PORT OF TAURANGA

Port for the Future

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Dangerous Goods & Hazardous Substances Code of Practice

Document Controller: Terminal Shipping and Planning Manager
Version 11

Revised August 2018

1 BACKGROUND

The Port of Tauranga is the gateway for large volumes of hazardous substances either used in, or exported from, the Bay of Plenty (BOP) region.

The Port of Tauranga Limited has two separate wharf areas as well as the MetroPort operation. These procedures relate to the Tauranga Terminal located at Sulphur Point, the general wharves at Mount Maunganui as well as MetroPort, Onehunga. There are large volumes of cargoes exported and imported that fall under the hazardous substances classification. These are both break bulk (petroleum products and fertilisers) as well as containerised.

These cargoes would present a risk to people, property and the environment if damaged, spilt or ignited.

Their safe and proper management is important. The purpose of this Code of Practice is to provide information on means of compliance with relevant legislation, and guidelines for industrial best practice while facilitating the movement of cargo.
To look at the relevant legislation it is necessary to define a “transit depot” and a “transfer site”. This is important as it enables us to keep hazardous substances without some of the responsibilities that are applicable under legislation, refer to Glossary, Section 14.

2 TERMINOLOGY “HAZARDOUS SUBSTANCES” AND “DANGEROUS GOODS”

Hazardous Substance is the term used for all hazardous materials whether they are being transported or not. The Hazardous Substances and New Organisms (HSNO) Act covers all substances which have a real hazard based on long term exposure, or any form of environmental hazard.

Dangerous Goods is the term for substances being transported or stored and covers a narrower range of items. The criteria are based on a hazard which is real during the period a substance would normally be transported or stored.

The term "Dangerous Goods" will be used for all items of sea freight cargo which are hazardous within the meaning of the International Maritime Goods (IMDG) Code.

3 LEGISLATION

At the current revision date of this manual, the following legislation applies to the management of hazardous substances and dangerous goods in the Port of Tauranga Limited.

3.1 Hazardous Substances & New Organisms (HSNO) Act

This is the primary legislation, enacted in 1996. It creates the Environmental Protection Agency (EPA), which becomes the agency responsible for the legislation. Port of Tauranga Ltd is concerned mainly with the Hazardous Substances portion of the legislation.

The Act is being progressively implemented by means of Regulations issued under its powers.

A number of previous regulations under older Acts were maintained in force until they were replaced by new regulations issued under HSNO. The HSNO regulations have now

been gazetted and sites previously licensed are being progressively transferred to compliance under the new legislation.

The following Regulations have been issued and have some effect on the responsibilities of Port of Tauranga Ltd.

3.2 Hazardous Substances (Classification) Regulations

These define the classes of hazard assigned to substances. The IMDG Code classification is practically the same, uses similar terminology and for all practical purposes the New Zealand categories match the cargo definitions which staff will encounter. The HSNO Act has additional classifications which may regulate storage but which do not regulate transport.

3.3 Hazardous Substances (Classes 1 to 5 Controls) Regulations

"Controls" are the basis of safety procedures for all Hazardous Substances. This Regulation defines the manner of labelling, storage, handling, transport and any other action necessary for safe management of the substance. Substances will be progressively transferred into the cover of this Regulation, at which time the defined controls will apply.

The retail and distribution packaging of Hazardous Substances are defined. Note that this does not cover shipping containers etc.

3.4 Hazardous Substances (Tracking) Regulations

Certain defined substances (mainly explosives and very hazardous materials including all toxic substances which are regulated for transport) must have their quantity, location and movement continually recorded by their "approved handlers". This requirement commences at the uplifting of the product by the importer [Regulation 4 (2)]. The current interpretation is that there is no responsibility on the Port of Tauranga Ltd to perform this role, as the intent of the Regulation is achieved by the shipping documents process. The detailed IMDG Code requirements, cargo stowage data, and DG data retrieval systems in operation at Port of Tauranga Ltd provide the same information as the Regulations would require. Records are kept of Hazardous Substances while they are within port limits.

3.5 Hazardous Substances (Classes 6, 8 and 9 Controls) Regulations

"Controls" are the basis of safety procedures for all Hazardous Substances. This Regulation will apply controls to the Toxic, Corrosive and Eco-Toxic substances and define the manner of labelling, storage, handling, transport and any other action necessary for safe management. Substances are being progressively transferred into the cover of this Regulation, and eventually the defined controls will apply to all substances.

3.6 Hazardous Substances (Disposal) Regulations

These regulations define rules for the safe disposal or modification of Hazardous Substances. It must be noted that "washing away" is never an acceptable method of disposal and Port of Tauranga Ltd staff will always consult and follow proper procedures in any disposal.

3.7 Hazardous Substances and New Organisms (Personnel Qualifications) Regulations

These define the "Approved Handlers" required for many Hazardous Substances. Persons in charge of Dangerous Goods handling will be required to hold appropriate qualifications for the transit of consignments of certain defined Hazardous Substances. At the Tauranga Terminal this will be the on duty Supervisor or the Rail Person. For the Mount Maunganui general wharves it will be a dedicated person from the stevedoring company concerned. This will be an approval to handle the substance “for transit storage purposes” rather than for actually working with the substances.

3.8 Hazardous Substance (Emergency Management) Regulations

Any place at which Hazardous Substances are present must have rapidly available information about them, must have appropriate fire extinguishers available for flammable materials, and must have secondary containment for possible liquid spillages and emergency response plans for incidents involving them.

Port of Tauranga Ltd complies with these provisions where relevant cargoes are managed, and maintains emergency plans for various scenarios of emergency.

3.9 Maritime Transport Act

This is the principal law covering ships, seafarers and ports. The detail of the Act is enforced through *Maritime Rules*, which have many parts. Regarding Hazardous Substances, the principal parts which affect Port of Tauranga Ltd are as below.

3.10 Maritime Rules, Part 24A, Carriage of Cargoes, Dangerous Goods

Part 24A gives effect to Chapter VII of the SOLAS 74 convention and enforces the IMDG Code to be followed in New Zealand.

There are requirements for reporting of spillages and incidents, for ports to have emergency plans and to exercise them and for persons handling or transporting Dangerous Goods to be appropriately trained.

3.11 Maritime Rules, Part 130B, Oil Transfer Site, Marine Oil Spill Contingency Plans

(Tier 1 Plan)
Part 130B requires the Port of Tauranga Ltd to define the risks, assess effects and prepare a plan for a "Tier 1" Oil Spill, and to assist other agencies in the event of a more serious "Tier 2” or “Tier 3" event.

A Tier 1 *Oil Spill Contingency Plan* has been prepared by Port of Tauranga Ltd and approved by the BOP Regional Council acting as authorised agent for MSA. This plan includes Codes of Practice for pipeline and road tanker transfer of Dangerous Goods to and from vessels.

Details of response and clean up strategies for oil pollution are contained in the ENVIRONMENT BOP TIER II OIL SPILL CONTINGENCY PLAN. This comprehensive plan is maintained by Environment BOP and is available at the following places within the port areas:

Customer Service Centre / Butters

3.11.1 Reporting Oil Spills / Pollution

(a) By Telephone

All reports of oil spills/pollution within the Tauranga Harbour limits are to be directed to the Harbourmaster.

Harbourmaster	Ph:	0800 368 267 Mob: 021 976 178
Duty Harbourmaster 24 Hours	Ph:	(07) 928 3385
BOP Pollution Hot Line	Ph:	0800 738 393
Port of Tauranga Limited Customer Service Centre (24 Hours)	Ph:	(07) 572 8888

(b) By Radio

All reports from shipping or marine radio are to be directed through Customer Service Centre (Tauranga Port Radio).

VHF Channel 16 or 12

3.11.2 Equipment and Personnel

Oil pollution clean-up equipment is maintained at various places within the port area. In the event of an oil spill personnel will be drawn from various organisations to make up a response team. Details of equipment and personnel call out routines are contained in the Tauranga Harbour Oil Pollution Response Plan.

3.12 Bay of Plenty Regional Navigation and Safety Bylaws 23 September 2004

3.12.1 Explosives Anchorage

There are no facilities for vessels with explosives to anchor other than in the Roadstead position 3. Defined as 37◦ 38.3 S 176◦ 16.9 E.

3.12.2 Prohibited Anchorages

The Master of any vessel in any harbour or anchorage having on board, or intending to load or discharge explosives must hoist on the vessel a Flag B by day and a red light by night.

The Master of any vessel in any harbour or anchorage, or the Pilot, must not allow that vessel to approach within 200 metres of any other vessel that is carrying or loading explosives, except:

- With the written permission of the Harbourmaster; or
- For the purpose of loading or unloading that other vessel; or
- For the purpose of rendering assistance to that other vessel in an emergency.
- For the purpose of navigating the vessel in the normal process of berthing or unberthing.

3.12.3 Duties of Tanker Master

While in a harbour, (Tanker Berth 16) the Master of an oil tanker must operate in accordance with the International Safety Guide for Oil Tankers and Terminals (ISGOTT).

3.13 Technical Liaison Committee

There is an agreement between the MSA, Police, NZ Fire Service, the Harbourmaster and Environmental BOP. They have formed the Hazardous Substances Technical Liaison Committee.

Port of Tauranga Ltd undertakes to maintain emergency plans, communicate these to emergency services, as well as to exercise and review the plans. Port of Tauranga Ltd undertakes to work co-operatively with other parties to ensure safe operations and proper management of emergencies.

3.14 Code of Practice for Handling of Class 1 and Class 5.1 Goods in the Port of Tauranga

Protocols have been developed for the handling of Class 1 and Class 5.1 within the Port. Limits for class 1 have been established at varying levels for different berths. Refer to 8.1 for limits. Class 5.1 (Ammonium Nitrate) limits are identified in Section 10.

3.15 Hazardous Substance Location Test Certificate

The Port has a Location Test Certificate for the storage of Class 5.1 only. Transit Depot rules to be followed for Class 2.1, 3, 4.1, 4.2 and 4.3 consignments.

3.16 Resource Management Act (RMA)

This major legislation protects the soil, water and air in which Port of Tauranga Ltd operates. Resource Consents to construct and operate wharves and carry on the business of the Ports are subject to environmental protection conditions and continuing safe operating practices detailed in those consents. Breaches of those conditions, or events, which release Dangerous Goods into the environment, constitute serious offences under the RMA and can lead to serious penalties or loss of the consent.

4 THE INTERNATIONAL MARITIME DANGEROUS GOODS (IMDG) CODE

The International Maritime Dangerous Goods (IMDG) Code was developed as a uniform international code for the transport of Dangerous Goods by sea covering such matters as packing, container traffic and stowage with particular reference to the classification, safe stowage and segregation of Dangerous Goods.

All Dangerous Goods cargoes are classified under this code both for import and export. All packaging from shipping containers down to individual cartons or bottles should display the internationally recognised diamond-shape labels showing the classification numbers.

Each substance label may display:

- A numbered class (eg Class 4) indicating the intrinsic hazard.
- A numbered division (eg subclass 4.2) indicating the type of hazard.

4.1 Port of Tauranga Limited - Use of IMDG Code

All cargo, which is, or contains Dangerous Goods, is to be received, stored and despatched using appropriate hazard control procedures based on the IMDG classification.

The Port area is to be regarded as a large ship and all cargo is to be planned and stowed in terms of the Code.

Planners preparing cargo for loading into ships will use the IMDG Code to ensure safe and compliant stowage of the vessel.

5 DANGEROUS GOODS MANAGEMENT PROCEDURES

Port of Tauranga Ltd must be supplied with information as follows:

5.1DG Information – Import or Transhipment Cargo

At least two (2) days before arrival of a vessel, the Agent or Stevedore is to supply a copy of the Dangerous Goods declaration for every consignment which carries IMDG classification.

For non-terminal operations the Vessel Operator via the Ships Agent is to supply a copy of the relevant documents to the Cargo Services Division.

Port of Tauranga Limited requires at least a two digit Dangerous Goods definition (eg 2.1) on all declarations. If only a single digit is provided the consignment will be treated as the most hazardous of that class.

This applies to ALL types of cargo whether FCL or LCL or Break-bulk or Bulk Liquid, and must include container numbers.

The information is to be provided to the relevant Shift Supervisor or stevedore as may be applicable.

The Shift Supervisor or Stevedore who receives the information is to ensure consignees, or their Stevedore Agent, for Break-bulk consignments classified Direct to Motor Vehicle (DMV) or Land and Remove (L & R) are notified accordingly.

5.2 DG Information - Export Cargo

Containers presented for export need to be accompanied by complete, legible hazardous certificates. These documents need to be collected and processed so that they are available for quick retrieval in the advent of spillage or other emergency event.

In addition to the hazardous packing certificates, for ISO tanks with bulk liquid hazardous content also must have the following checklist (checked-off and signed by shipper) to be submitted as mandatory documentation.

TANK CONTAINER EQUIPMENT SAFETY CHECKLIST

Date of Delivery _____

Exporter _____ Pack Point _____

CARGO			
ID NUMBER UNIT	**CONTENTS (PRODUCT OR WASTE)**	**IMDG CLASS**	**UN No**
	Note: Although multiple containers may be listed checklist is for single product consignment only		

CHECKLIST		
#	***DESCRIPTION***	**Please tick √**
1	Confirm emergency contact details as listed in the Hazardous Substances / Dangerous Goods Declaration are up to date and accurate and a 24/7 emergency response procedure is in place?	
2	Confirm all container units within a minimum of four weeks from date of next inspections according to legislation?	
3	Confirm equipment check has been completed on all tank container units by the pack point to ensure units are fit for purpose of international travel, inclusive of all hatches ,valves, flanges, vents and other opening that may cause potential for uncontrolled discharge?	
4	Have all Hazardous Goods Labels and Proper Shipping Nameand if applicable Marine Pollutant marking been affixed to all four sides according to the IMDG Code	
5	Has the equipment been checked for loose items on the gratings, in the frame and the forklift pockets (e.g. tools, dirt, gravel..?)	
6	Are all the frames and gratings and steps undamaged and in good condition?	
7	Confirm the loaded weight of the unit(s) are under the Maximum Gross Weight of the tanktainer unit(s)?	
8	Is the transport operator delivering to POTL Terminal facility a certified Approved Handler for IMDG Class of unit contents?	

Inspector		**Remarks**	
Signature			

At the Terminal, on receipt of cargo, the Road or Rail Exchange is to file a copy of the Dangerous Goods Declaration in the relevant ships DG folder.

At MetroPort, hazardous certificates will be copied and filed in DG Rail file with a copy faxed to the Tauranga Container Terminal (TCT).

