes
Funding requests are to be in accordance with the NZTA *Planning, Programming and Funding Manual* in the 3 following categories:

- **Maintenance**
  Normal care and attention of existing site and facilities, including pavement repairs and sealing. *[Work to be included in regional annual plans/programmes]*

- **Upgrading**
  Minor work that improves the level of service of the weigh pit. May include access improvements such as additional lanes and tapers, visibility improvements, lighting and new concrete surfaces. Supporting reasons for the work and how it aligns with the current strategy are required. *[Work to be prioritised for inclusion in the national programme or if safety related, funded from the regional minor safety allocation]*

- **New Sites**
  Works to be processed as capital works, including formal justification, BCR and reference to its alignment with current heavy vehicle enforcement strategy. *[Work to be included in regional capital programme].*

Spills Arising from Transport Incidents on the State Highway Network

When to use	This operating procedure is to be used in planning responses to crashes that spill harmful substances as a result of a transport incident.
Justification	The objective is to streamline the response to spills on the highway by having effective response plans already in place and agreed with the emergency services as an aid to the co-ordinated incident management system.
Procedure	The procedure is set out in the Operating Procedure Response that follows (pages 16 to 47).

Operating Procedure Response to Spills Arising from Transport Incidents on the State Highway Network

Contents

Abbreviations

AIS	Accident Investigation System
AREC	Amateur Radio Emergency Communications
CDEM	Civil Defence Emergency Management Act (2002)
CoP	Codes of Practice
CVIU	Commercial Vehicle Investigation Unit
EGV	Environmental Guideline Value
ESCC	Emergency Services Co-ordinating Committee
FENZA	Fire and Emergency New Zealand Act (2017)
HSNO	Hazardous Substances and New Organisms Act (1996)
HSTLC	Hazardous Substance Technical Liaison Committees
LPG	Liquid Petroleum Gas
LTA	Land Transport Act (1998)
LTSA	Land Transport Safety Authority
MCDEM	Ministry of Civil Defence Emergency Management
NRL	National Radiation Laboratory
FENZ	Fire and Emergency New Zealand
NZP	New Zealand Police
NZTA	New Zealand Transport Agency
NZTM	New Zealand Transverse Mercator co-ordinate system
NZQA	New Zealand Qualifications Authority
RAMM	Road Asset Maintenance Management
RMA	Resource Management Act (1991)
SOP	Standard Operating Procedure
TDI	Tolerable Daily Intake

Chapter 1 Introduction

NZ Transport Agency (NZTA) is responsible for the ongoing maintenance, operation and improvement of our State Highway system. Specifically, NZTA's role includes the following areas:

- State Highway Maintenance and Construction;
- State Highway Operation, including safety; and
- Development of policy in relation to State highways

It is noted that state highway traffic management is partially a NZ Police responsibility.

NZTA employ a range of consultants and contractors who maintain the state highway network on their behalf. This is done through 25 'sub networks' around the country, known as 'Network Management Areas'. Contracts for state highway maintenance work specify 'levels of service' that must be achieved. These include response times to events, such as emergencies arising from road accidents and transport spillages through containment loss.

Activities arising from spillages are subject to the provisions of the Resource Management Act 1991, the Health & Safety in Employment Act 1992 and the Hazardous Substances and New Organisms Act 1996. NZTA therefore aims to have in place a contingency plan for response to any spillage that occurs on or from State Highways. This is to ensure that so far as practicable the risk to people and the environment is reduced and the spillage can be immediately and effectively contained.

1.1 Scope

This purpose of this Standard Operating Procedure (SOP) is to guide NZTA in planning its response to spill incidents within the state highway network. This SOP is intended to provide direction to NZTA regional sub-networks, their consultants and contractors. The roles and responsibilities of other agencies that may be involved in the response to spill incidents are outlined to provide a context for NZTA responses.

1.2 Objectives

This SOP is required for compliance with Section 10.2 of the NZTA Quality Standard TQS1:2005. The objectives of this document are to:

- Establish procedures, with respect to spills of hazardous and environmentally harmful substances on the state highway network,;
- Establish a rating of severity of transport spill incidents;
- Clarify the roles and responsibilities of the NZTA, its sub-networks, consultants and contractors in relation to spill responses;
- Provide linkages to other agencies and their roles;
- Provide methods for hazard identification;
- Describe the expectations for NZTA contractors' spill response; and
- Describe the mechanism through which NZTA will respond to and record spill response.

By assisting all parts of the NZTA state highway sector management to understand the systems, processes and roles required in response to a spill incident, activation of a spill response plan will allow for:

- rapid, timely, co-ordinated and effective action; and
- in the event of an incident, the return to normal state highway operations as soon as practicable.

This SOP provides procedures for spillage response following road accidents and transport spillages through containment loss It excludes responses to spillages arising from NZTA maintenance and construction activities as these are controlled under planning consent conditions

Chapter 2 Background

2.1 Legislative Controls

Incidents involving spills of hazardous substances are subject to a response under the emergency provisions of the Hazardous Substances and New Organisms Act 1996, and depending on severity, may trigger a response under the Fire Services Act 1975 or the Civil Defence Emergency Management Act 2002.

2.1.1 Hazardous Substances and New Organisms Act 1996 (HSNO)

Under S135 of this act, an emergency means

(a) Actual or imminent danger to human health or safety; or

(b) A danger to the environment or chattels so significant that immediate action is required to remove the danger, arising from a hazardous substance or new organism

This section also defines an enforcement officer to include any member of the Police, and any Chief Fire Officer or person exercising the powers of a Chief Fire Officer under section 28 or section 28A or section 29 of the Fire Service Act 1975.

Under section 136 HSNO an enforcement officer may declare an emergency to protect human health and safety and, the environment. Such an emergency shall lapse:

after 48 hours, or

when a state of emergency is declared under the Civil Defence Emergency Management Act 2002, the emergency is treated by a Chief Fire Officer as an emergency under the Fire Service Act 1975, or an emergency is declared under section 144 of the Biosecurity Act 1993

whichever is sooner.

Under S97(1)(c) of HSNO, the NZTA may enforce the provisions of that Act in or on any motor vehicle and on any road.

Under S97(1)(d) of HSNO, the Commissioner of Police (after consultation with the NZTA) shall ensure that the provisions of that Act are enforced in or on any motor vehicle or on any road.

Under S144(1) of HSNO, every person in charge of a substance involved in an incident resulting in serious harm to any person or serious environmental damage is required to report that incident to an enforcement officer.

2.1.2 Fire and Emergency New Zealand Act 2017 (FENZA)

Under section 28(3A) FENZA, the Fire **and Emergency** New Zealand (FENZ) personnel are empowered to endeavour by all practicable means to cause the stabilising or rendering safe of any hazardous substance emergency, and save lives and property in danger. A hazardous substances emergency under the FENZA "means the release or potential accidental release of any hazardous substance from any building or other premises, or from any container or pipe, or from any means of transport (whether motorised or not)" (s6 FENZA)

The authorised FENZ person responding to the emergency shall have the powers of an enforcement officer under the HSNO relating to a hazardous substances emergency until a HSNO enforcement officer arrives (s39(2) FENZA) and under sections 136 and 137 of the HSNO Act may declare an emergency and exercise emergency powers. The declared emergency will cease when the emergency Is treated by FENZ personnel.

2.1.3 Civil Defence Emergency Management Act 2002 (CDEM Act)

The Royal Commission of Inquiry into a chemical incident in Parnell in 1973 recommended setting up formal meetings between the emergency services within regions. This resulted in the establishment of regional emergency services co-ordinating committees (ESCCs). Under the CDEM Act, these committees are responsible for the planning and provision of civil defence emergency management within their district. The purpose of the ESCC is to maintain/develop relationships between those organisations that will be required to respond to multi-agency emergencies. The NZ Police are responsible for coordinating quarterly meetings of the ESCC Committee. The composition of the committees include:

- NZ Police (chair);
- NZ Fire Service;
- The Territorial Local Authority;
- Community Public Health;
- St John Ambulance;
- Ministry of Civil Defence & Emergency Management;
- The regional Council;
- Telecommunications;
- Electricity supply;
- Amateur Radio Emergency Communications (AREC);
- Others as appropriate.

As the ESCC lack technical knowledge about chemicals Hazardous Substances Technical Liaison Committees (HSTLC) were established as a sub-committee to co-ordinate certain actions in respect to chemical emergencies. The Fire Service acts as convenor of the HSTLC in all areas (Appendix B). Generally the organisations include:

- Fire Service;
- Ambulance;
- Ministry of Health;
- Department of Labour (hazardous substances);
- Police;
- Technical expert in chemistry (varies according to local expertise, e.g., University, Crown Research Institute);
- Industry specialists (Chemical Industry Council members, where available);
- Media representative or liaison; and
- Local/Territorial authority (water, electricity, environmental, hazardous substances)

The participation of enforcement agencies in HSTLCs has been relatively informal.

The initial response to a hazardous substance spill incident will follow regional Civil Defence Emergency Group Management Plans,

Civil Defence Emergency Group Management Regional Plans generally categorise incidents as follows:

Level 1: Local Incident that can be dealt with by Emergency Services and/or **Territorial** Authority;

Level 2**:** Incident that may extend beyond locality and may require regional support;

Level 3**:** Emergency that is regionally significant and requires regional support; and

Level 4**:** Emergency that nationally significant and requires national support

Level 3 and Level 4 incidents are **generally** declared to be civil defence emergencies. Level 3 incidents are managed regionally under the Civil Defence Emergency Management (CDEM) Group. Level 4 emergencies are managed nationally under the Ministry of Civil Defence Emergency Management (MCDEM).

Spills involving hazardous substances will trigger a response from emergency services with the police, initially assuming the role of incident response management. For major incidents, territorial authorities or regional councils may assume control

2.1.4 Resource Management Act 1991 (RMA)

The RMA is New Zealand's overarching environmental legislation. Its purpose, outlined in Section 5, is to "promote the sustainable management of natural and physical resources". Under the RMA, the definition of contaminant is sufficiently wide to include organic material like milk, stock effluent and other materials not controlled as hazardous substances under HSNO and/or as dangerous goods under the Land Transport Rule: Dangerous Goods 2005 (see below). Regional Councils have statutory powers under the RMA to establish regulatory controls on activities which may affect the environment through rules within their regional plans. Territorial Authorities have statutory powers under the RMA to establish regulatory controls on land use through rules within their district plans. Most Regional Councils maintain 24 hour hotlines for reporting pollution incidents and, if required, regional councils attend incident scenes as soon as practicable.

Section 330 RMA provides for network utility operators approved as requiring authorities to undertake emergency works, preventive and remedial action without first obtaining consents that would normally be required under regional or district plan rules. Section 330A RMA requires the network utility operator to notify the appropriate consent authority within 7 days that such emergency activity has been undertaken. Where the adverse effects of the emergency activity continue, an application to the consent authority for a resource consent is required within 20 days of the notification.

The same regime applies to activities undertaken by a person exercising emergency powers during a state of emergency declared under the CDEM Act 2002 (section 330B RMA).

2.1.5 Land Transport Act 1998 (LTA)

Among other things the LTA contains provisions, provides for a system of Rules, governing road user behaviour.. Section 9 of the LTA states that a person operating a motor vehicle on a road, and any person loading that vehicle, must ensure that any load carried in or on the vehicle (or in or on a vehicle being towed), is secured and contained in such a manner that it cannot fall or escape from the vehicle.

2.1.6 Land Transport Rule: Dangerous Goods 2005

The *Land Transport Rule: Dangerous Goods 2005* sets out the requirements for the safe transport of dangerous goods on land in New Zealand.

The Rule covers the packaging, identification and documentation of dangerous goods; the segregation of incompatible goods; transport procedures and the training and responsibilities of those involved in the transport of dangerous goods. The Rule's requirements are applied according to the nature, quantity and use of the goods.

The consignor must supply emergency response information for the dangerous goods being transported unless the driver or operator of the vehicle indicates that he or she already has that information.

The carrier must:

- Carry emergency response information for all the dangerous goods on the vehicle; and
- Keep the emergency response information in the driver's cab in an accessible position; and

Be aware of:

- the hazards that the dangerous goods present; and
- the procedures for their safe loading, handling and storage on the vehicle; and
- the emergency procedures stated in the emergency response information.
- The Commercial Vehicle Investigation Unit (CVIU) of the New Zealand Police is a nationally managed unit with responsibilities under this Land Transport Rule. These responsibilities include:
- The safe carriage of dangerous goods and hazardous substances;
- Specialist investigation of serious commercial vehicle crashes;
- Load security; and

- WorkSafe (Health and Safety at Work Act 2015) investigations focusing on driver workplace safety and vehicle fitness

2.1.7 Land Transport Management Act 2003

The Land Transport Management Act 2003 sets out the requirements and processes for local authorities to obtain funding for roading construction and maintenance, and for the funding of Police on-road enforcement. As amended in 2008 it is also the Act that establishes the NZTA.

Under this Act, the NZTA's functions include:

- Promoting an affordable, integrated, safe, responsive, and sustainable land transport system;
- Investigating and reviewing accidents and incidents involving transport on land; and
- Managing the State highway system, including planning, funding, design, supervision, construction, and maintenance and operations, in accordance with the Land Transport Management Act and the Government Roading Powers Act 1989:

2.1.8 Radiation Protection Act 1965

The National Radiation Laboratory (NRL) is a specialist business unit within the Ministry of Health. The NRL:

- Administers and enforces current radiation protection legislation; and
- Advises key agencies on radiation risks, and the application of radiation safety principles to reduce the potential for radiation incidents in its role as a regulatory body through the tracking of radioactive sources, compliance monitoring and other processes and initiatives.

The NRL will provide expert advice and technical support to the emergency and health services, who are likely to attend any ionising radiation incident. In relation to all incidents involving ionising radiation, the NRL will:

- Provide expert advice and assistance (including specifying appropriate control measures) for the purposes of minimising the radiation dose to workers and the public, and damage to the environment;
- Provide laboratory support and on-site measurement capability;
- Secure radioactive material and remove it to a place of safety, and/or advise on the securing and evacuation of affected areas;
- Provide radiation dose assessments;
- Assist in the mass screening of people for external radioactive contamination; and
- Provide expert advice and assistance in the development and implementation of remediation plans.

2.2 Transport Spill Incidents

Spills from road transport occur regularly and can result in safety and environmental risks, costly clean-up and traffic disruption. Such spills are not limited to hazardous substances as spills bulk materials such as milk, tallow and soils can create hazardous road conditions and create environmental problems. They may occur when a vehicle carrying a load lacks adequate containment or when a vehicle accident causes breach of the containment system. Smaller spills of fuel from vehicles often occur as a result of a crash loss of load containment. The spill may result in an impact to the receiving environment or human health, particularly if inappropriately managed.

The Environmental Protection Agency (formerly ERMA New Zealand) has categorised spill incidents involving hazardous substances into the levels shown in Table 1.

Table 1: The Environmental Protection Agency (formerly ERMA New Zealand) Incident Categories

Minimal (Level 1)	Little discernible effect on people or the environment, minor effect on property or some social disruption, existing environmental and public health controls are adequate
Minor (Level 2)	Localised, short term, minor effect on people or the environment, property damage, some social disruption to surrounding area, existing environmental and public health controls are adequate
Moderate (Level 3)	Significant longer term damage to people, property or the environment, one death, disruption to surrounding community, controls appear adequate but may require follow-up
Major (Level 4)	Significant irreversible damage to people, property and the environment, more than one death, major social disruption, a system/control failure or lack of adequate controls, public and political interest
Massive (Level 5)	Major damage to property, communities and the ecosystem, including species loss, multiple deaths, significant economic effect, substantial system/control failure resulting in public and political outrage

While not directly aligned with the CDEM levels (Section 2.3) they are similar, with increasing support from governmental agencies and other organisations required as the incident category rises.