For the general wharves on the Mount Maunganui side, the Receiving and Delivery office responsible for the receival (C3 and NZ Marshalling and Stevedoring Ltd) shall keep Dangerous Goods Declaration available for quick retrieval. In addition to this the R & D will forward a copy of the Dangerous Goods certificate to the Port of Tauranga Customer Service Centre (for 24 hour recovery)

5.3 DG Information - Storage and Retrieval

At all times there is to be rapid access available to full information on Dangerous Goods presently stored on any wharf or cargo area within Port of Tauranga Ltd.

5.4 Cargo - Receipt, Stowage, Isolation Bunds and Data Retrieval

Cargo containing Dangerous Goods (either Import or Export) is to be stored in planned positions, which minimise hazard and facilitate management of any incidents, which may occur.

Port of Tauranga Terminal computer based cargo allocation system "SPARCS" has a program titled EXPERT DECKING, which will allocate a yard storage position for Dangerous Goods consignments based on the policies detailed.

Export containers allocated to the end of rows in all export blocks: A, B, C, D, E, F

Imports containers are located in J, H and L block but overflow may be in E and F blocks, rows 20-30. **Refer to Map 13.1**

Class 1 cargo that is transiting, will be placed on a Maffi trailer and parked in C block Row 30. **See Map 13.2**

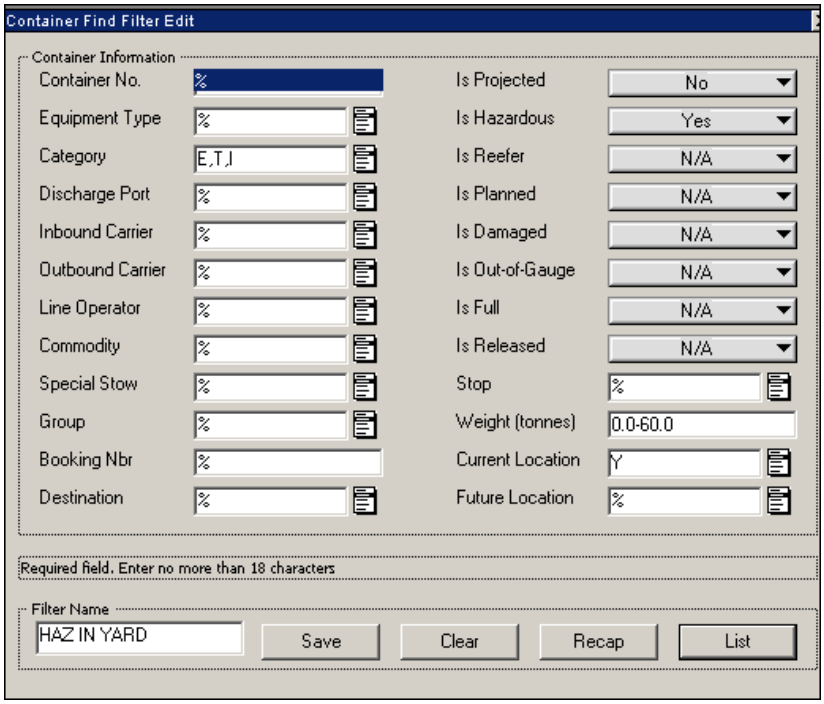
5.4.1 Isolation Storage Bund

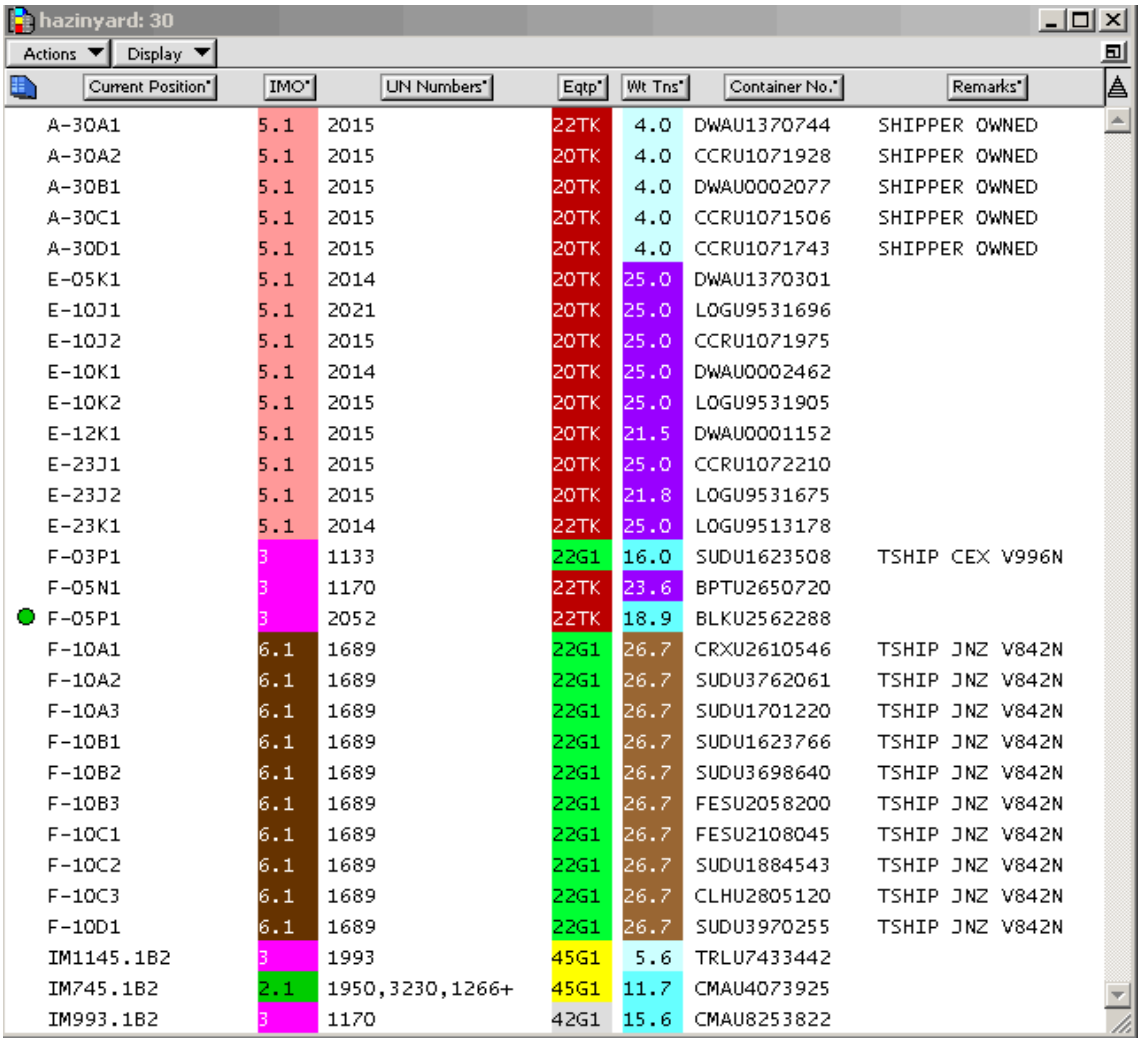
Any damaged Dangerous Goods Container is to be placed within the spill area adjacent to light tower 6A East of G Block. **Refer Map 13.3**

5.4.2 DG Data Retrieval Tauranga Terminal

Copies of DG Manifests from vessels (Import Cargo electronically in P: drive; Vessel: DG Import, hard copy in rail or R&D hazardous box) and from Road or Rail Exchange (Export Cargo in folders behind planners) to be stored in folders related to the relevant vessel and voyage.

A "Dangerous Goods in Yard" list can be produced using Sparcs in following format. This will give container numbers, positions, class, UN numbers, and container weight.





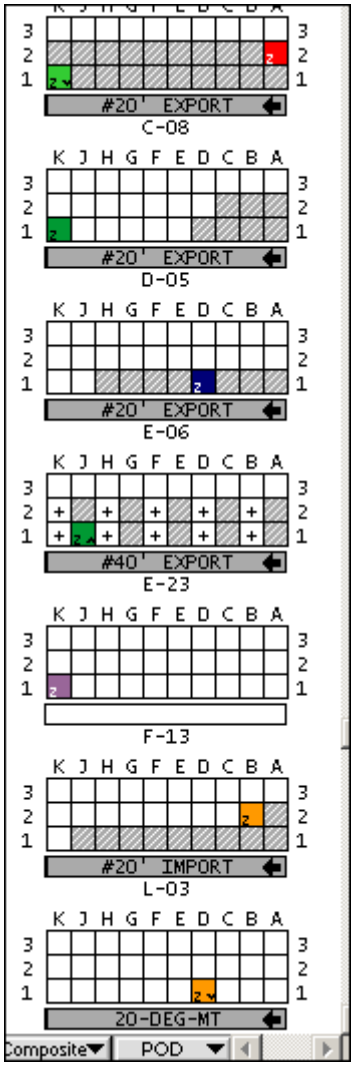
Current Position	IMO	UN Numbers	Eqtp	Wt Tns	Container No.	Remarks
A-30A1	5.1	2015	22TK	4.0	DWAU1370744	SHIPPER OWNED
A-30A2	5.1	2015	20TK	4.0	CCRU1071928	SHIPPER OWNED
A-30B1	5.1	2015	20TK	4.0	DWAU0002077	SHIPPER OWNED
A-30C1	5.1	2015	20TK	4.0	CCRU1071506	SHIPPER OWNED
A-30D1	5.1	2015	20TK	4.0	CCRU1071743	SHIPPER OWNED
E-05K1	5.1	2014	20TK	25.0	DWAU1370301	
E-10J1	5.1	2021	20TK	25.0	LOGU9531696	
E-10J2	5.1	2015	20TK	25.0	CCRU1071975	
E-10K1	5.1	2014	20TK	25.0	DWAU0002462	
E-10K2	5.1	2015	20TK	25.0	LOGU9531905	
E-12K1	5.1	2015	20TK	21.5	DWAU0001152	
E-23J1	5.1	2015	20TK	25.0	CCRU1072210	
E-23J2	5.1	2015	20TK	21.8	LOGU9531675	
E-23K1	5.1	2014	22TK	25.0	LOGU9513178	
F-03P1	3	1133	22G1	16.0	SUDU1623508	TSHIP CEX V996N
F-05N1	3	1170	22TK	23.6	BPTU2650720	
F-05P1	3	2052	22TK	18.9	BLKU2562288	
F-10A1	6.1	1689	22G1	26.7	CRXU2610546	TSHIP JNZ V842N
F-10A2	6.1	1689	22G1	26.7	SUDU3762061	TSHIP JNZ V842N
F-10A3	6.1	1689	22G1	26.7	SUDU1701220	TSHIP JNZ V842N
F-10B1	6.1	1689	22G1	26.7	SUDU1623766	TSHIP JNZ V842N
F-10B2	6.1	1689	22G1	26.7	SUDU3698640	TSHIP JNZ V842N
F-10B3	6.1	1689	22G1	26.7	FESU2058200	TSHIP JNZ V842N
F-10C1	6.1	1689	22G1	26.7	FESU2108045	TSHIP JNZ V842N
F-10C2	6.1	1689	22G1	26.7	SUDU1884543	TSHIP JNZ V842N
F-10C3	6.1	1689	22G1	26.7	CLHU2805120	TSHIP JNZ V842N
F-10D1	6.1	1689	22G1	26.7	SUDU3970255	TSHIP JNZ V842N
IM1145.1B2	3	1993	45G1	5.6	TRLU7433442	
IM745.1B2	2.1	1950,3230,1266+	45G1	11.7	CMAU4073925	
IM993.1B2	3	1170	42G1	15.6	CMAU8253822	

By highlighting the list and holding down the Shift Control and S key, a scan of the positions can be obtained.

From here, the individual certificates would have to be recovered from the two sources:

For exports, from the vessel folders behind the planners workstation.

For imports, the boxes at the rail desk or R&D office.



MetroPort

MetroPort is connected to the same Sparcs system. Dangerous Goods in the yard can be identified using the above process.

Export Dangerous Goods Certificates are located in the "to be railed" file.

Import Certificates have been filed as per the incoming train.

Mount Maunganui Wharves

The hazardous certificates are forwarded to the POT Customer Service Centre, by the individual receiving companies, where they are filed for emergency recovery.

5.5 Dangerous Goods Cargo Procedures – General

Note: - Throughout this Manual, the term "Shift Supervisor" shall mean the person responsible, at that time for the direct management of the site and the work in progress, whether employed by Port of Tauranga Ltd or a stevedoring company operating on a Port of Tauranga site.

Shift Supervisor to ensure that when Dangerous Goods are being handled, operations are supervised by a responsible person (e.g. Foreman).

Shift Supervisor, in conjunction with Port of Tauranga Ltd, to ensure that when Dangerous Goods are being handled, a person trained in basic first aid is on site.

Shift Supervisor to ensure that any mobile plant being used to move Dangerous Goods is operated by a competent operator.

Shift Supervisor to ensure that persons handling Dangerous Goods have received appropriate levels of training according to their levels of responsibility.

Shift Supervisor to ensure berth is secure, with access to authorised personnel only, and clear access for emergency services.

Shift Supervisor to ensure that consignments classified "DMV" are despatched immediately on discharge as per arrangements made under 6.1. Export cargo classified

"DMV" is not to be delivered to the wharf until vessel is ready to receive goods direct to stowage.

Shift Supervisor to ensure that consignments classified "L & R" are despatched off the wharf within 72 hours of the vessel arrival (Import Cargo), or are received on the wharf within 72 hours of the vessel's departure (Export Cargo) as per arrangements made under 6.1.

Shift Supervisor to ensure that at all times Dangerous Goods are stored with appropriate segregation as set out in 7.1.

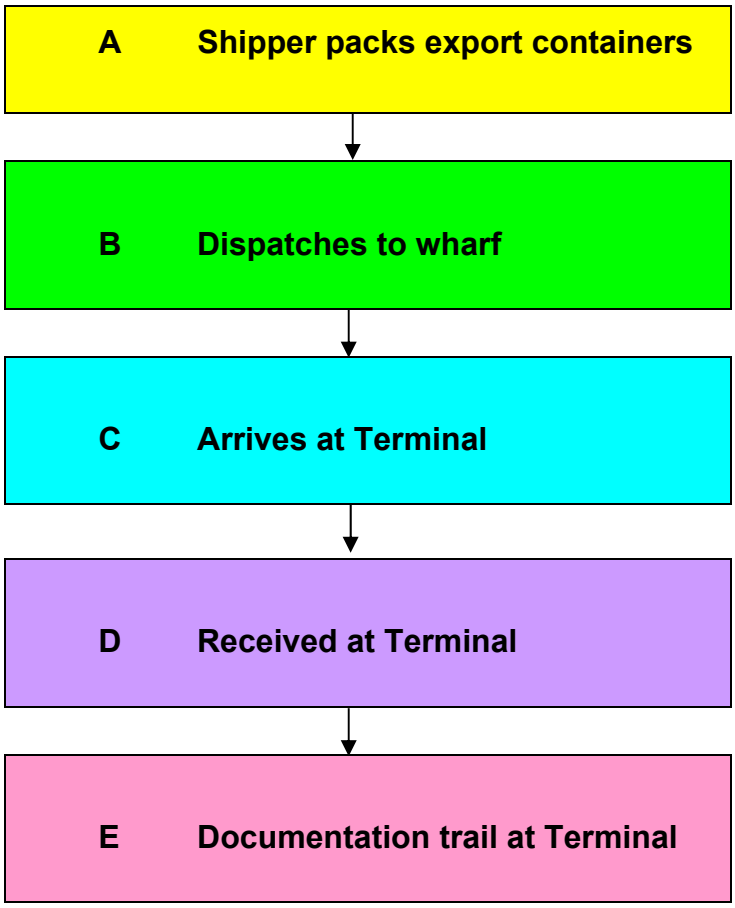
All wharf users, whether Port of Tauranga Ltd or stevedores are to immediately report any damage, leakage, or untoward event concerning Dangerous Goods cargo.

Shift Supervisor to ensure suitable warning notices are posted and firefighting equipment, stationed where necessary when dangerous goods are being handled.

6 DANGEROUS GOODS RECEIPT AND DESPATCH PROCEDURES

All Dangerous Goods when received either from vessel, rail or road are to be received and dispatched in accordance with the following procedures.

These are based on the Dangerous Goods classification of the cargo. Two procedures have been assigned as detailed below.



1 Complies with segregations within container.

Applies 4 x HAZ stickers to outside of container.

Completes IMO hazardous declaration IMDG class, UNDG number, proper shipping name, product name, EMS, emergency contact name, telephone and signature.

2 Is container able to be received at Terminal?

Load direct from truck:

All Class 1 except 1.4

****receive within 24 hours***

Class 1.4

Class 2.1.1A

Class 5.1.1A

Class 7

****receive 72 hours before vessel arrival***

3 <u>By road</u>

Carter's Note , IMO Hazardous declaration and mandatory Tank Container Equipment Safety Checklist presented to R&D desk

Details checked and confirmed (driver to fix)

Stickers on container checked (driver to fix)

<u>By rail</u>

IMO declaration collected by Toll GD and delivered to TCT

Details checked and confirmed

Container not to be accepted in not correct

4 Physical receival at Terminal

<u>By road</u>

After processing paper work to move to truck exchange

Container uplifted by straddle and placed in yard in accordance with IMO

Separation code as operated in SPARCS expert decking

<u>By rail</u>

Container placed in yard as above

5 After the checking and entering of the Carter's Note, details of the Hazardous Substance are also entered into Express using the Equipment Hazard maintenance.

Hazardous Declaration photocopied.

Original is filed in the relevant DG folder behind the Planners.

Copy is filed with Carter's Notes. Scanned with Carter's Notes.

Planners check that there are declarations for all HAZ containers.

Check details again to endure correct details have been entered.

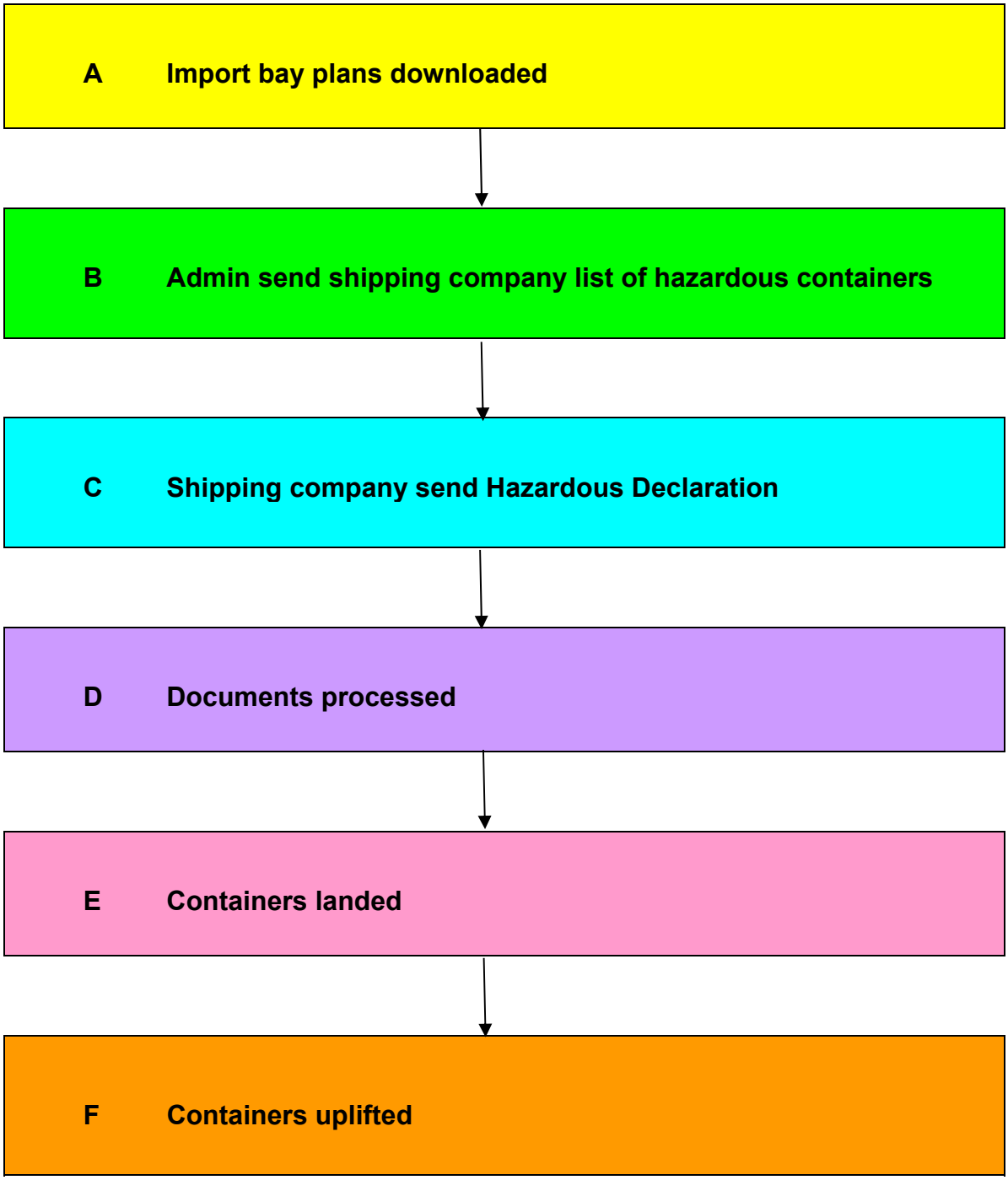
DG manifests produced for vessel (except Maersk and MSC who produce their own).

Manifest and Hazardous Declaration scanned and saved in

P:\\ A Shipping Lines\Vessel\Planning\Sailing Package

DG manifests and original copies of declaration presented to vessel.

HAZARDOUS SUBSTANCES IMPORT PROCESS



A

- Planners receive and process inbound bay plans

B

- C&CL send list of hazardous containers to shipping company requesting declaration documents

C

- Shipping company send Hazardous Declarations by email or fax
- Saved or scanned and saved to P:\shipping lines\vessel\DG imports

D

- Documents passed to rail desk.
- Declarations are checked against master list to ensure all have documents
- Any missing details are entered into Express using Equipment Hazardous Maintenance.
- ANY DOCUMENTS THAT ARE INCOMPLETE OR ILLEGIBLE NEED TO BE CONVEYED TO SHIPPING COMPNAY FOR REPLACEMENT.
- For container going to MetroPort print RG32 (Rail DG cover sheet) using Reports\TRG\Tauranga Reports\Rail DG Reports.
- Declarations are photocopied and placed into plastic envelopes. One copy inside with RG32 and one copy stapled to outside.
- MetroPort filed by vessel at rail desk.
- Tauranga delivery by vessel at R&D desk.

E

- Container discharged from vessel
- DMR (Direct to Motor Vehicle)
- All Class 1 except 1.4 – REMOVE WITHIN 48 HOURS
  - Class 1.4
  - Class 2.1 1 .A
  - Class 5.1 1.A
  - Class 7
- To yard – all, other than above
- IMO separations code as operated in Sparcs expert decking.

F **Loading to road**

- To be within 24 hours of discharge.
- Truck transaction processed at R&D office.
- Hazardous Declaration document given to driver.

Loading to rail

- Separations as per IMO code
- RG32 envelopes taken to rail office for shunter to place on train wagon.

6.1 Direct to Motor Vehicle (or Vessel) – DMV

6.1.1 Class 1, (Except 1.4S and 1.4G)

For Import this is to be the first cargo off the vessel, before any other cargo is worked. The cargo is to be placed by the original unloading crane direct to motor vehicle which is then to depart the wharf area immediately.

For Export, this is to be the last cargo onto the vessel before its departure, with no other cargo being worked at the time on that ship, and is to be loaded by crane direct from motor vehicle to stowage position.

(When using a ship crane instead of a dockside container crane, it is permissible to land the container onto the wharf beneath the ship crane, in order to fit or remove spreaders and use mobile plant to/from the truck.)

6.1.2 Actively Managed Dangerous Goods

Certain other classes of Dangerous Goods need to be actively managed so that they are removed from the Port within 24 hours of their arrival. This is because of the additional risk they pose in our operational area. It is because it is impracticable to have these go direct to motor vehicle that time restrictions in the Terminal yard apply.

CLASS TYPE	SUBSTANCE
UN Class 1, 1.4G and 1.4S	Fireworks and Safety Ammunition
UN Class 2.1 HSNO Class 2.1.1A	Compressed or Liquefied Flammable Gas eg LPG
UN Class 5.1 HSNO Class 5.1.1A	Oxidising Agent High Hazard eg Ammonium Nitrate
UN Class 7	Radioactive

6.2 Land and Remove

6.2.1 Other Dangerous Goods (24 hour limit)

Other dangerous goods requiring prompt handling (need to be removed within 24 hours), can be placed in the yard. The shift supervisor is to ensure that the consignor is aware the container is to be moved. The exchange must be within 24 hours of the vessel's departure.

6.2.2 All other Dangerous Goods Cargo

The objective is to minimise hazard levels on wharves. Dangerous Goods with this Receipt and Despatch classification should be exchanged within a maximum of 72 hours of the vessels arrival or departure respectively. All parties involved should work to either load the goods to the vessel, or arrange transport to remove the goods as quickly as possible. The goods may be landed and stored in wharf areas temporarily within the total 72 hour timeframe.

The only variation to this requirement is when MPI or Customs are exercising their powers in regard to a shipment.

6.2.3 Class 2 Gases

Cylinders of gas of any class to be stored in open air to ensure adequate ventilation. General wharves will designate such areas from time to time. The area is to be clean and tidy, at least three metres away from a building, or other dangerous goods, and with clear access in the event of an emergency. Cylinders, whether full or empty, are to be stored inside a secure cage. No cylinder to be freestanding or unprotected.

6.2.4 Classes 3, 4 and 5

Where practicable, temporary storage of these goods to be in closed steel general shipping containers with the following qualifications:

A separate container to be used for any Class 3, Class 4.1, Class 4.2, Class 4.3 and Class 5.1.

(a) Containers to be at least three metres apart.

(b) Containers of Class 3 and Class 5.1 to be at least 1 container space apart from each other.

(c) No containers with any Dangerous Goods to be closer than 10 metres to any building used as an office or amenity, or to any boundary fence line. No smoking or naked lights permitted within 15 metres of the material being stored. Signs to be placed to this effect.

(d) Containers in use for Dangerous Goods to be identified with appropriate placard.

In the event that storage of these goods in containers should prove impracticable on any occasion (eg due to volume or other operational difficulties) then an isolated area should be designated for temporary outside stowage. This area to be at least 10 metres clear of all buildings, all other cargo operations and storage, and at least 10 metres clear of any other stored dangerous goods.

Note: The storage precautions set out above for "L & R" cargo do not remove the obligation from the Shift Supervisor to make all reasonable effort to ensure cargo is delivered on the day of discharge. The 72 hour storage permission for "L& R" cargo is a MAXIMUM and is to be applied only if and when these efforts fail and three day storage cannot be avoided.

6.3 Land and Restow

6.3.1 All Other Dangerous Goods Cargo

The objective is to minimise hazard levels on wharves. Dangerous Goods with this Receipt and Despatch classification should be exchanged within a maximum of 72 hours of the vessels arrival or departure respectively. All parties involved should work to either load the goods to the vessel, or arrange transport to remove the goods as quickly as possible. The goods may be landed and stored in wharf areas temporarily within the total 72 hour timeframe.

The only variation to this requirement is when MPI or Customs are exercising their powers in regard to a shipment.

6.3.2 Class 2 Gases

Cylinders of gas of any class to be stored in open air to ensure adequate ventilation. General wharves will designate such areas from time to time. The area is to be clean and tidy, at least three metres away from a building, or other dangerous goods, and with clear access in the event of an emergency. Cylinders, whether full or empty, are to be stored inside a secure cage. No cylinder to be freestanding or unprotected.

6.3.3 Classes 3, 4 and 5

Where practicable, temporary storage of these goods to be in closed steel general shipping containers with the following qualifications:

(a) A separate container to be used for any Class 3, Class 4.1, Class 4.2, Class 4.3 and Class 5.1.

(b) Containers to be at least three (3) metres apart.

(c) Containers of Class 3 and Class 5.1 to be at least one container space apart from each other.

(d) No containers with any Dangerous Goods to be closer than 10 metres to any building used as an office or amenity, or to any boundary fence line. No smoking or naked lights permitted within 15 metres of the material being stored. Signs to be placed to this effect.

(e) Containers in use for Dangerous Goods to be identified with appropriate placard.

In the event that storage of these goods in containers should prove impracticable on any occasion (eg due to volume or other operational difficulties) then an isolated area should be designated for temporary outside stowage. This area to be at least 10 metres clear of all buildings, all other cargo operations and storage, and at least 10 metres clear of any other stored dangerous goods.

Note: The storage precautions set out above for "L & R" cargo do not remove the obligation from the Shift Supervisor to make all reasonable effort to ensure cargo is delivered on the day of discharge. The 72 hour storage permission for "L & R" cargo is a MAXIMUM and is to be applied only if and when these efforts fail and three day storage cannot be avoided.