FENZ data, reported by The Environmental Protection Agency (formerly ERMA New Zealand) for the period 2002 – 2008 is illustrated in Figure 1.[1]

[1] Environmental Risk Management Authority Monitoring Report, April 2009

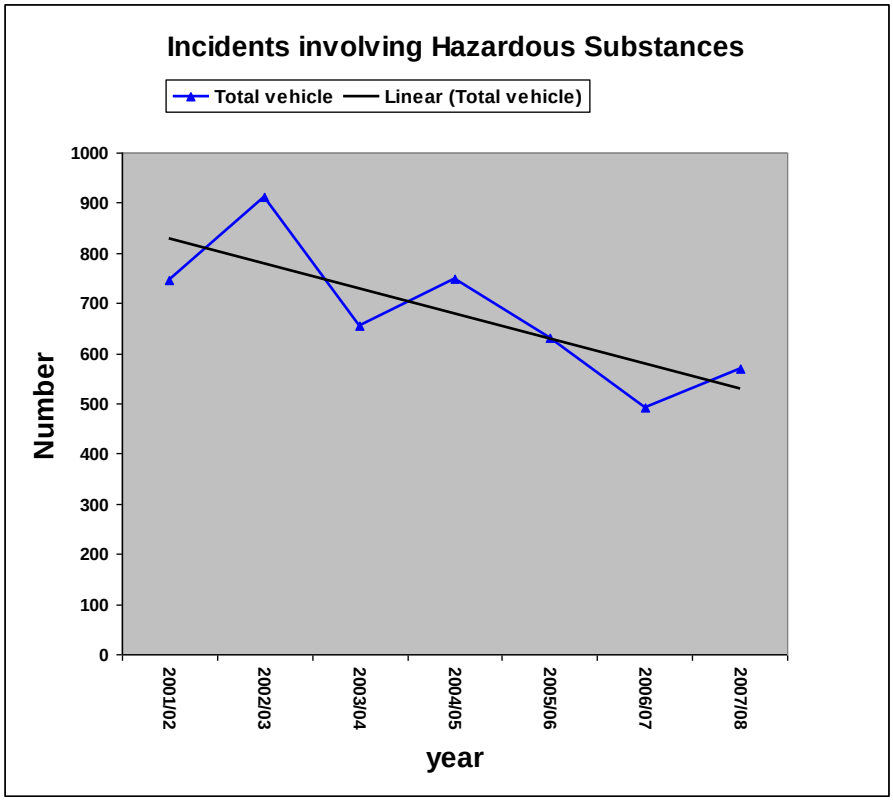


Figure 1: Vehicle incidents involving hazardous substances reported by the New Zealand Fire Service

The Environmental Protection Agency (formerly ERMA New Zealand) records for the year 2008 – 2009 indicate that approximately 85% of incidents were level 1 with the remaining being level 2. No higher level incidents were reported[2]. Nationwide the most common substances associated with incidents were liquid petroleum Gas (LPG), ammonia, petrol, diesel and acids.

Many other spill incidents arise from insecure loads and may not attract an immediate response from emergency services. For example, leaking fluids from stock trucks and tank wagons may remain undetected until the vehicle from which the leak is coming is well removed from the scene.

2.2.1 Inter-agency Emergency Response Roles

A number of agencies and organisations are involved directly or indirectly with the management of hazardous substances and dangerous goods and the investigation of chemical incidents and other spills (see section 2.1.3). Good communication links between key agencies are important. These should be established or reinforced, and regularly maintained to allow for efficient and effective dissemination of information and resolution of issues.

2.2.2 Initial response

By virtue of their day-to-day role as co-ordinators of emergency situations and their 24-hour availability, New Zealand Police and the New Zealand Fire Service, acting under the authority vested in them under S97 of HSNO and the FSA, will generally take the initial responsibility for co-ordination of an emergency. The St John Ambulance Service, and others, provide life support for accident victims. This initial response will mainly involve life support and the control of accident scenes. Life

[2] Environmental Risk Management Authority Annual Report 2009

support includes victim evacuation and scene controls include road safety, human health, safety and environmental issues. This response captures the spillage of hazardous substances and dangerous goods from road accidents and point source spills, but is unlikely to capture diffuse leaks from vehicles that occur over long distances, where road safety issues are not immediately apparent. Diffuse leak incidents are more likely to be reported by road users.

2.2.3 New Zealand Fire Service

The New Zealand Fire Service (FENZ) attends over 70,000 emergency incidents, including road accidents, annually. Their role is to:

- Manage the scene;
- Contain and manage any released hazardous substance; and
- Working in co-operation with the Ambulance Service, for decontamination of individuals at the scene,

Each incident requires that the officer in charge record the important features of the incident. These records become part of a database used in developing community safety programmes. To assist in this role, Fire **and Emergency** New Zealand maintains a centralised hazardous substances spill response database. In 2005 the New Zealand Fire Service signed the National Hazardous Substance Technical Liaison Committees (HSTLC) Terms of Reference and copies were distributed to 22 HSTLC Groups (Appendix B). The HSTLC role is to advise and support Fire **and Emergency** New Zealand when it is dealing with hazardous-chemical incidents. Generally, the committees' expertise is in dealing with spills of chemicals from a transport vehicle or at an industrial site.

2.2.4 New Zealand Police

The Police role is to:

- Act as the Incident Controller;
- Secure and manage the scene;
- Investigate the incident to determine if it is the result of a criminal or terrorist act; and
- Secure evidence for any resulting prosecution.

They have responsibility for accessing the Emergency Service Co-ordination Committees (see section 2.1.3), including advising the regional councils and territorial authorities and NZTA sub network contractors of the incident. The responsibility for subsequent action, if any, is transferred to the appropriate lead agency once that agency is ready.

2.2.5 CDEM Groups

In the event of a major incident (CDEM Levels 3 and 4, Section 2.3 this report), the initial response will follow regional Civil Defence Emergency Management Plans and be controlled by a Civil Defence Emergency Management Groups (CDEM Groups) (see section 2.1.3). Their role of these Groups is to:

- Integrate and co-ordinate civil defence emergency management planning and activity; and
- Respond to and manage the adverse effects of emergencies in their areas.

They are controlled by the Director of Civil Defence Emergency Management or the National Controller appointed under the CDEM Act during a state of national emergency.

2.2.6 Regional Council Pollution Response

Regional councils generally receive reports of pollution via a 24-hour Pollution hotline, with every call investigated by a pollution response officer. If this officer finds a pollution problem, regional councils aim to:

- Stop any discharge to the environment immediately;
- Ensure that residual pollutants are cleaned up as far as practicable;
- Collect evidence of the pollution incident;

- Advise the responsible party (the spiller) on appropriate actions to prevent the problem from reoccurring;
- Ensure that the responsible party is adequately prepared to deal with future leaks or spills by having a Spill Response Plan;
- Assess other activities/operations in order to identify any other problems that may be causing actual or potential water pollution;
- Consider the legal liability of each person and/or entity involved and potential enforcement options; and
- Where possible, seek to recover all reasonable costs associated with pollution events so that the region's ratepayers do not have to bear the cost - the polluter pays!

2.2.7 The NZTA Role

The sub networks and their position within the NZTA structure are identified in Appendix A. Contracts for state highway maintenance work managed by the sub networks specify 'levels of service' that must be achieved and include response times to events, such as emergencies arising from spillages. During an emergency situation, it is the responsibility of the contractor to carry out the physical repairs and reopen the road to the traffic as soon as practicable.

The NZTA Asset Management Manual includes a proposal for the development, extension and maintenance of a crash reporting network[3] to obtain information relating to safety on the state highway network. These contacts forming part of this network are to provide details of crashes and incidents to supplement details provided by police and maintenance contractors. This network would be important in remote areas where crashes may not be attended or recorded by police. Appropriate personnel for inclusion in the crash reporting network include:

- NZ Police;
- Emergency services such as ambulance services and the Fire **and Emergency** New Zealand;
- Service stations;
- Crash recovery and tow truck operators;
- Utilities such as telecommunications companies;
- Territorial authorities and regional councils;
- Transport companies; and
- Local residents