6.4 Receipt & Despatch – DMV

ALL	Class 1	Explosives (first off - last on)
	Class 2.1.	Flammable Gases – LPG and Hydrogen. Any size of container.
	Class 4.2	Substances liable to spontaneous combustion
	Class 5.1	Ammonium Nitrate Ammonium Nitrate Fertiliser Chlorates (all) Consignments greater than 1,000kg of any other class 5.1 goods
ALL	Class 5.2	Organic Peroxides
	Class 7	Radioactive substances
	Class 3 Class 4 Class 6 Class 8	Packing group 1 only and greater than 1,000kg.

Land & Remove

ALL	Class 2 Class 3 Class 4 Class 5.1	Gases – except LPG or Hydrogen. Flammable liquids – other than above. Flammable solids etc. Oxidising agents (Less than 1,000 kg)

6.5 Shipping lines to advise in case of new shippers for hazardous product

Port of Tauranga customer shipping lines are required to inform the Port of Tauranga Container Terminal soonest when they engage with new customers and shippers, whose products are both hazardous (as per and IMDG code) and transported in ISO tank containers. TCT requires this information to update their database for Shippers of Hazardous cargoes.

7 SEGREGATION OF CONTAINERS IN STOWAGE

The IMDG Code provides rules for stowage of Dangerous Goods containers aboard vessels. These rules will be followed by planners when planning stowage of vessels.

Segregation of cargo within the Port will also be according to the recommendations of the IMO IMDG Code, using the charts in section 7.1 below.

Containers may be over-stowed if segregation code in the chart is **X**.

Class 2, 3 and 4 over-stowing is prohibited. (Note that the same class may be stacked on itself).

The relevant section of the IMO IMDG Code is 7.2.

7.1 Segregation Table (7.2.1.16 of the IMDG Code)

***Segregation should also take account of a single subsidiary risk label**

Class	1.1 1.2 1.5	1.3	1.4	2.1	2.2	2.3	3	4.1	4.2	4.3	5.1	5.2	6.1	6.2	7	8	9
Explosives 1.1,1.2,1.5	•	•	•	4	2	2	4	4	4	4	4	4	2	4	2	4	X
Explosives 1.3	•	•	•	4	2	2	4	3	3	4	4	4	2	4	2	2	X
Explosives 1.4	•	•	•	2	1	1	2	2	2	2	2	2	X	4	2	2	X
Flammable gases 2.1	4	4	2	X	X	X	2	1	2	X	2	2	X	4	2	1	X
Non-toxic, non-flammable gases 2.2	2	2	1	X	X	X	1	X	1	X	X	1	X	2	1	X	X
Poisonous gases 2.3	2	2	1	X	X	X	2	X	2	X	X	2	X	2	1	X	X
Flammable liquids 3	4	4	2	2	1	2	X	X	2	1	2	2	X	3	2	X	X
Flammable solids 4.1	4	3	2	1	X	X	X	X	1	X	1	2	X	3	2	1	X
Spontaneously combustible substances 4.2	4	3	2	2	1	2	2	1	X	1	2	2	1	3	2	1	X
Substances which are dangerous when wet 4.3	4	4	2	X	X	X	1	X	1	X	2	2	X	2	2	1	X
Oxidising substances 5.1	4	4	2	2	X	X	2	1	2	2	X	2	1	3	1	2	X
Organic peroxides 5.2	4	4	2	2	1	2	2	2	2	2	2	X	1	3	2	2	X
Poisons 6.1	2	2	X	X	X	X	X	X	1	X	1	1	X	1	X	X	X
Infectious substances 6.2	4	4	4	4	2	2	3	3	3	2	3	3	1	X	3	3	X
Radioactive material 7	2	2	2	2	1	1	2	2	2	2	1	2	X	3	X	2	X
Corrosives 8	4	2	2	1	X	X	X	1	1	1	2	2	X	3	2	X	X
Miscellaneous dangerous substances and articles 9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

7.2 Index of Stowage Segregation Table

Numbers and symbols in table

1 "Away from"

2 "Separated from"

3 "Separated by a complete compartment or hold from"

4 "Separated longitudinally by an intervening complete compartment or hold from"

X The segregation, if any, is shown in the individual schedules

***** Refer to EPA Advisor - Explosives and DG.

Details of Segregation Requirement principle applied to

Segregation Requirement	Vertical	Horizontal
1 Away from	Prohibited	Fore & aft – one container space Athwartships – one container space
2 Separate from	Prohibited	Fore & aft – one container space Athwartships – two container spaces
3 Separate by a complete compartment or hold	Prohibited	Fore & aft – two container spaces Athwartships – three container spaces
4 Separate longitudinally by an intervening compartment	Prohibited	Fore & aft – minimum 24 metres Athwartships – minimum 24 metres

8 MANAGEMENT OF HAZARDOUS CONTAINERS IN THE CONTAINER TERMINAL YARD

Principle

1 Segregation is applied to the Container Terminal yard, as per the IMDG Code which provides rules for stowage of DG containers on vessels.

2 Segregation of DG containers within the TCT yard grid will also be according to the IMDG Code, using the segregation table shown in paragraph 7.1. Containers may be overstowed if segregation code in table is **X**.

3 Overstowing is prohibited for Classes 2, 3 and 4 (Note: Same class may be stacked on top of itself).

Yard storage of containers:

Container yard storage would have to follow the above segregation principles. The stacks are to be regarded as cells.

For example: the combination of class 5 and class 3 goods should have a separation of 1 TEU lengthways and 2 TEU sideways.

In order to facilitate the segregation the following classes would have to be allocated to F block, end slots (J and K), even numbered rows only – ***doors facing roadway*** in order to be accessible as quickly as possible

- **Class 2.2**
- **Class 2.3**
- **Class 3**
- **Class 4.1**
- **Class 6.1**
- **Class 8**
- **Class 9**

These classes amongst each other mainly show the "X" symbol for segregation. F-block is also conveniently located to allow emergency services access.

Export containers to be allocated with rows 1-24 and Import containers from row 25 to 31 with row 30 to be exclusively set aside for Classes 2.2 and 2.3.

Import DG containers can spill over into L block even numbered rows, end slots J and K, between row 1 and 10.

The following classes would have to be allocated in E block, end slots (J and K), even numbered rows only – ***doors facing roadway*** in order to be accessible as quickly as possible.

- **Class 4.2**
- **Class 4.3**
- **Class 5**

These classes amongst each other mainly show either **X** or **1** symbols and the reduced number of classes will be easier to separate, whilst on the other hand achieving complete segregation from the earlier listed classes.

Class 5.1
ISO tanks can be stacked in rows 30 and 31.

Class 6.2
(Infectious substances) if materialising, to be placed in D block, 31 F1.

Classes 1.3 and 1.4
Explosives can be stored (subject time limitation) in C block Row 30 ("safe and remote location") basis "first off-last on".

The isolation storage ("spill pit") for any damaged hazardous container is south of light tower 6A, east of G Block.

Dangerous Goods containers to be stored **no** closer than 10 metres from any building, used as office or amenity, or to the boundary fence line. No smoking or naked lights permitted within 15 metres of the commodities stored. Signs to be placed accordingly.

Further required action

1 Copies of DG manifests and hazardous cargo declarations for Import cargo to be scanned into PDF format and to be kept/filed in the DG Import folder for the relevant vessel / voyage.

2 Hazardous cargo declarations for export containers received from TCT R&D, MetroPort or TCT Rail desk are being kept in the vessel operations area in the red folder for the relevant vessel / voyages and are used to produce the (electronic) export Dangerous Cargo Manifest, which is submitted, along with the original documents, to the vessel on departure.

3 A ”Dangerous Goods in Yard” list is to be produced once a day and is to be held by TCT Ops duty supervisors and TCT rail desk (TCT R&D desk).

4 Whenever the Terminal is not working, this list to be kept at the Mirrielees Road gatehouse for reference by Emergency Services.

5 TCT R&D to be vigilant on proper and correct placards (all four vertical sides) of hazardous cargo containers presented for export. On delivery containers to be inspected (visual) to ensure no spillage or residue exists.

6 From time to time, an audit will need to be performed on hazardous tank containers held in the TCT yard: this will consist of relocating a tank-container to an inspection area and checking vents / seals are closed and ensuring the shipper has actually done everything they have said they will do in the checklist as per para 5.2.

It is envisaged that such an audit is done quarterly for the 2019 financial year, after which it can be reduced to six monthly for the following years.

PASS/ FAIL

Tank container Audit checklist

Purpose: Do give confidence that the Tank Container Equipment Safety Checklists (TCESC) supplied by exporter's are valid.

Personnel required: Terminal staff and Marine Surveyor / Certified Inspector (MS/CI)

Actions Required: Terminal staff:

- Arrange time with MS/CI
- Select export Tank Container and check TCESC
- Advise MS/CI of the DG class and UN number so he can use appropriate safety equipment when conducting the audit.
- Move container to the spill pit for audit.

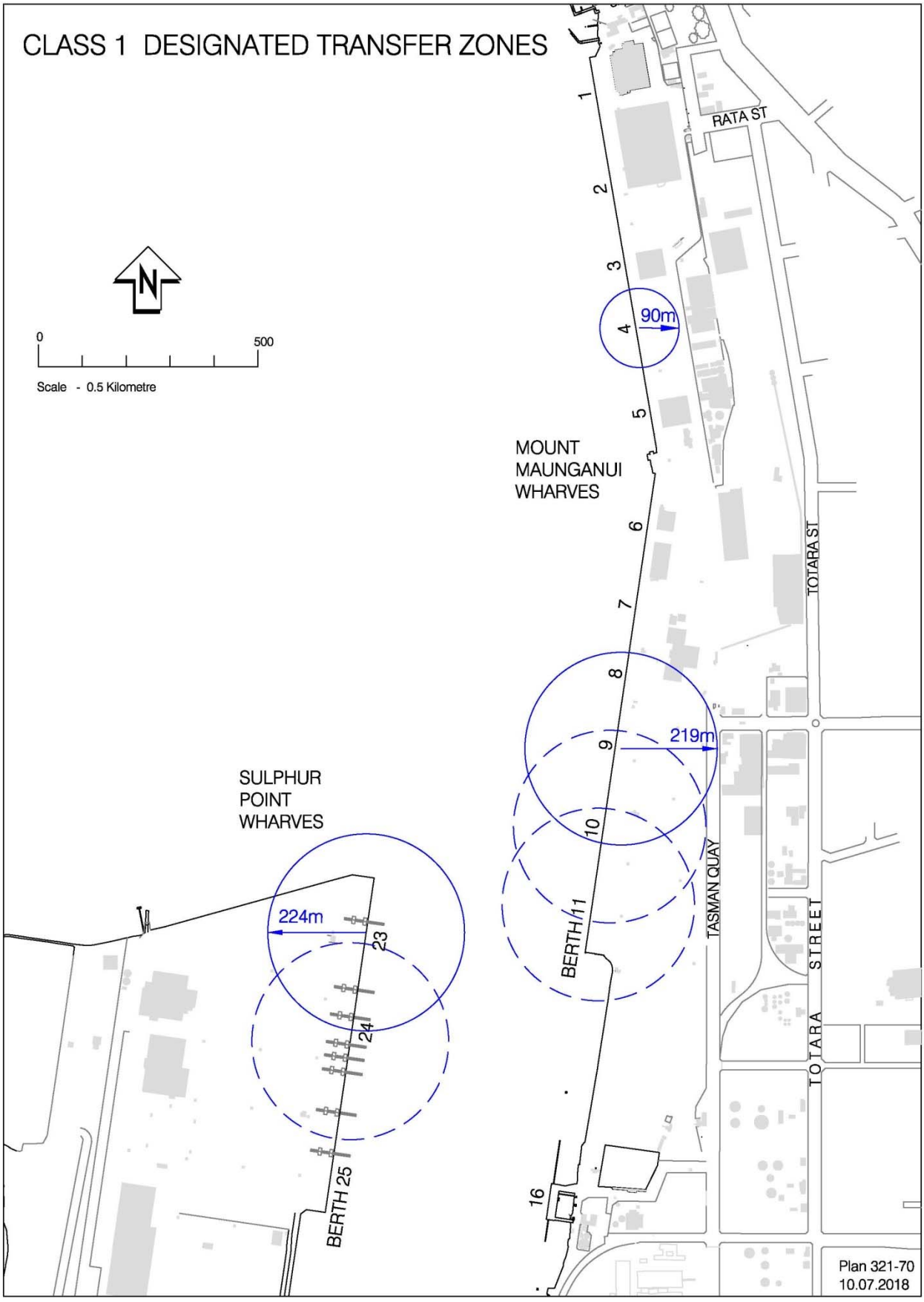
Marine Surveyor / Certified Inspector (MS/CI):