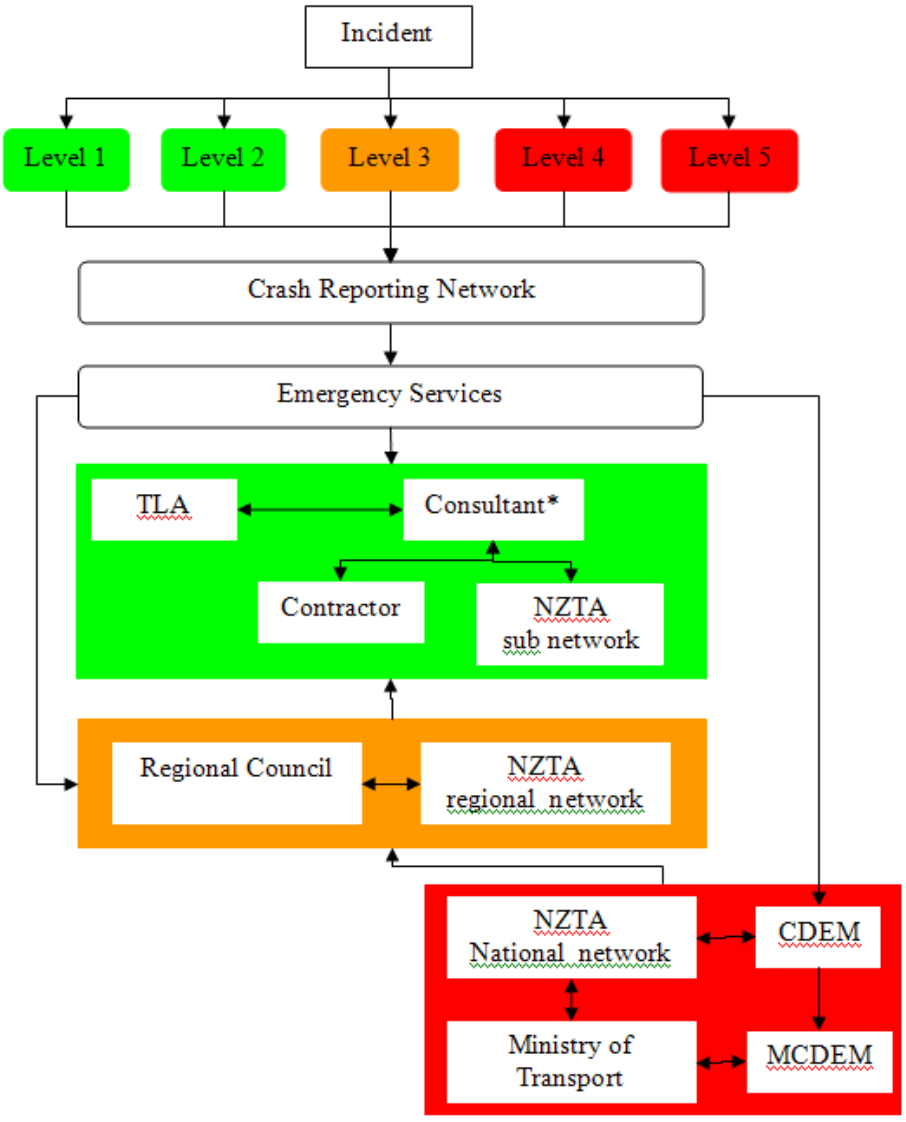
Crash data is generally collected by consultants who report to road controlling authorities for entry into the LTSA Accident Investigation System (AIS).

Initial notification of an incident may arise from the New Zealand Police or from the local crash reporting network contacting the New Zealand Police.

Although this process is primarily targeting crash incidents, it would also captures many incidents where environmentally damaging spills may result. For minimal incidents (Level 1, Table 1), the incident may not present a threat to the environment and no clean up response is required. For level 2 incidents, where environmental discharges or risks to human health arise, regional councils will become involved and NZTA may be required to undertake environmental remediation. Environmental remediation are likely to be required following higher level 3 - 5 emergencies.

[3] Section 3.4, Chapter 2; The State Highway Asset Management Manual, SM020 TNZ, Aug 2000

The interaction between the NZTA and other parties involved in emergency/spill response is illustrated in Figure 2.



* The consultants relationship and role is described in Section 3.3.1 – 7

Figure 2: Control of response to incident/emergency

2.2.8 Transport Operators

Transport operators, through industry associations, may have developed Codes of Practice (CoP) or Standard Operating Procedures (SOP) for guidance on dealing with spills. For example, the fertiliser industry has a CoP that includes the following:

- *In the event of any spillage of fertiliser products, the driver must take immediate steps to prevent any further loss, risk to other people and/or any contamination of land or waterways. The driver must:*
    - *Notify the appropriate authority (call 111) if there is a large spill*
    - *Minimise any hazard to other road users, and*

- *Ensure that no residual product remains that could pose any immediate or future threat to the environment.*

- *At the earliest opportunity, the regional authority must be advised of any spillage risks to waterways, ponds, lakes or ground water.*

An example of an SOP for the transport dangerous goods is the Tier 1 Oil Spill Response Plan required under the marine protection rules of the Maritime Transport Act 1994 for tank truck operations in port areas.

2.3 Identification of Spill Hazard

Dangerous Goods and Hazardous Substances are terms that are often used interchangeably. This is not strictly correct. Dangerous Goods are defined under the Land Transport Rule: Dangerous Goods 2005 (Part 2.1.5, this document) and include infectious and radioactive substances. Hazardous substances are defined under the HSNO and the Hazardous Substances Regulations 2001. Infectious diseases are controlled under the Health Act 1956 and radioactive substances are controlled under the Radiation Protection Act 1965, but not under the HSNO Act. Where the term dangerous goods is used in this SOP, it refers to dangerous goods as defined in the Land Transport Rule and NZS:5433: The Transport of Dangerous Goods on Land. Where the term hazardous substance is used, it refers to hazardous substances as defined in HSNO.

2.3.1 Carriage of Dangerous Goods

The carriage of Dangerous Goods on Land is regulated under the Land Transport Rule: Dangerous Goods 2005. This rule incorporates, by reference, some of the controls in NZS:5433:2007 *Transport of Dangerous Goods on Land*.

The Rule refers to classes of dangerous goods and requires that general commercial vehicles carrying hazardous substances must carry a Dangerous Goods Declaration. The classes are;

Table 2: Classes of Dangerous Goods

Class 1	Explosives
Class 2.1	Flammable gases
Class 2.2	Non-flammable and non-toxic gases
Class 2.3	Toxic gases
Class 3	Flammable liquids
Class 4.1	Flammable solids
Class 4.2	Substances liable to spontaneous combustion
Class 4.3	Substances which on contact with water emit flammable gases
Class 5.1	oxidising substances
Class 5.2	organic peroxides
Class 6.1	toxic substances
Class 6.2	infectious substances
Class 7	Radioactive material
Class 8	Corrosive substances
Class 9	Miscellaneous dangerous substances

The placarding of many vehicles carrying dangerous goods is also required under these controls. These placards contain pictograms identifying the class of dangerous goods carried. For bulk carriers, an emergency information panel is also

required. The emergency information panel (Figure 3) identifies the hazardous classification and emergency response details of the dangerous goods be carried on the vehicle.

Class 6.2, infectious substances classification, captures the carriage of portable toilet waste, septic tank effluent, grease trap waste and animal effluent under the identifier UN3373, Biological Substances Category B. Class 9, miscellaneous dangerous substances, captures environmentally hazardous substances. These substances include liquids or solids that are pollutants to the aquatic environment and solutions and mixtures of such substances (such as preparations and wastes). HSNO Class 9.1 substances (for example pesticides, herbicides, and insecticides) are included in this dangerous goods classification.

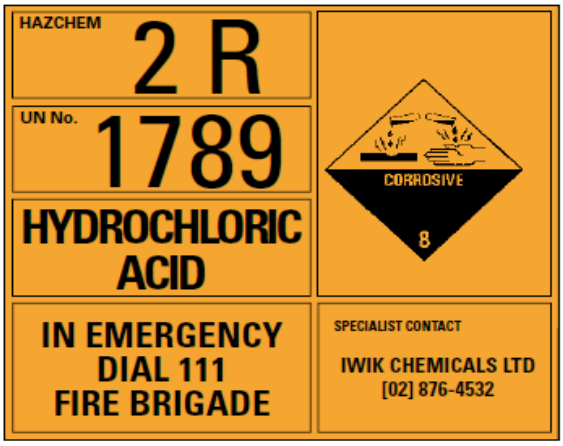


Figure 3: Dangerous Goods Placard Example[4]

This information provides detail required by the emergency services to identify the hazardous properties of the material carried and the response required in dealing with spillages. The pictogram gives the hazardous substance classification. The emergency information gives the UN No. identifier, contact details and the HAZCHEM Emergency Code (2R in Figure 3). The HAZCHEM code advises on:

- Firefighting media;
- Personal protection requirements;
- Risk of violent reaction;
- Spillage handling; and
- Evacuation consideration

The code interpretation, given in Figure 4, provides immediate information that emergency services should carry out firefighting with fine spray and use liquid tight chemical suits with breathing apparatus, and that washing to drain with large quantities of water is a suitable initial response. Note that any placards containing the letters W, X, Y or Z in the HAZCHEM code refer to dangerous goods which require containment by any means possible to prevent discharge into drains or water courses.

This information is used by the Fire **and Emergency** New Zealand in their initial response to transport accidents involving the carriage of dangerous goods and in reporting spills of hazardous substances to EPA . It is also reported to the NZTA contractors to inform them on what remedial action may be required to seek to ensure environmental protection after an incident.

[4] From SNZ HB76:2008 Dangerous Goods initial Emergency Response Guide.

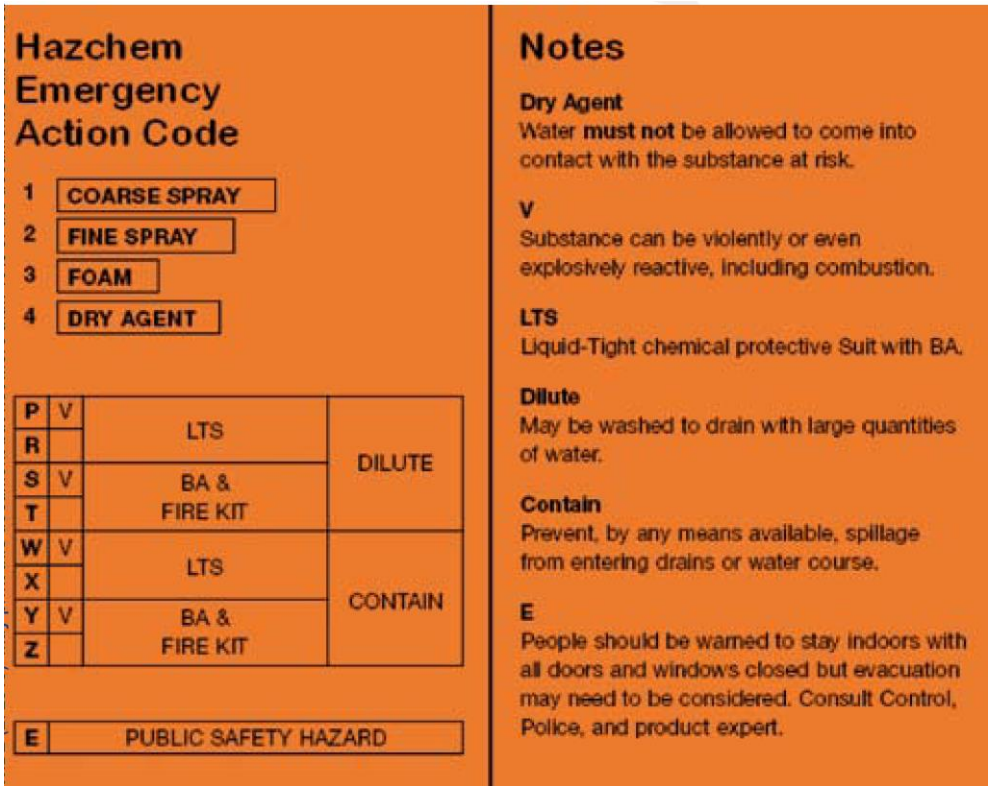


Figure 4: HAZCHEM Code: Interpretation of Emergency Action[5]

NZS 5433 incorporates by reference the SNZ HB76: 2008 *Dangerous Goods Emergency Response Guide*. This guide provides initial emergency response guidance and requires that the NZ Police and Fire **and Emergency** New Zealand be contacted for spills involving dangerous goods. A template contact form provided in this guide is included in Appendix F to this SOP.

2.3.2 Carriage of Other Goods

Substances we usually consider harmless, for instance food, building materials, fertilisers and even clean top soil can have disastrous and deadly effects on delicately balanced ecological systems. For example, aquatic species can be threatened by spills of:

- Fine silty materials, such as sands and soils, that increase sediment deposition in water bodies;
- Cement related products that can make receiving water alkaline;
- Milk that can reduce the oxygen content of water; and
- Fertilisers and stock effluent that can increase the level of nutrients in water, promoting aquatic weed growth;

The crash reporting network will capture most spillages of this nature and the NZTA sub-network will respond accordingly

2.4 Transport Leaks

Faulty valves and access ports, and poorly secured containers, on commercial vehicles frequently result in material being spread over many kilometres of road. The Commercial Vehicle Investigation Unit (CVIU) of the New Zealand Police has reported load security offences being identified in up to 8% of roadside commercial vehicle inspections over the period 2004

[5] From SNZ HB76:2008 Dangerous Goods initial Emergency Response Guide

– 2008[6], but the CVIU data provides no detail of the type of load being carried. Many such incidents remain unreported and do not trigger an immediate spill response. Material damage and health impacts can be severe.

Other incidents, such as spills of effluent from stock trucks, although generally not permitted under regional plans, also remain difficult to control.

2.5 Spills recorded

The New Zealand Fire service road transport incident records for the period 2003 – 2008[7] are summarised in Tables 3 and 4.

Table 3: Freight - Road Transport Fire Incidents

	07/08	06/07	05/06	04/05	03/04
Truck: One tonne and over	123	87	90	109	92
Light truck: Under one tonne	80	77	76	76	79
Semitrailer	37	17	25	22	41
Tanker: Non-flammable goods	4	6	-	7	-
Tanker: Flammable combustible goods	5	6	3	6	3
Car trailer	23	14	16	13	22
Freight road transport vehicle - not classified above	15	9	16	19	10
Freight - Road Transport Total Fire incidents	287	216	226	252	247
Waste container, Bin, Compacter, Dumper	4	9	2	7	7

Table 4: Freight - Road Transport Non-fire Incidents Involving Hazardous Substance Spills

	07/08	06/07	05/06	04/05	03/04
Gas, Liquid spill: Vehicle accident	237	250	274	315	338
Gas, Liquid spill: No vehicle accident	193	177	129	155	157
Gas, liquid spill: Incorrect vehicle loading	12	18	13	18	20
Chemical spill: Vehicle accident	13	13	15	21	15
Chemical spill: Incorrect vehicle loading	4	11	10	6	14
Mobile property hazardous incident - not classified above	15	21	37	42	42
Total hazardous spill incidents	474	490	478	557	586
Mobile property accident: No hazardous substance spill	1713	1,624	1,323	1,353	1,612

[6] 2009/2010 Road Policing Programme, NZ Police

[7] Emergency Incident Statistics 2007 – 2008, New Zealand Fire Service 2009 (ISSN 1171-638X)

Chapter 3 Spill Response

3.1 Spill Control

Under Section 330 RMA the NZTA may undertake emergency works, preventive and remedial action without first obtaining consents that would normally be required under regional or district plan rules. (Section 2.1.4).

The potential causes of spills arising from the transport of hazardous substances on the state highway network include:

- ***Insecure loads:*** Insecure loads can result in the rupture of containers by their toppling or striking infrastructure such as bridges and retaining walls;
- ***Handling incidents:*** Handling incidents include spills from material transfer and impact damage resulting in the rupture of containers (e.g. dropping, puncturing with lifting gear);
- ***Unstable containment:*** Spills may arise from leaking transfer lines, insecure seals and uncovered loads;
- ***Chemical reaction:*** Incompatible substances mixed in transport containers can result in fires, explosions and pressure damage to seals and transfer lines;
- ***Vandalism;***
- ***Fire;***
- ***Road Crashes;*** *and*
- ***Natural hazards (earthquakes. major storms etc.):*** Natural hazards can result in many of the potential spill sources and risks listed above.

3.2 Incident types

Any spill (of solid or liquid product) that has, or may have, entered, or is at risk of entering, the ground and/or groundwater, a stormwater system, a waterway, or coastal water must be notified to the regional council (the environmental regulator). There are three categories of spill:

- A spill that can be contained within a confined area and cleaned up by the spiller and initial response team;
- A spill that cannot be contained in a confined area by the initial response team, but can still be controlled and cleaned up with the assistance of the NZTA sub-network contractors; and
- A spill that cannot be contained in a confined area, and cannot be cleaned up without significant external resources. Such spills may pose threats to personnel and local resources and require regional and/or central government control.

The incident controller (generally the NZ Police or Fire **and Emergency** New Zealand) must assume responsibility for assessing the need for outside assistance in dealing with spills. The environmental regulator can provide guidance on this requirement. Pollution hot lines for Regional Councils are given in Appendix C.

3.3 Discovery and first response

The intention is that the person who discovers a crash or incident involving spills on the state highway network will notify the crash reporting network, who in turn will call in the required emergency services. The initial responder to such incidents, generally emergency services of the police and FENZ will attend to their personnel, crash victims and community health and safety as a priority.

The NZP provide communications, traffic control and diversions, coordination of victim evacuation and vehicle recovery for road crash incidents. Serious accidents require a detailed scene examination to assist with a reconstruction of events leading up to the accident, which can result in significant traffic disruption.

The identification information required to be carried on vehicles carrying dangerous goods (Section 2.4.1) provides FENZ with information as to the appropriate immediate response actions. This is backed up by a centralised FENZ hazardous substances data base that allows rapid confirmation of the identity of chemicals, the hazards posed by them, and appropriate

health and safety protection for FENZ personnel and provides information on containment and clean-up. In the event of material spillage from a crash incident, FENZ will:

- Identify the type of substance spilled;
- If safe to do so, take immediate steps to contain the spillage and protect stormwater by:
    - blocking access to stormwater systems or unpaved ground using drain covers, sandbags, booms or other materials as appropriate for the spill;
    - containing liquid spills with suitable material so they cannot spread; and
    - covering powder spills to stop them blowing around, or dampen them where it is safe to do so.
- Report the spill to their control base.