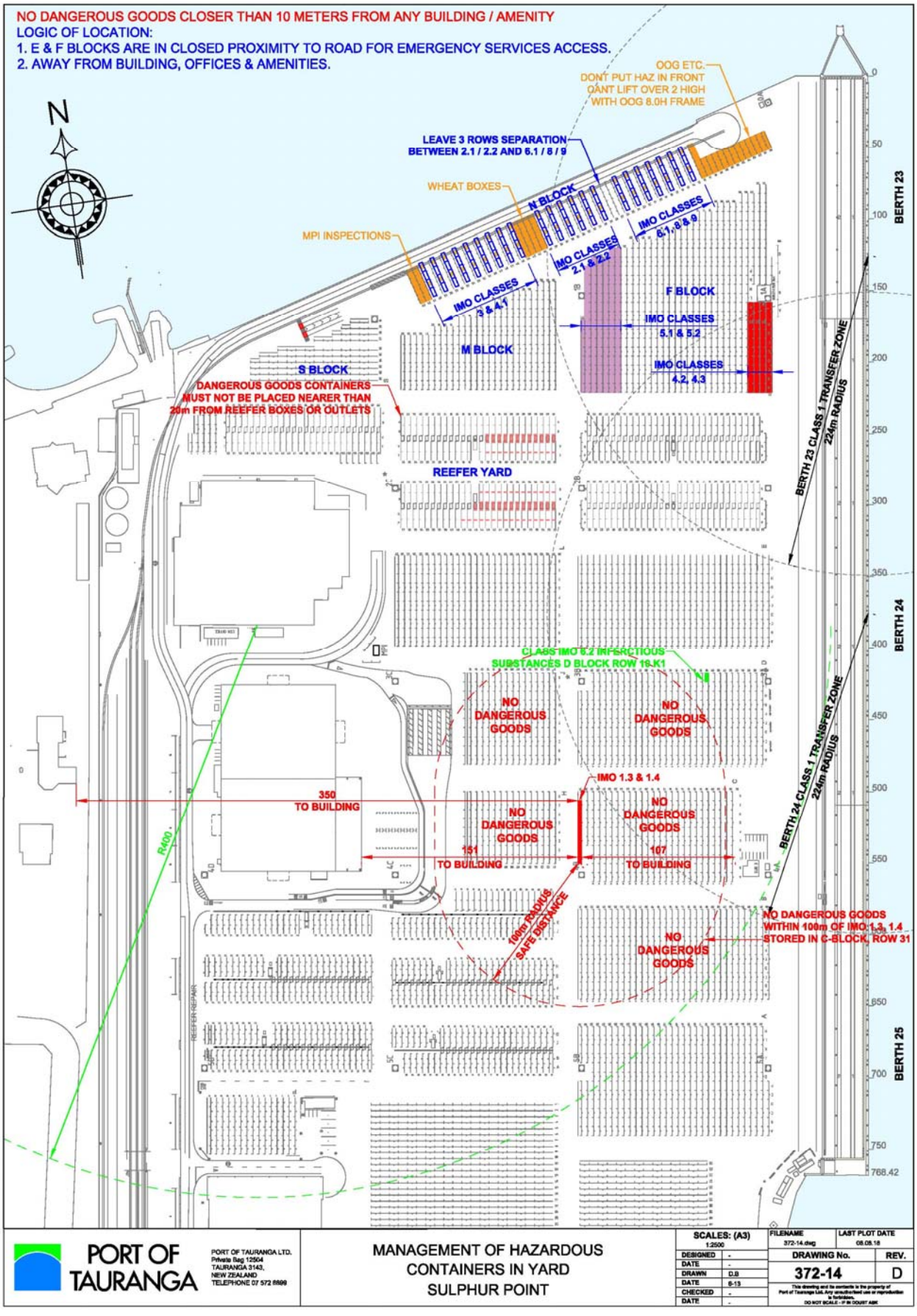
- Arrive on site and get details of Tank Container
- Conduct below audit checks on Tank Container wearing appropriate safety gear as required for the UN class contained in the tank

TANK CONTAINER NUMBER:	**EXPORTER:**	**UN NUMBER:** **DG CLASS:**	**TCESC sighted YES/ NO**

TCT to call 24/7 emergency number to see if suitable response	YES / NO
TCT to call trucking company that delivered container and check if truck delivering is approved to deliver that class	YES / NO
MS/CI to check next inspection date on Tank	INSPECTION DUE DATE:
MS/CI to check Tank has correct placards on all four sides	YES / NO
MS/CI to check all hatches, values flanges, vents and other openings are in appropriate states to prevent uncontrolled discharge.	YES / NO
MS/CI to check the tanks frames, gratings and steps are in good condition	YES / NO

DATE: / /20 Signed TCT operator: Signed MS/CI


CLASS 1 DESIGNATED TRANSFER ZONES
N
0
500
Scale - 0.5 Kilometre
RATA ST
90m
MOUNT
MAUNGANUI
WHARVES
TOTARA ST
219m
SULPHUR
POINT
WHARVES
224m
TASMAN QUAY
BERTH 11
TOTARA STREET
BERTH 25
1
2
3
4
5
6
7
8
9
10
11
16
23
24
25
Plan 321-70
10.07.2018


NO DANGEROUS GOODS CLOSER THAN 10 METERS FROM ANY BUILDING / AMENITY
LOGIC OF LOCATION:
1. E & F BLOCKS ARE IN CLOSED PROXIMITY TO ROAD FOR EMERGENCY SERVICES ACCESS.
2. AWAY FROM BUILDING, OFFICES & AMENITIES.
N
OOG ETC.
DONT PUT HAZ IN FRONT
CANT LIFT OVER 2 HIGH
WITH OOG 8.0H FRAME
LEAVE 3 ROWS SEPARATION
BETWEEN 2.1 / 2.2 AND 6.1 / 8 / 9
WHEAT BOXES
N BLOCK
IMO CLASSES
6.1, 8 & 9
MPI INSPECTIONS
IMO CLASSES
2.1 & 2.2
IMO CLASSES
3 & 4.1
F BLOCK
IMO CLASSES
5.1 & 5.2
M BLOCK
IMO CLASSES
4.2, 4.3
S BLOCK
DANGEROUS GOODS CONTAINERS
MUST NOT BE PLACED NEARER THAN
20m FROM REEFER BOXES OR OUTLETS
REEFER YARD
BERTH 23 CLASS 1 TRANSFER ZONE
224m RADIUS
BERTH 24 CLASS 1 TRANSFER ZONE
224m RADIUS
CLASS IMO 6.2 INFECTIOUS
SUBSTANCES D BLOCK ROW 19.K1
NO
DANGEROUS
GOODS
NO
DANGEROUS
GOODS
IMO 1.3 & 1.4
350
TO BUILDING
NO
DANGEROUS
GOODS
NO
DANGEROUS
GOODS
151
TO BUILDING
107
TO BUILDING
R400
100m RADIUS
SAFE DISTANCE
NO DANGEROUS GOODS
WITHIN 100m OF IMO: 1.3, 1.4
STORED IN C-BLOCK, ROW 31
NO
DANGEROUS
GOODS
REEFER REPAIR
BERTH 23
BERTH 24
BERTH 25
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
768.42
PORT OF TAURANGA
PORT OF TAURANGA LTD.
Private Bag 12504
TAURANGA 3143,
NEW ZEALAND
TELEPHONE 07 572 8899
MANAGEMENT OF HAZARDOUS
CONTAINERS IN YARD
SULPHUR POINT
SCALES: (A3)
1:2500
DESIGNED -
DATE -
DRAWN D.B
DATE 8-13
CHECKED -
DATE -
FILENAME
372-14.dwg
LAST PLOT DATE
08.08.18
DRAWING No.
372-14
REV.
D

9 DANGEROUS GOODS - CLASS 1 (EXPLOSIVES) CODE OF PRACTICE

As detailed in the Hazardous Substances (Classes 1 to 5) Control Regulations, the Port of Tauranga Ltd wharves are treated as a "Transfer Zone" where Class 1 substances may be transferred from one type of transport to another.

With reference to the requirements of Section 46 of the Hazardous Substances (Class 1-5) Control Regulations, Port of Tauranga Ltd will comply with requirements by the following actions which will be observed whenever Class 1 goods are transferred through the port.

1 The Shift Supervisor of any wharf is deemed to be the "Person in Charge" of the transfer of Class 1 substances.

(a) The vessel to which or from which the Class 1 Explosives is being transferred, and the immediately adjacent quayside are deemed to be the Transfer Zone for any particular operation.

(b) The Shift Supervisor at the time of any Class 1 transfer is to be a person who has completed a training course and qualified as an "approved handler" for Class 1.

(c) The emergency response plans detailed in the *Emergency Procedures Manual* 7.6.2 are relevant to the Transfer Zone, and the requirements detailed will be in force. The requirements of these emergency plans are to be available during the transfer of Class 1.

All persons not necessary for the transfer of the Class 1 and any not under the direct control of the Shift Supervisor are to be removed from the Transfer Zone.

The Shift Supervisor shall have immediately available to them full details of the sensitivity and safe environmental limits of the particular Class 1 being transferred.
The Shift Supervisor shall ensure that the time taken to complete the operation is minimised and in any event is less than eight hours overall.

In the event of, or any risk of thunderstorm near the Transfer Zone, the operation shall cease, any opened packages shall be sealed within metal containers and all persons shall be withdrawn to a safe distance based on the net explosive quantity (NEQ) of the goods being handled.

9.1 Designated Transfer Zone (DTZ)

When explosives, in excess of the quantities shown in Table 1 (over page), are handled from one means of transport to another, a DTZ must be established. The Zone must contain all forms of transport involved in the transfer.

Table 1

Quantities of Class 1 substances that activate requirements for a Test Certificate at a Hazardous Substance Location, for a Designated Use Zone, for a Designated Transfer Zone and for Notification of Transport

Hazard Classification	Quantities
1.1B, 1.2B and 1.4B	5 kg (NEQ)
1.1 (other than 1.1B or 1.1C), 1.2 and 1.5	50 kg (NEQ)
1.1C and 1.3 (other than 1.3G)	100 kg (NEQ)
1.3G and 1.4 (other than 1.4S)	200 kg (NEQ)
1.4S	1000 kg (NEQ)
Fireworks in classification 1.3G, 1.4G and 1.4S that are controlled under the Hazardous Substances (fireworks) Regulations 2001	10,000 kg (gross weight)
Safety ammunition including pre-primed cartridges and primers of Class 1.4S	25,000 kg (gross weight)

The radius of the DTZ must be the public safeguarding distance shown in Table 3 (over page) or greater for the total quantity of explosives present in the zone using the laid out explosive classification mixing rules.

Only persons necessary for the transfer and handling of the explosives shipments are allowed inside this area.

The time Class 1 Explosives are present within a DTZ must be kept to a minimum, less than eight hours (or less than 24 hours for substances of Class 1.4C, 1.4E, 1.4G or 1.4S).

The Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 at Part 3, section 11, defines a DTZ but notes that a DTZ does not include roll-on roll-off operations in which a vehicle or trailer with its load drives or is driven on to or into another means of transport for the duration of a journey.

9.2 Designated Transfer Zone Table

Table 3 Explosive Quantity Distances for Designated Transfer Zones

	HD 1.1		HD 1.2	HD 1.3	HD 1.4
	Containerised	Break Bulk			
Net Explosive Quantity	Public Safeguard Distance	Public Safeguard Distance	Public Safeguard Distance	PublicSafeguard Distance	Public Safeguard Distance
(kg)	(m)	(m)	(m)	(m)	(m)
5	60	90	71	0	25
10	60	90	80	0	25
15	60	90	86	0	25
20	60	90	91	0	25
25	60	90	95	0	25
30	60	90	98	0	25
40	60	90	103	0	25
50	60	90	107	0	25
60	90	135	111	0	25
70	90	135	114	0	25
80	90	135	117	0	25
90	90	135	120	0	25
100	90	135	122	0	25
200	90	135	138	60	25
300	90	135	148	60	25
400	90	135	156	60	25
500	90	135	163	60	25
600	90	135	168	60	25
700	90	135	173	60	25
800	90	138	177	60	25
900	90	143	181	60	25
1,000	90	148	184	60	25
1,200	135	158	190	60	25
1,400	135	166	196	60	25
1,600	135	174	200	60	25
1,800	135	181	205	60	25
2,000	135	187	209	60	25
2,500	135	201	217	60	25
3,000	135	214	224	60	25
3,500	135	225	231	60	25
4,000	135	235	236	60	25
4,500	135	245	241	60	25
5,000	135	254	246	60	25
5,500	135	262	250	60	25
6,000	135	269	254	60	25
6,500	135	277	258	60	25
7,000	138	284	261	62	25
7,500	141	290	265	63	25

Table 3 (Cont'd) Explosive Quantity Distances for Designated Transfer Zones

8,000	144	296	268	64	25
8,500	147	303	271	66	25
9,000	150	308	273	67	25
9,500	153	314	276	68	25
10,000	156	319	279	69	25
11,000	161	330	283	72	25
12,000	165	339	288	74	25
13,000	170	348	292	76	25
14,000	174	357	296	78	25
15,000	178	365	300	79	25
16,000	182	373	303	81	25
17,000	186	381	307	83	25
18,000	189	388	310	84	25
19,000	193	395	313	86	25
20,000	196	402	316	87	25
22,000	202	415	321	90	25
24,000	208	427	326	93	25
26,000	214	439	331	95	25
28,000	219	450	335	98	25
30,000	224	460	339	100	25
32,000	229	470	343	102	25
34,000	234	480	347	104	25
36,000	238	489	351	106	25
38,000	243	498	354	108	25
40,000	247	507	357	110	25
42,000	251	515	361	112	25
44,000	255	523	364	113	25
46,000	258	531	367	115	25
48,000	262	538	369	117	25
50,000	266	546	372	118	25
55,000	274	563	379	122	25
60,000	282	580	385	126	25
65,000	290	596	390	129	25
70,000	297	610	395	132	25
75,000	304	625	400	135	25
80,000	311	638	405	138	25
85,000	317	651	409	141	25
90,000	323	664	414	144	25
95,000	329	676	418	147	25
100,000	335	687	421	149	25
120,000	356	730	436	158	25
140,000	374	769	448	167	25
160,000	391	804	459	174	25
180,000	407	836	468	181	25
200,000	422	866	477	188	25

9.3 Mixing Rules

When explosives of different Hazardous Divisions (HDs) are present in the DTZ, the required public safeguarding distances are determined as follows, unless it has been determined by explosive trials that explosives of different HDs would not contribute to the effects of an explosive event:

(a) HD 1.5 is treated as HD 1.1 and HD 1.6 is treated as HD 1.2.

(b) The NEQ of explosive from HD 1.4 is not added to other HDs as HD 1.4 does not contribute significantly to explosive events.

(c) When explosives of HD 1.1 and 1.2 are present, the total aggregate NEQ is treated as HD 1.1.

(d) When explosives of HD 1.1 and 1.3 are present, the total aggregate NEQ is treated as HD 1.1.

(e) When explosives of HD 1.2 and 1.3 are present, the total aggregate NEQ is treated as HD 1.2.

(f) When explosives of HD 1.1, 1.2 and 1.3 are present, the total aggregate NEQ is treated as HD 1.1.

9.4 Class 1.3C Propellants

All UN 0160/0161 powder, smokeless, Class 1.3C, in quantities greater than 500 kg are classified as 1.1C for purposes of transportation and transfer.

9.4.1 Contingency Plan for Transit Class 1.1C

9.4.1.1 Depending on EPA controls and permit, container will be worked on a first-off last-on DMV basis. Container to be stored at Hanga Road for duration of port stay (see 9.4.8).

9.4.1.2 Subject to EPA approval only and on the basis of first off, last on, containers will be placed on a Maffi-trailer and parked in the yard. The tractor unit will remain attached. Fire extinguisher to be placed on Maffi trailer.

9.4.1.3 The trailer will be parked in Row 30, C Block.

9.4.1.4 Prior to the arrival of the container, full containers will be placed two-high in Row 31 and Row 29 C Block. These containers will not be for the vessel that is being worked.

9.4.1.5 The three rows will be activated with men working in SPARCS for the duration of the vessel work time.

9.4.1.6 A flashing light unit at the end of Row 30 to be activated and the DANGER – EXPLOSIVES signage to be placed at both ends of Row 30.

9.4.1.7 If during the time the container is stored on the Port any unusual emission or event is noticed which gives concern to the status of the container:

(i) work in the Terminal will cease and the immediate area evacuated.