Climatic and geographic conditions may have a significant effect on the initial response.

3.4 Material recovery

Bulk spill material can usually be contained at the point of spillage for recovery by the spiller or by contractors with equipment ranging from hand tools to vacuum tankers. For example:

- Oil spills to water bodies may be able to be recovered by pumping the oil/water mix to an oil water separator;
- Solid materials such as fertilisers spilt to land can often simply be recovered by excavation and placing in a contained system; and
- Insoluble solid materials such as sand spilt to water bodies may be able to be recovered by dredging;

Spills of soluble substances to water bodies are not easily recoverable. If they can be contained by barriers in a ditch or drain, the contaminated water may be able to be recovered by vacuum tanker for treatment and disposal at a consented disposal system.

3.5 Residual contamination

Any residues that cannot readily be recovered can harm land and water by soaking into the ground and slowly seeping or being washed by rain into a nearby water body or the coastal marine area. At this stage, NZTA, through their sub-network contractors, will normally have assumed control of any clean up and remedial action required to mitigate any adverse environmental effects from the spill. However, under section 341(2) RMA, the spiller may wish to assume this responsibility in order to establish one element of the defence to a prosecution by demonstrating that their actions have adequately mitigated or remedied the adverse effects of the spill event.

3.6 Risk Assessment

FENZ has resources for hazard identification and risk management for immediate response to spills of dangerous goods (Part 2.4). However, residual risks are likely to remain at the spill scene once the initial response is completed and site reinstatement is generally undertaken by the NZTA. These residual risks arise from soils and surface waters contaminated with hazardous substances and environmentally harmful substances, and their potential toxic and eco-toxic effects on human health and ecosystems.

The principal modes of human exposure to contaminants are ingestion, inhalation and skin contact. These can occur through:

- Ingestion of contaminated soil;
- Ingestion of contaminated water;
- Inhalation of gaseous and dust-borne contaminants; and
- Skin absorption through contact with soil.
- Ecosystem exposure arises in:
- The aquatic environment;

- The soil (subsurface) environment; and
- The terrestrial (surface) environment.

Contaminants vary greatly in their ability to cause health effects, from those that are highly toxic to those with no known health effects, making contaminant specific risk assessment beyond the scope of this SOP.

The risk of exposure to residual contaminants after a spill of hazardous substances can be addressed by reference to environmental guideline values (EGV). These guideline values have been derived in a number of jurisdictions and in New Zealand are provided in the Ministry for the Environment's *Contaminated Land Management Guideline No.2: Hierarchy and Application in New Zealand of Environmental Guideline Values* (2007).

Risk based human health guideline values for hazardous substances and dangerous goods have been derived from tolerable daily intakes (TDI) or cancer risk for contaminants. For cancer, a risk level of $1x10^{-5}$ is used. This risk level indicates that exposure to contaminant concentrations at the guideline value may result in one additional cancer in 100,000 people. EGVs are in place for a range of land uses for both human health and ecological receptors. From these risk based EGVs, the level of contamination can be assessed and appropriate management controls put in place under the resource consent requirements in regional and district plans to protect human health and the environment. Any assessment and management of the risk must also include assessment and management of the risks to road maintenance workers.

Substances that are not classified as hazardous substances or dangerous goods can also pose environmental hazards. Soluble foods and fertilisers can pollute waterways by increasing nutrient levels, promoting aquatic weed growth and modifying aquatic environments. Sediments arising from building materials (sand) and wastes (excess soils) also adversely modify aquatic environments.

Chapter 4 Procedures for residual spill clean-up

4.1 Crash Scenes and Point Source Loss of Containment

The NZP will advise the NZTA sub-networks of road crashes and point source losses of containment of materials, where a "point source loss" is the discharge of the consignment in a limited area. NZTA contractors will respond by assisting the initial emergency service response and ensuring that the affected area (the asset) is restoring the to a safe and sustainable condition. The following process will be followed:

- The crash will be reported to the emergency service providers (the NZP and FENZ)
- The FENZ will determine if the crash;
    - involves hazardous substances;
    - involves environmentally harmful substances; or
    - does not involve either of the above
- If hazardous substances are involved the HSTLC can provide:
    - Advice on hazardous substance emergency response; and
    - Contacts for other agency and network response under Civil Defence Emergency management
- The NZP will contact call out services of the NZTA, territorial authorities and regional councils;
- The FENZ will take immediate steps to contain spilt material;
- NZTA network contractors will supply immediate support (machines, vacuum tankers, back up spill control equipment), in consultation with the territorial authority, the regional council and, in significant incidents, the HSTLC, to the FENZ;
- If no hazardous or environmentally harmful substances are involved, the NZTA contractor will start any actions required to ensure restoration of the asset;
- If further clean-up is required after the initial response to a spill of hazardous or environmentally harmful substances, and the NZTA is undertaking the clean-up:
    - the NZTA's consultant or contractor will submit a clean-up plan to the territorial authority and regional council for their approval before commencing any clean-up work;
- If earthworks are required, sediment control will be required in the clean-up plan and territorial authorities and regional councils must be consulted on any resource consent issues relating to earthworks and the discharge of contaminants;
- On resolution of any consent requirements and approval of the clean-up plan, the NZTA contractor shall commence restoration of the asset;
- On completion of the restoration, a report validating the clean-up action shall be submitted to the regional council.
- On acceptance of the site restoration by the regional council, NZTA shall conduct a review of the incident, including the sub-network, their consultant and contractor and centrally record the results to provide data from which future responses can be refined.
- If the incident that results in a requirement for clean-up can be assigned to a fault of a known party, the NZTA may seek to recover the costs, including any consenting costs, from that party

A flow diagram for crash and point source spill response is given in Appendix D.

4.2 Diffuse Loss of Containment

Diffuse loss of containment of a consignment can spill material over wide areas. Such spills are less likely to be reported by the mechanisms described in Section 3.3.1. However, they are likely to become apparent to territorial authorities and

regional councils from community reporting and to the NZTA by contractor reporting. Transport operator reporting, while required for hazardous substances under land transport rules, is unlikely to report diffuse spillages of environmentally harmful substances. The NZTA response to such spills will generally be reactive to territorial authority and regional council notification.

The following process will be followed:

- The pollution control team of the regional council or Health Protection unit of the territorial authority will respond to incident reporting from the community, road maintenance contractors and/or transport operators and brief the NZTA;
- The NZTA will identify whether there spill involves hazardous substances or dangerous goods and whether any environmental harm has been caused by the spill;
- If no hazardous substances, dangerous goods or environmentally harmful substances are involved, the NZTA contractor will start any actions required to restore the asset;
- If hazardous substances, dangerous goods or environmentally harmful substances are involved further clean-up is required after the initial response to any spill. Such clean-up will be subject to compliance with district and regional plan contaminated land rules and consents may be required. The NZTA's consultant or contractor will submit a clean-up plan to the territorial authority and regional council for their approval and apply for any consents required before commencing any clean-up work;
- For widely dispersed spills, contaminant concentrations in soils and water will be lower than for point source spills. Earthworks are less likely to be required for clean-up.
- On approval of the clean-up plan, the NZTA contractor shall commence restoration of the asset;
- On completion of the restoration, a report validating the clean-up action shall be submitted to the regional council.
- On acceptance of the site restoration by the regional council, NZTA shall conduct a review of the incident, including the sub-network, their consultant and contractor and centrally record the results to provide data from which future responses can be refined.

A flow diagram for diffuse source spill response is given in Appendix E.

4.3 Consent Issues

The NZTA response to spill incidents is required to address any consenting issues arising from provisions of regional and district plan rules. The NZTA will consult with the regional council and territorial authority to establish whether any clean-up activities require consent under the regional or district plan..

If the NZTA response requires ground disturbance, district plan rules may require land use consents for vegetation alteration or removal, earthworks, the creation of impermeable surfaces, and works to affected buildings. Regional plan rules may require consent for earthworks, vegetation alteration or removal, and discharges arising during clean up, The details required for applications for consent for earthworks generally include the volume of earthworks, number of vehicle movements, duration of works and erosion and sediment control methods. Illegal earthworks (i.e. earthworks undertaken without resource consent where a resource consent should have been obtained) can result in a prosecution under the RMA.

4.4 Spill Clean-up Plan

The site clean-up plan will be site specific and prepared by the NZTA sub-network or their consultant. The content of the plan may be subject to rules contained in district and regional plans.

The plan should generally include the following elements:

- Identification of the spill site, including:
- Road name;
- Land title; and
- Map grid (NZTM)

- Summary details of the spill incident including the identification of the spilt material and any hazardous, dangerous or environmentally harmful properties;
- An estimate of the amount of material spilt and the amount of residual contamination in soil and water;
- Procedures for cleaning up or containing the residual contamination to mitigate any ongoing contaminant discharge to waterways, groundwater or coastal water;
- Target contamination levels for any contaminant levels remaining in soils and water following clean-up;
- A requirement to provide a record of the disposal of contaminated material to treatment/disposal sites that are consented to accept them;
- A requirement to provide a report validating the effectiveness of the clean-up; and
- The provision of a review template with instructions for completion and forwarding to central record keeping.

Depending on the severity of the spill, technical input may be required to determine the contaminant risk by quantifying contaminant concentrations in soil and water samples and assessing these against accepted human health and environmental protection criteria. Territorial authorities and regional councils will provide advice on the need for such input.

The Ministry for the Environment has also prepared a Contaminated Land Management Guideline Series.

4.5 Review and recording

This SOP seeks to meet the targets set out in *Part 1.2: Objectives.* Monitoring and reviewing the effectiveness of the NZTA in achieving these targets and the SOP as a whole is necessary to determine if its objectives are being met. Monitoring and reviewing will occur at the following levels:

- Completion of spill response records by the NZTA sub-network linked to the Land Transport Safety Authorities Crash Analysis System and Road Asset Maintenance Management (RAMM) system[8];
- Reporting to the NZTA CEO on progress being made on achieving targets; and
- Updating of the SOP as required, addressing deficiencies or gaps to ensure that relevant matters are covered and unintended consequences are addressed.

A template for sub-network spill response records is provided in Appendix F.

4.6 Preparedness

Other measures include advance preparation in case of emergency – such as :

- Where practicable and affordable the provision of sustainably designed stormwater controls – swales, wetlands, detention ponds and other treatment devices to provide in place treatment and containment systems if a spill occurs;
- A maintenance programme for these devices with specific attention to their ability to mitigate the impact of spill events;
- Repair or replacement of these devices if they are severely impacted by spill incidents;
- Spill response equipment being stored on or near critical routes, particularly where they intersect with sensitive waterway areas;
- Maintenance of communication links with other agencies – the HSTLCs provide an existing nationwide network to achieve this (Appendix B);
- Participation in Civil Defence exercises – again the HSTLC provides good links for achieving this.

These measures should be proportional to any potential risk and common sense suggests that emergency response experience would give guidance in achieving sustainable outcomes.

[8] Section 7.3, Chapter 1; The State Highway Asset Management Manual, SM020 TNZ, Aug 2000

4.7 Training

Regional councils, under their CDEM, provide training for civil defence purposes. Training content and delivery will be consistent with Ministry courses or meet relevant tertiary or New Zealand Qualifications Authority (NZQA) standards. Training content will wherever possible be multi-agency and multidisciplinary. Exercises also play an important role in moulding and adjusting readiness activities and will be undertaken on a regular basis. Exercises also allow plans and SOPs to be tested and potential gaps and overlaps to be identified. Exercises will involve all CDEM Group members and will include Strategic Stakeholders (see Section 2.1.3)where and when opportunities arise. The benefits of joint exercises involving a multi-agency, multi-disciplinary approach will be realised wherever possible. NZTA shall develop links with the regional CDEM and require that sub-networks, their consultants and subcontractors participate in available training and exercises as required.

The NZTA consultant's role in data recording of road crashes is described in Section 3 of the SMO20 TNZ[9] The consultancy staff must be suitably trained, competent and experienced to undertake safety inspections, audit and crash analyses. There is no requirement for the consultant to have competence in dangerous goods, hazardous substances or spillages.

[9] The State Highway Asset Management Manual, SM020 TNZ, Aug 2000

Regional Hazardous Substances' Technical Liaison Committees

This list can be updated through the Fire and Emergency NZ. The contact at the date of this report is Dick Thornton-Grimes, (09) 302 5173; 0274 404 424.

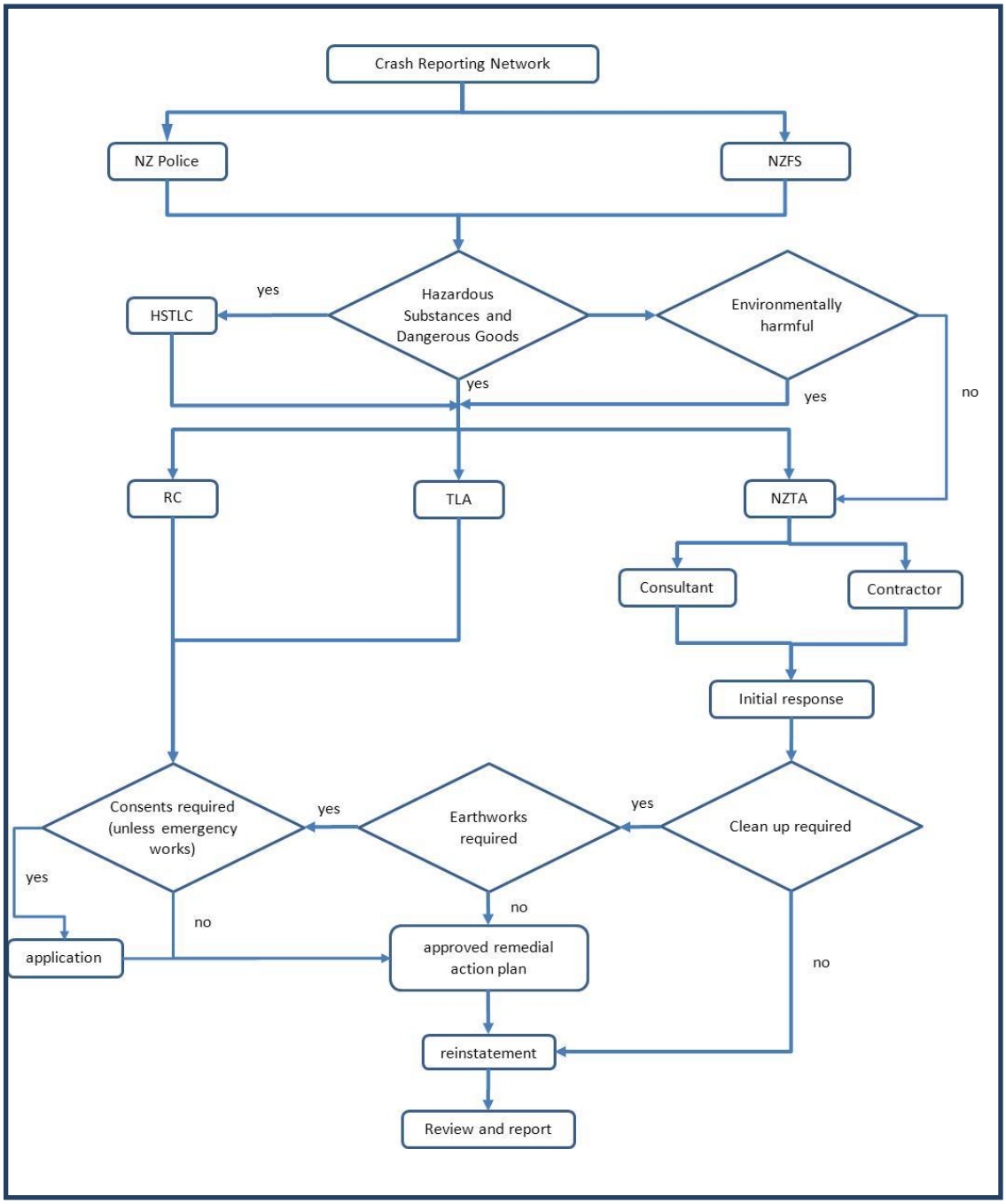
Location	Meeting frequency	Fire and Emergency New Zealand representative
Gisborne	Reforming	Stu Law
Dunedin (with satellite groups in Oamaru, Queenstown, Alexandra and Balclutha, Invercargill)	Two-monthly	Dave Seque Peter Burtonwood Barry Gibson
Whangarei		Craig Bain
Auckland	Three-monthly	Dick Thornton-Grimes
Napier/Hastings	Six-monthly	Ray Brown
Horizons Region Council (Ruapehu, Rangitikei, Wanganui, Manawatu, Palmerston North, Horowhenua, Tararua)	Six-weekly	Mitch Brown
Taranaki	2–3 months	Pat Fitzell
Wellington region	Three or four times a year	Peter Dempsey
Wairarapa/Masterton	Twice year (EMG)	Henry Stechman
Marlborough	Twice a year	Rob Dalton
Nelson/Tasman	Twice a year	Graeme Daikee/Brian Lucas
Canterbury South Canterbury (Timaru) Greymouth	Annually	Steve Barclay Artie Lind/Kevin Collins Dave Hyde/Mark Thomas
Rotorua	Twice yearly	Wayne Bedford
Tauranga/Kawerau	Quarterly	Ron Devlin
Waikato	Irregularly	Roy Breeze
Thames	Irregularly	Martin Berryman
Taupo		Charlie Turei