(ii) the Fire Service will be notified (phone 111)

9.4.1.8 Should the container require removal an arrangement is in place with Priority Logistics 0274 776 175 to remove the container to the quarry of Prime Blasting Services Ltd, situated in Hanga Road, Upper Kaimai. This will be by most direct route. Priority Logistics is a licensed carrier for this type of cargo.

9.4.1.9 At all times if an incident occurs the procedures in the Port Emergency Procedures Manual will be followed.

9.5 Transit Cargo - Class 1 (Explosives)

The maximum quantities and classifications of Class 1 Dangerous Goods which may at any time transit the Port of Tauranga Ltd, are subject to an agreement between Environment BOP and the EPA Test Certifier.

(a) A maximum of 2 containers, each container shall contain no more than 14,000 kg net explosive quantity (NEQ), corresponding to a maximum of 28,000 kg NEQ for any given transhipment can transit the Port of Tauranga Ltd.

(b) Classes 1.3C (1.4S and 1.4G (lower risk explosive goods) may be landed and stored at a defined "safe remote location" within the Port area. Tauranga Terminal Safe Area defined as Row 30, C Block.

(c) A maximum of 2 containers as described under 9.5.a can remain on board of a vessel whilst in port, with the requirement that:

- the consignment to be stowed on the vessel in a place that will not be worked while the vessel is at Port of Tauranga,
- and would require the area where the consignment is stowed to be secured to prevent access by unauthorised personnel.
- For transhipments where two containers of smokeless powders are on-board. WorkSafe (NZ) would also prefer that these are separated by an “inert” container, in order to reduce the potential radius of accumulative effect should an incident occur.

9.6 Net Explosive Quantity (NEQ) Limits

Based on Port of Tauranga berth configuration, Sulphur Point and Mount Maunganui and distances to inhabited buildings, public roads and places of assembly, NEQs that can be handled across these berths, have been identified.

The NEQs are determined, using the requirement to ensure blast overpressures, heat radiation and hazardous fragment fallout in the event of an unintended initiation does not cause harm to persons or damage to properties within a designated area.

Table 2 and has been used to identify the various NEQ for Hazardous Divisions that can be transferred or handled at each designated Port of Tauranga berth which is permitted, in terms of the public safeguarding distance to handle Class 1 cargoes.

Permissible Class 1 Explosive quantities that can be handled over the various Port of Tauranga berths is shown as Table 2.

Table 2

Permissible Class 1 Explosive Quantities and Designated Transfer Zones DTZ)

Wharf Berth	Public Safeguard Distance	Qty HD 1.1 Containers	Qty HD 1.1 Breakbulk	Qty HD 1.2	Qty HD 1.3	Qty HD 1.4	Qty Ammonium Nitrate * 5.1
Berth 23 Sulphur Point	**224 metres**	**30,000 kg**	**3,000 kg**	**3000 kg**	**200,000 kg**	**200,000kg**	**400 tonnes**
Berth 24 Sulphur Point	**224 metres**	**30,000 kg**	**3,000 kg**	**3000 kg**	**200,000 kg**	**200,000kg**	**400 tonnes**
Mount Maunganui Berth 4	**100 metres**	**1000 kg**	**50 kg**	**30 kg**	**Nil**	**200,000kg**	25 tonnes
Mount **Maunganui Berth 9**	220 metres	28,000 kg	2,500 kg	2,500 kg	200,000kg	200,000kg	25 tonnes
Mount **Maunganui Berth 10**	220 metres	28,000 kg	2,500 kg	2,500 kg	200,000kg	200,000kg	25 tonnes
Mount **Maunganui Berth 11**	220 metres	28,000 kg	2,500 kg	2,500 kg	200,000kg	200,000kg	25 tonnes

9.7 Vessels Carrying Explosives

9.7.1 The Master of any vessel in any harbour or anchorage, having on board, or intending to load explosives, must hoist on the vessel a Flag B by day and a red light by night.

9.7.2 The Master of any vessel in any harbour or anchorage, or the Pilot, must not allow that vessel to approach within 200 metres of any other vessel that is carrying or loading explosives, except:

(a) With the written permission of the Harbourmaster; or

(b) For the purpose of loading or unloading that other vessel; or

(c) For the purpose of rendering assistance to that other vessel in an emergency; or

(d) For the purpose of navigating the vessel in the normal process of berthing or un-berthing.

9.8 Transfer of Class 1 during Hours of Darkness

The transfer of Class 1 Explosives from ship to shore or shore to ship cannot be carried out during the hours of darkness unless a Test Certificate has been issued that certify there are documented procedures for the transfer that meet requirements for transfer without natural lighting.

10 DANGEROUS GOODS (CLASS 5) (OXIDISING AGENTS) CODE OF PRACTICE

The Tauranga Harbourmaster and Port of Tauranga Ltd Manager are to be notified in advance by the owners or agents of any vessel which intends to visit the Port of Tauranga Ltd carrying Class 1 or Class 5.1 Dangerous Goods of greater tonnages than the wharf/berth limits detailed below.

Ammonium Nitrate when mixed with fuel oils has the capacity to be used as an explosive and for transport purposes when any Ammoniun Nitrate is transported in consignment with Class 1 Explosives the total aggregate (ie explosive plus ammonium nitrate) must be treated as Class 1 Explosives.

Ammonium Nitrate moving without Class 1 Explosive present however is treated as Class 5.1 Oxidising substance.

Note: All Ammonium Nitrate handling for discharge at wharves should be treated as DMV. Practically 24 hours removal will be allowed to remove.

Transit ISO containers of Ammonium Nitrate are to be stowed on a hatch of the vessel so that no other cargo is worked immediately adjacent to, or lifted over the Ammonium Nitrate, (other than a portion of the total consignment which may be discharged at Tauranga).

At all times the lashings are to remain on the containers so that doors are secure.

Towing wires (fire wires) are to be rigged fore and aft on the vessel while at the berth. The vessel must maintain its engines at “Stand-by” whenever the relevant Hazardous Materials remain on board.

No “hot work” is to be permitted on the vessel whenever the relevant Hazardous Materials remain on board. This may be varied in special circumstances only after consultation with Tauranga Harbourmaster.

Breakbulk Cargo Limits:

(a)	Ammonium Nitrate in steel drums	25 tonnes
(b)	Ammonium Nitrate bags on pallets	25 tonnes

ISO Containers Cargo Limits:

(c)	Ammonium Nitrate	400 tonnes

Note: This event is to be subject to review and special conditions agreed with Tauranga Harbour Master, the Chief Advisor to EPA (Environmental Protection Agency), and the Hazardous Substances Technical Liaison Committee.

10.1 Hydrogen Peroxide – ISO Tank Stowage, Sulphur Point

Special arrangements have been made for the storage of Hydrogen Peroxide ISO Tank Containers (Class 5.1.1) because required managed Land and Restow (Refer section 6.4) cannot be carried out in practice. Export ISO Tanks may be received before vessel arrival and accumulated for loading. Import ISO Tanks may be unloaded and stacked awaiting removal.

Every effort is to be made to limit storage to less than 72 hours.

10.2 Uranium Oxide Concentrate

For emergency response purposes, radioactive material is no different from the other classes of dangerous goods. As for all dangerous goods, hazards are communicated by marking, labelling, placarding and documentation.

The responsibility for initial response to any incident involving drummed Uranium Oxide Concentrate (UOC) packed in shipping containers transiting or transhipping through overseas shipping ports and terminals will generally fall with either the ship's crew or the port or terminal operations staff.

As such, initial response should always follow those organisations "in house" incident response guidelines for dangerous goods. Further escalation will occur depending on the scale and nature of the incident.

In all situations irrespective of size or scale, details of the incident must be reported to both the Consignor of the cargo and to the local Competent Authority who in turn may call upon their local radiation management and protection agencies for assistance and involvement as deemed necessary.

Details of the contents of each shipping container in the form of a detailed delivery manifest as well as a Safety Data Sheet for drummed UOC containing extensive details about the material are provided to the ship's crew and are available for each port and terminals through the local shipping line representative. Each shipping container is clearly marked, labelled and placarded in order to assist identification in the event of any incident.

The likelihood and attendant consequences of incidents involving a spillage of material during transit and or transhipment operations are extremely low in line with the packing group assigned by the International Atomic Energy Agency (IAEA).

<u>Uranium Oxide Concentrate</u>

Uranium is a naturally occuring, weakly radioactive element which is widely distributed through the earth's crust, in rocks, soils, stream sediments, rivers and oceans. Traces of uranium also occur in foods and human body.

Uranium contributes to what is termed natural background radiation. It decays over geological time, producing a series of variably radioactive daughter or decay products. During processing of uranium ore, the decay products are separated out and a weakly radioactive UOC is produced. Uranium is exported in the form of UOC which his both chemically and physically stable. It cannot undergo a chain reaction without further intensive processing.

Far Left –Typical BHP (Olympic Dam) or ERA (Ranger Mine) UOC

Left – Typical Heathgate (Beverley Mine) UOC

Chemical Name: Uranium Ore Concentrate as Uranium Oxide U3O8

Proper Shipping Name: Radioactive Material, Low Specific Activity (LSA-1) Non Fissile or fissile – excepted

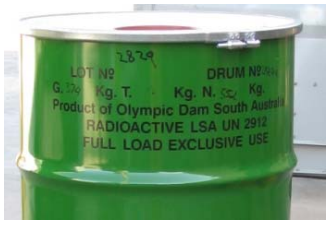
Class No: 7 (Class 7 Radioactive Material)

UN Number: UN2912 Class 7 Schedule No: 5, LSA-1

Common Name: UOC, yellow cake, U3O8

Packaging of drummed UOC

UOC is packaged in sealed 205 litre steel drums meeting IP-1 industrial package requirements as set out by the IAEA. Each drum has a tight fitting lid which is secured to the drum by means of a steel locking ring that is clamped by a locking ring bolt.



Far Left – Typical BHP (Olympic Dam) or ERA (Ranger Mine) UOC

Left – Typical Heathgate (Beverley Mine) UOC

Drums filled with UOC are stowed securely to international standards, within 20 foot ISO sea freight containers by means of a webbed Kevlar-based strapping system.

This is the preferred packing method and complies with the requirement of the IMDG code and relevant UN guidelines for packing of cargo transport units. This packing method has been formally approved by the Australian Maritime Safety Authority.

The packed containers are placarded, inspected and sealed with consecutively numbered CTPAT bolt type seals affixed to the door of each container. The containers remain sealed throughout the journey from mine site to final overseas point of delivery. The container seals are checked for integrity at all transhipment and discharge points.

Typical placard on UN2912 Class 7 Shipping container

Incident reporting

If an incident occurs the following information should be documented:

- Nature and time of incident
- Precise location
- Quantity and condition of UOC involved
- Any particular hazards present
- Details of container number, drum numbers involved
- Extent of damage or security breach
- Sequence of events leading to the incident
- Action taken
- Notifications to consignee, regulatory authority, competent authorities, shipping line.

Security

Persons within their respective areas of responsibility should ensure that:

- Every person engaged in the handling of dangerous goods exercises reasonable care to avoid damage to packages, unit loads and cargo transport units
- While dangerous goods are being handled, precautions are taken to prevent unauthorized access to handling areas; and
- If there is any loss of containment/control of dangerous goods, every practical step is taken to minimise risks to persons and adverse effects to the environment.

Spillages (in the event that offloading or transhipment is required)

The release or leakage of any UOC material should be treated as per any other dangerous goods or heavy metal concentrate in accordance with the relevant port or terminal operators incident response procedures.

- The responsibility for the initial response will generally lay with the terminal operator who would envoke their incident response procedures with the addition of contacting the Ministry of Health (see 24 hr emergency contact number on page 6).

- The first priority is to rescue any injured personnel, non-critical personnel should be excluded from the area.

- Non–critical personnel should be excluded from the area.

- The spilt material should be contained (covered to prevent dusting, bunding of area to reduce washdown) with plant, equipment and personnel being excluded from accessing the incident area.

- Basic personal protective equipment (eg) respirator, goggles, gloves, disposable overalls) provide all the necessary protection required for responder safety.

- Clean up will vary according to the scale of the spill but could be as easy as requiring manual collection of spilt material.

- Regulators (i.e. the local Competent Authority) and the Consignor MUST be informed of any incident involving a spillage of material.

- Depending on the scale of the incident, escalation following assessment will follow local incident response processes and is likely to involve local health protection officers (who provide the radiation monitoring capability) and possibly local fire service personnel who would be involved in the physical recovery of the spilt material.

Spillages in transit or whilst at sea

All UOC transported by Australian producers is stowed under deck. The shipping containers are stowed in the forward bay areas of the vessel. The shipping containers are generally positioned door to door, minimizing the opportunity for the doors to open should some external event trigger a significant impact or force upon the containers during transit through the port.

Under the IMDG transport regulations, all UOC shipments have a high degree of containment afforded by utilising approved packaging (the sealed 205 litre steel drum) meeting the IP-1 standard, secured within a sealed steel shipping container (as the outer package). Due to the multiple encapsulations afforded by this process the possibility for a release of material is very unlikely.

The IMDG Code emergency response procedures are linked to dangerous goods identified in the Dangerous Goods List (DGL), column 15, and take account of the circumstances of an emergency at sea. In the unlikely event of a spillage at sea the crew would invoke the following actions in accordance with the IMDG Code Supplement (amdt. 36-12) S-S Radioactive material as per Appendix A. Copies of this document are included with and form a part of the delivery documentation provided by the Consignor to the Shipping Line. All personnel involved in carrying Class 7 by sea are fully trained to meet the requirements of the International Convention for the Safety of Life at Sea (SOLAS) 1974 and "MARPOL" the International Convention for the Prevention of

Pollution from Ships, 1973 and its 1978 Protocol, as amended. for any spillage at sea, we should refer to IMDG Code Supplement (amdt 36-12) S-S Radioactive material adopting the recommended actions.

Contact details

For all incidents regarding the transport of UOC from Australian producer/shippers please refer to the Multimodal Dangerous Goods Form for the 24 Hour contact number of the Shipper/Consignor/ Sender or the Shippers Declaration for Radioactive Materials for the consignor's company contact details.

The Competent Authority of each state and territory in Australia and throughout the world should also be contacted in the case of a radiological emergency.

New Zealand Ministry of Health 24 hr (+64 0800 611 116) should be contacted with any radiological emergency related to shipments of UOC.