Agency	Coverage	Contact name	Telephone
National Poisons Centre	National		0800 764 766
National Radiation laboratory	National		03 366 5059
NZCIC CHEMCALL Emergency Response	National		0800 243 622
New Zealand Police	National	Superintendent Steve Christian	(04) 463 4432

Agency	Coverage	Contact name	Telephone
Fire and Emergency New Zealand	National	Bryan Davey Jim Stuart-Black	(04) 496 3600
Regional Councils	Northland Regional Council		0800 504 639
	Auckland Regional Council		09 377 3107
	Environment Waikato		0800 800 401 (not a pollution hotline)
	Environment Bay of Plenty		0800 73 83 93
	Taranaki Regional Council		0800 736 222
	Gisborne		
	Hawkes Bay Regional Council		0800 108 838
	Horizons Regional Council		Freephone 0508 800 800 and ask for Pollution Hotline
	Greater Wellington Regional Council		04 384 5708
	Tasman		No 24 line listed on web site. Call local office for connection
	Marlborough		None specifically listed
	Environment Canterbury		03 366 4663
	West Coast Regional Council		03 768 0466 (not a pollution hotline)
	Otago Regional Council		0800 800 033
	Environment Southland		(03) 211 5225
	Chatham Islands		03 305-0033 or 03 305-0034 (not a pollution hotline). After hours: 03 305 0149 (not an pollution hotline)

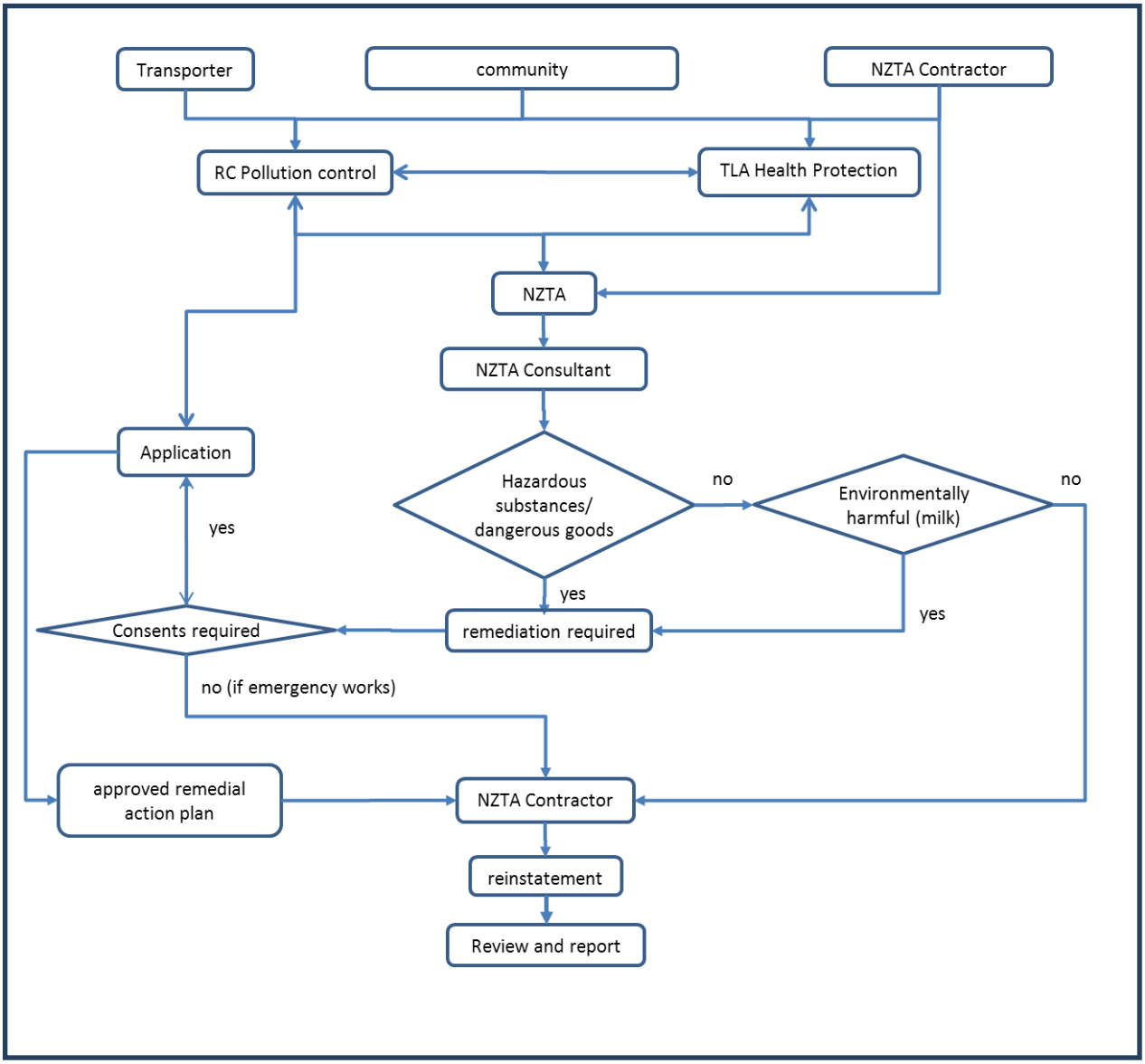
Spill clean-up: Procedural flow diagram for crash and point source response

To be read with reference to Section 3.3.1



Spill clean-up: Procedural flow diagram for diffuse source response

To be read with reference to Section 3.3.2.



Chapter 5 Forms

Initial incident response form (from SNZ HB76: 2008 *Dangerous Goods Emergency Response Guide)*

Dangerous Goods Incident Report Form

This form is to be filled out for ANY hazardous substance spill or leak and to be sent to the relevant enforcement agency

Location .....

Date .....

☐ Leak/Spill in transit ☐ Leak/Spill during loading ☐ Leak/Spill during unloading

PRODUCT NAME.....
CLASS.....
UN NO. .....
PACK SIZE.....
PACK TYPE.....
QUANTITY.....

INCIDENT DESCRIPTION.....
.....
.....
.....

WHO IS AT THE SCENE

	At Scene	Called	ETA	Contact Name
Fire Brigade	☐	☐	.....	.....
Police	☐	☐	.....	.....
Ambulance	☐	☐	.....	.....
District Health Board	☐	☐	.....	.....
Department of Labour Inspector	☐	☐	.....	.....
Clean-Up Contractor	☐	☐	.....	.....

Name..... ..... Signature.....

Spill response record

Response and debriefing record

FROM:		
TO:		
DATE:		
SUBJECT:		
REPORT		
Date of event:		
Location of spill:		
Point source or diffuse		
Climatic conditions at time of spill		
Materials spilt		
Amount(s) spilt		
Cause of spill		
Did any material escape off site? If yes, where to?		
What environmental or other effects resulted?		
Action taken:		
Who detected the spill and what did they do?		
Who else on the staff was notified and what did they do?		
Other agency response		
Were there any other agencies involved in the event? If yes, please list and describe their role.	Fire and Emergency NZ	
	NZ Police	
	Territorial Local Authority	
	Regional Council	
	Towing company	

other	

Injury report	
Were there any injuries?	Yes/no (please circle one)
Cross reference to:	
Costs report	
Estimate costs of staff down time for clean-up and other response:	
External clean-up costs:	
Disposal costs:	
Any other costs (e.g. Value of lost product):	
Incident review	
What was done well?	
What wasn't done that should have been done?	
What was done wrong or could have been done better?	
What non-compliance caused the incident?	
Prevention	
Discuss any changes needed to prevent similar incidents in future:	
Spill emission procedures	
Equipment	
Staff training	
Drains or structures	
Housekeeping practices	
Site management systems	
Standard operating procedures	
Other things to prevent a similar event	

FUTURE RESPONSE
Have spill control and safety supplies been topped up?
Have staff been debriefed, and if necessary, re-trained?
Other recommendations
Further action
Actions, timing, responsibility, budget, completion, review