References

International Maritime Dangerous Goods (IMDG) code

IMDG CODE SUPPLEMENT (Amdt. 36-12)

IAEA Regulations for the Safe Transport of Radioactive Material – Safety Requirements No. SSR-6 (formerly TS-R-1)

Class 7 e-learning – Training for transport of radioactives

http://www.iaea.org

New Zealand emergency management plan (refer to correct name and section)

11 SAFE REMOTE LOCATIONS ON WHARVES

11.1 Terminal

If there is a need to store either Transit Cargo of Class 1.4S or 1.4G or transit consignments of other Class 1 Dangerous Goods of less than 25 Kg NEQ, these may be placed in C Block Row 30. Refer Map 13.2 "Isolation Area for Class 1 in Tauranga Container Terminal Yard".

The following criteria apply:

(a) The containers can be placed by straddle or driven to location on Maffi trailer.

(b) After placement Row 29, 30 and 31 to be activated in Sparcs with men working.

(c) The warning light on Light Tower 4B to be activated.

11.2 General Wharves

There is no approved isolation area at the Mount Maunganui general wharves.

11.3 Security of Stored Explosives

Whenever explosives are temporarily stored within the Port at safe remote locations, appropriate arrangements are to be made for their security.

The remote location is situated in the middle of the Terminal yard and any non authorised persons in this area, should be advised to the Operations Supervisor.

Spill Pit Procedures – Hazardous Product Identified

Note: The movement of a leaking container from its original location will only be done in consultation with the emergency services and only if it is deemed safe to do so.

Note: The below procedures must be completed **prior** to moving the container to the spill pit.

- TCT Ops to evaluate the possibility and logistics of transporting the portable spill tank to the leaking container. This is likely when a severe leak is detected. For smaller less significant leaks transportation to the spill pit is most likely.

- TCT Ops/TCT Planner to immediately notify all stevedoring foreman to initiate immediate emergency evacuation of southern stevedoring facilities.

- TCT Ops to notify Specialised Container Services to evacuate staff within 300 metres of the spill pit.

- TCT Ops/TCT Planner to immediately notify security and or TCT Ops representative to erect barriers across East road with a minimum 300 meter (or as directed by emergency services) clearance from the spill pit. Erect "ROAD CLOSED – HAZARDOUS SPILL – NO ENTRY" signage. Barriers and all signage located in yellow spill container (TCT Ops have key)

- Security and or TCT Ops representative to erect "STEVEDORE FACILITIY CLOSED – HAZARDOUS SPILL - NO ENTRY" signage (sandwich board) on yellow walkway at southern end of wharf apron. Notify TCT Ops road closed signage in place & stevedore facilities evacuated.

- Security and or TCT Ops representative – At spill pit close the retaining valve at the outlet to contain the product (the valve is normally open to release rain water). Exit the area to a safe distance, minimum 300 metres.

Do not proceed any further until all of the above has been completed

- TCT Ops instruct that the transportation of the container will now proceed to the spill pit.

Note: Should there be another leaking container over the pit then the second container will be placed over the portable spill tank.

- TCT Ops to notify all users via channels 13, 14, 15 that a hazardous container is on the spill pit and to remain a safe distance at all times (300 metres). Strictly no entry to the area including stevedore facilities until further notice and that East Road is now closed to all users.

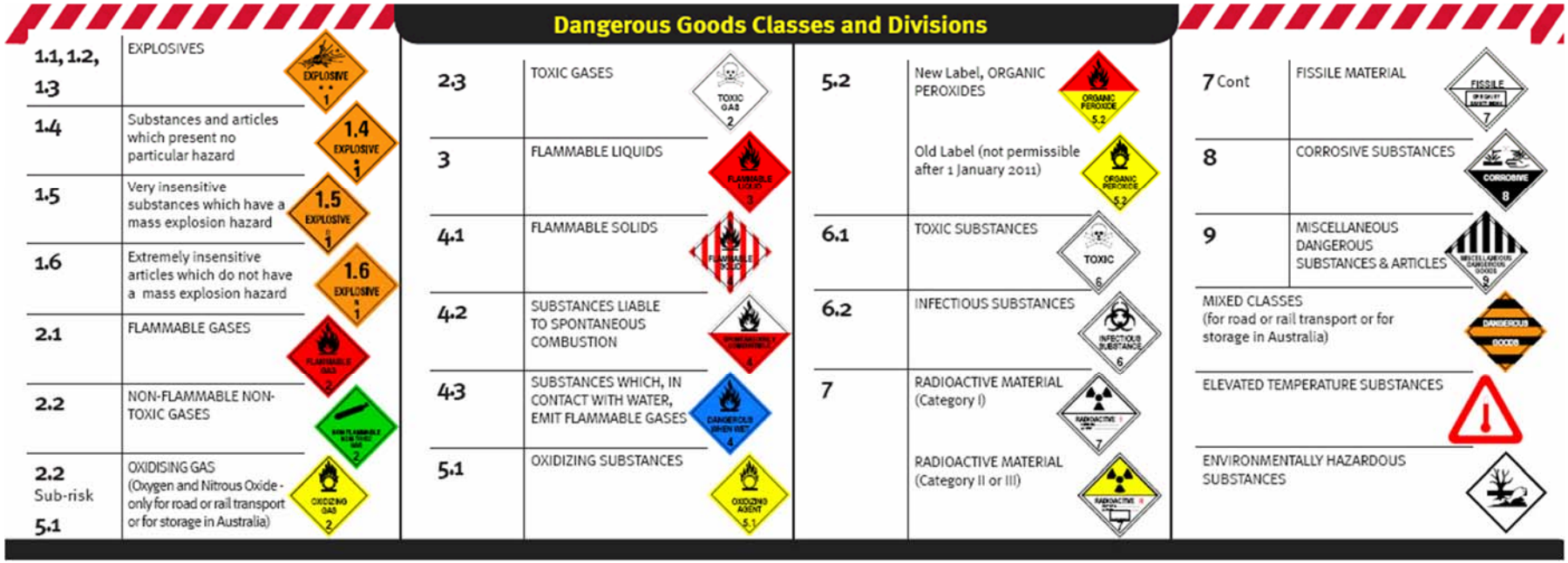
- Refer to Part 7 of this document "Control of devan and safe handling of product in spill container".

- All signage and fencing stored inside yellow spill container located beside spill pit.

Control of devan and safe handling of product in spill container

- If appropriate, area must remain cordoned off until determined that it is safe to remove that cordon.
- Container is not to be opened until cleared with Emergency Services or TCT Ops.
- Ascertain whether Emergency Services are required to be in attendance during devanning.
- Devan procedure is to be advised and controlled by Emergency Services, TCT Ops or their appropriate agents

Dangerous Goods Classes Placards and Labels



In the event of any leakage, spillage, or damage to a consignment of Dangerous Goods, the emergency procedures detailed in *Port of Tauranga Ltd Emergency Procedures Handbook* are to be implemented unless a Port of Tauranga Ltd Supervisor is completely confident that the incident does not warrant such actions.

If there is any doubt, the plan is to be implemented immediately.

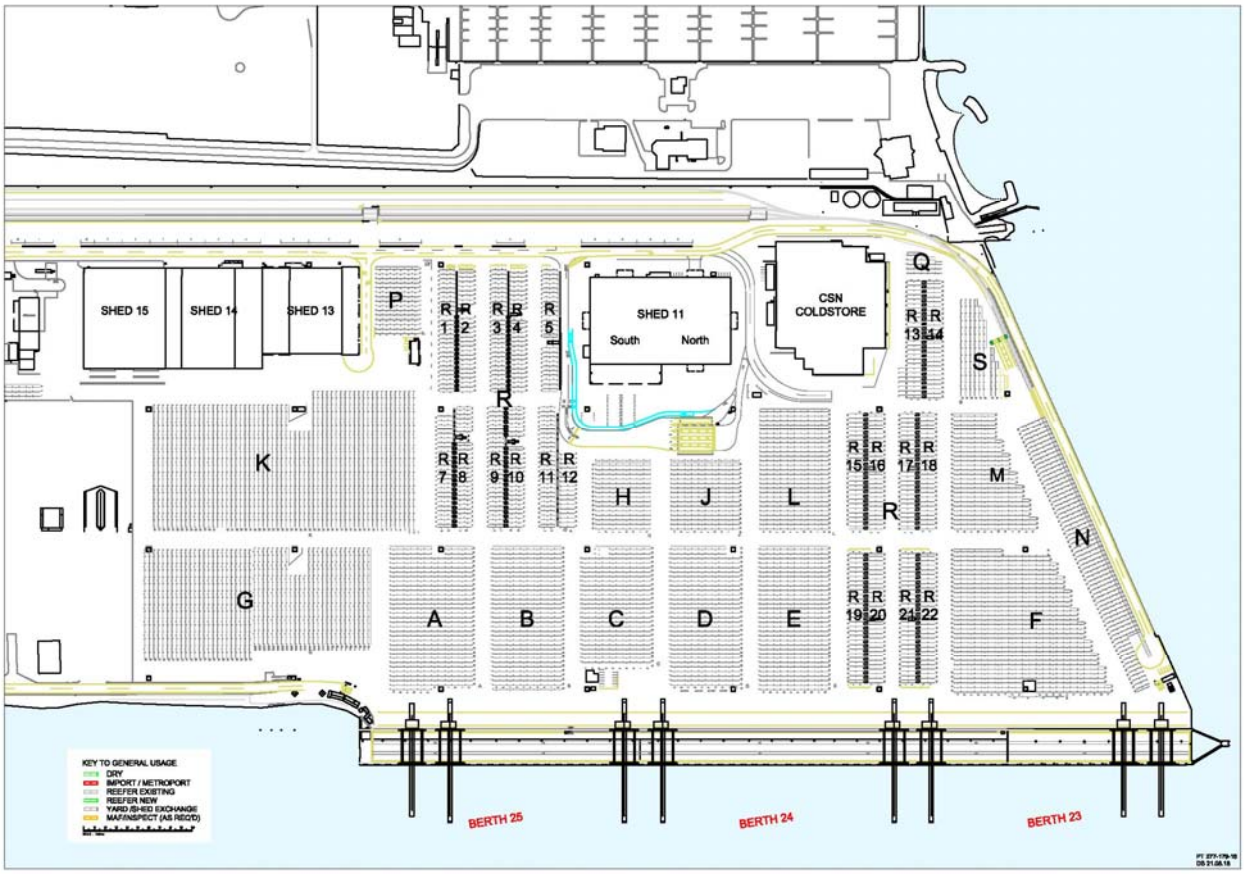
Training and exercises at employee, Shift Supervisor, and Manager levels on an annual basis.

Copies of the Port of Tauranga Limited Emergency Procedures Manual are to be held at all working positions for Shift Supervisors and above. The handbook is also to be available in electronic format at all Terminal computer drives.

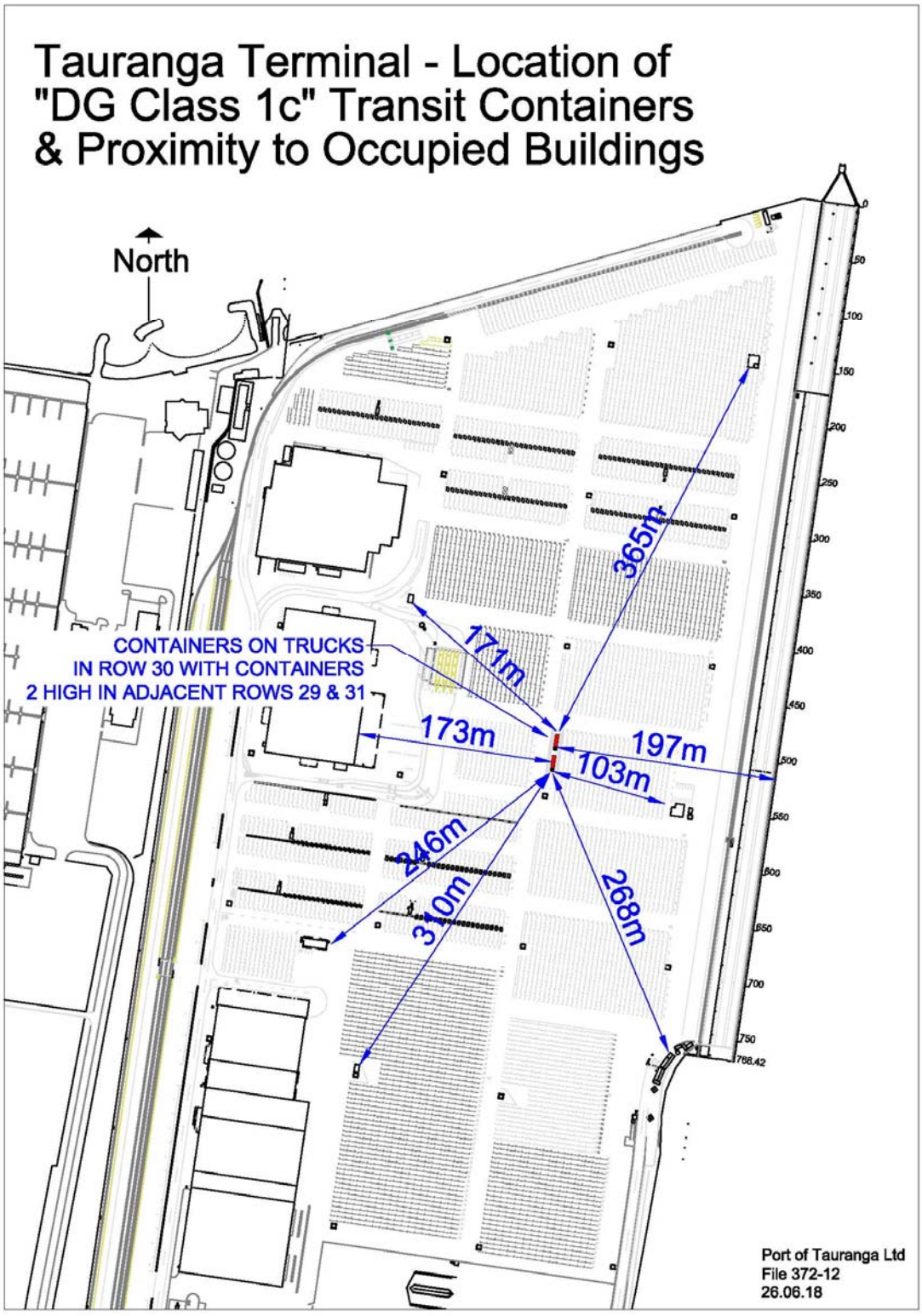
S:\ Manuals\ Emergency Procedures Manual

12 MAPS OF WHARF DANGEROUS GOODS STORAGE AREAS

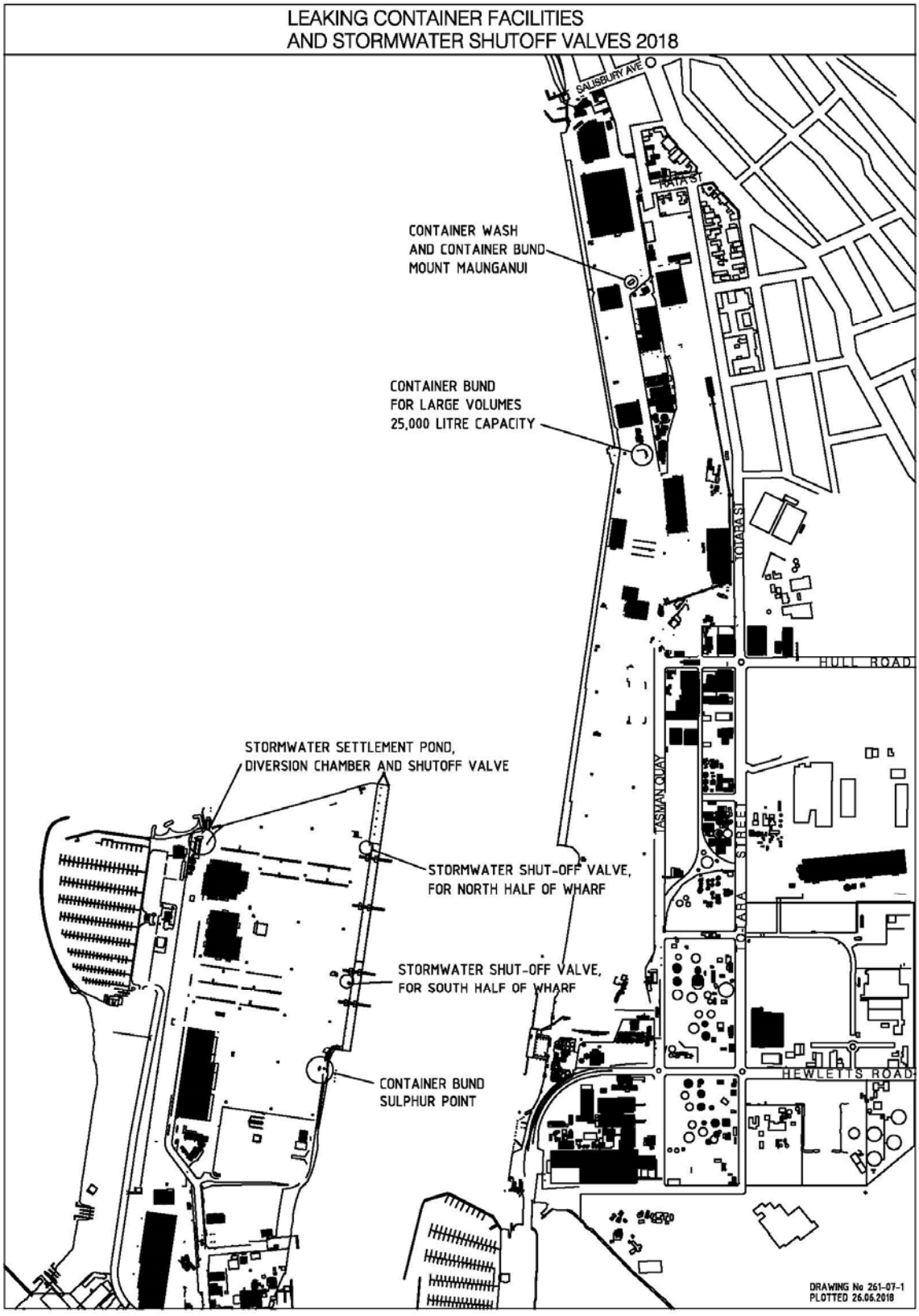
TAURANGA TERMINAL GENERAL



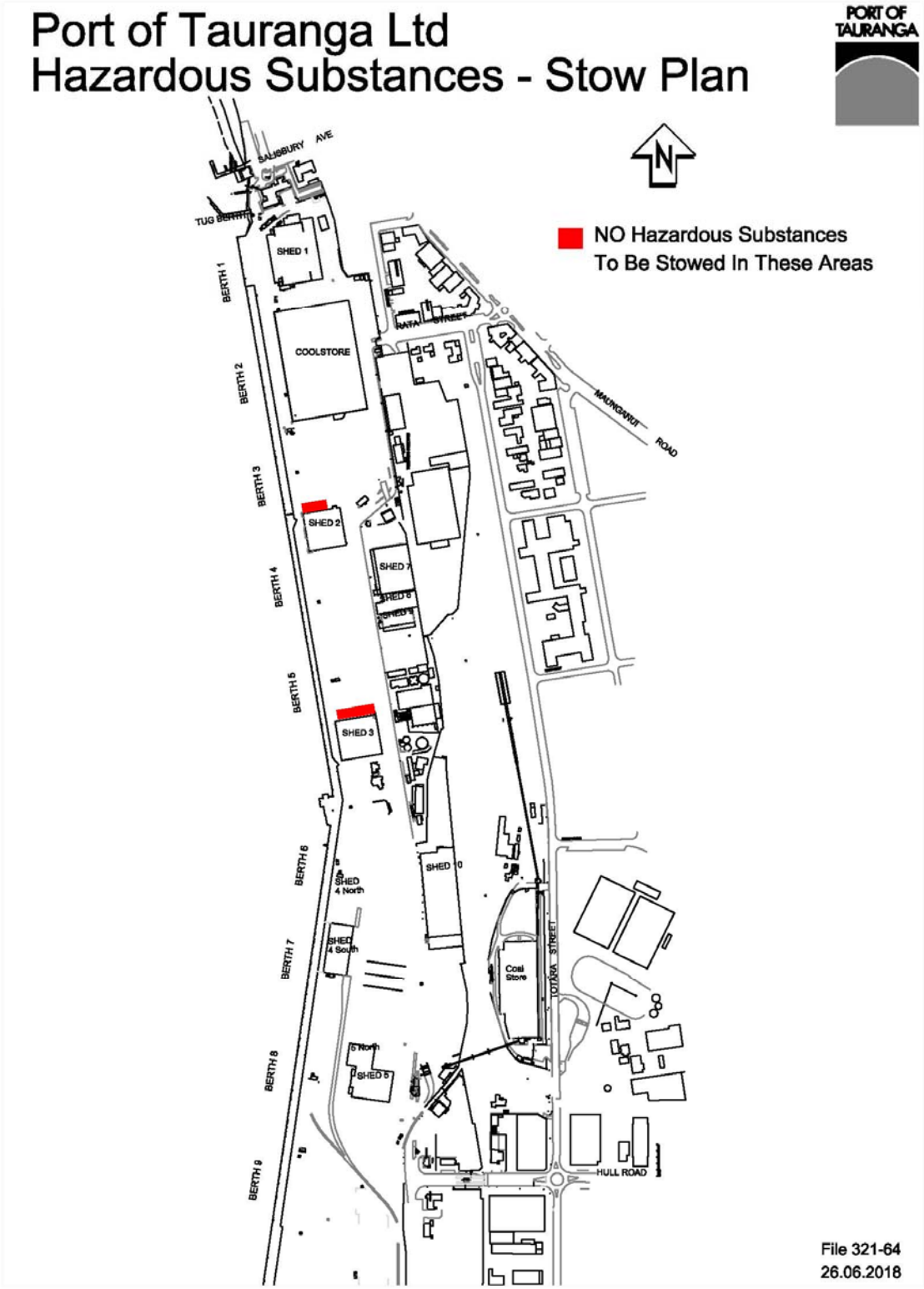
12.1 Isolation Area for Class 1 in Tauranga Container Terminal Yard



12.2 Leaking Container Facilities and Isolation Valves on Port of Tauranga



12.3 Hazardous Substance Stow Plan Mount Maunganui General Wharves



13 GLOSSARY OF TERMS & ABBREVIATIONS

Approved Handler: An approved handler is a person who holds a current test certificate certifying that they have met the competency requirements specified by the Personnel Qualification Regulations in relation to handling specific hazardous substances during specified parts of the lifecycle.

Designated Transfer Zone:

1 Means a place used and required to be designated as such under Regulation 46 HSNO (Class 1-5 Controls) Regulations, for the movement of a Class 1 substance from one type of transport to another, where the movement requires handling of packages or containers; but

2 Does not include:

(a) roll-on roll-off operations in which a vehicle or trailer with its load drives or is driven on to or into another means of transport for the duration of a journey; or

(b) a hazardous substance location; or

(c) a designated use zone.

Ecotoxic Substance: Capable of causing ill health, injury, or death to any living organism.

Hazardous Substance Location

1 In relation to a Class 1 substance:

(a) means an area where an amount of the substance that is in excess of the relevant quantity specified in Table 5 in Schedule 2, HSNO (Class 1-5 Controls) Regulations is manufactured, or is located for more than 2 hours;

(b) does not include any designated use zone or designated transfer zone (as defined in regulation 11) or any means of transport within a transfer zone for the purposes of transfer;

(c) does not include a vehicle, ship, or aircraft while it remains under the direct control of its driver, master, or pilot and under the jurisdiction of the Land Transport Rules, the Maritime Rules, or the Civil Aviation Rules, as the case may be.

2 In relation to a Class 2, 3, 4, or 5 substance:

(a) means an area where an amount of the substance that is in excess of the relevant amount specified in HSNO (Class 1-5 Controls) Regulations ,Table 4 in Schedule 3, Table 1 or Table 2 in Schedule 4, or Table 1 of Schedule 5 is located for more than:

- 18 hours, in the case of a substance that is not subject to the tracking provisions of the Hazardous Substances (Tracking) Regulations 2001
- hours, in the case of a substance subject to the tracking provisions of those regulations

(b) does not include a vehicle, ship, or aircraft while it remains under the direct control of its driver, master, or pilot and under the jurisdiction of the Land Transport Rules, the Maritime Rules, or the Civil Aviation Rules, as the case may be.

Person in Charge: in relation to a place, a hazardous substance location, a transit depot or a place of work, means a person who is:

(a) the owner, lessee, sub lessee, occupier, or person in possession of the place, location, or depot or any part of it; or

(b) any other person who, at the relevant time, is in effective control or possession of the relevant part of the place, location, or depot.

Place: includes any vehicle, ship, aircraft or other means of transport.

Test Certificate: Test certificates provide for a formal means of verifying that required HSNO specifications have been met. Test certificates can be issued to either a person (to certify competence as an approved handler) or to a specific site or location (to certify compliance with certain safety and procedural requirements).

Test Certifier: Test certifiers are individuals who are authorised under the HSNO Act by the Authority to issue test certificates

Toxic Substance: Capable of causing ill health in or injury to, human beings

Transit Depot: A transit depot is a permanent place (excluding a means of transport, and excluding places where substances are held for sale or supply) used as a transport depot that is designed to hold hazardous substances (in containers that remain unopened) for a period of up to three days, but for periods that are more than:

- 18 hours (for substances that do not require tracking) or
- 2 hours (for substances that are subject to the Tracking Regulations)

Abbreviations

BOPRC	Bay of Plenty Regional Council	IMDG	International Maritime Dangerous Goods Code
COP	Code of Practice	ISO	Organisation for Standardisation
DG	Dangerous Goods	L&R	Land and Remove
DMV	Direct to Motor Vehicle	LCL	Less than a Container Load
DTZ	Designated Transfer Zone	MPI	Ministry of Agriculture and Forestry
EMS	Emergency Medical Services	NEQ	Net Explosive Quantity
EPA	Environmental Protection Agency	POT	Port of Tauranga
EPM	Emergency Procedures Manual	R&D	Receival and Dispatch
FCL	Full Container	SOLAS	Safety of Life at Sea
HO	Hazardous Organism	TCT	Tauranga Container Terminal
HSNO	Hazardous Substances & New Organisms Act	UN	United Nations
UNDG	United Nations Dangerous Goods Code		

14 APPENDIX A – The EmS Guide

SPILLAGE SCHEDULE Sierra

S-S

RADIOACTIVE MATERIAL

General comments		Evacuate compartment or downwind area of non-essential personnel. Provide respiratory protection to personnel in downwind area. For ships carrying radiation monitoring equipment, measure radiation levels. In this case, access the extent of contamination and resultant radiation level of the package, the adjacent areas and, if necessary, all other material which has been carried in the conveyance. Define a zone for restricted entry. Personnel should not enter this zone without suitable protective clothing and self-contained breathing apparatus. Limit entry of personnel to the restricted zone for the shortest time possible. Cover liquid spill with inert absorbent materials, if available. Cover powder spills with plastic sheet or tarpaulin to minimise spread. If exposure of personnel is suspected, clean body and hair with warm water and soap; discharge resultant washings directly overboard. Record the names of potentially exposed persons. Ensure medical examination of these persons after reaching any medical staff. Emergency procedures, if established for the ship or the specific cargo by relevant authorities or the shipper, should be followed. For ships carrying radiation monitoring equipment, continue monitoring the radiation levels. Radio for expert ADVICE.
Spillage on deck	**Packages (small spillage)**	Wash spillages overboard with copious quantities of water. Keep clear of effluent. Packages damaged or leaking radioactive contents may be removed to an acceptable restricted access interim location. Isolate and sheet over. Do not remove packages from restricted access zone until approved by the competent authority.
	Cargo Transport Units (large spillage)	Let released gas escape. Keep clear. Use water spray to protect bridge, living quarters and personnel from precipitation of vapours (water curtain). Absorb liquid spillage, where practicable, using absorbent material. Isolate and sheet over. Packages damaged or leaking radioactive contents may be removed to an acceptable restricted access interim location. Isolate and sheet over. Do no remove packages from restricted access zone until approved by the competent authority. Wash residues of liquids or solids overboard with copious quantities of water (use spray nozzles). Do not allow water to enter receptacles.

Spillage under deck	**Packages (small spillage)**	Provide adequate ventilation. Let released gas escape, keep clear. Where a ventilation system is used, particular attention should be taken in order to prevent radioactive vapours or fumes entering occupied areas of the ship, e.g., living quarters, machinery spaces, working areas. Keep solids dry. Absorb liquid spillage, where practicable, using inert absorbent material. Isolate and sheet over. Packages damaged or leaking radioactive contents may be removed to an acceptable restricted access interim location. Isolate and sheet over. Do not remove packages from restricted access zone until approved by the competent authority. Keep working period of emergency team in space as short as possible.
	Cargo Transport Units (large spillage)	Do no enter space. Radio for expert ADVICE. ***If liquid, or vapour is developing:*** Where a ventilation system is used, particular attention should be taken in order to prevent radioactive vapours entering occupied areas of the ship, e.g., living quarters, machinery spaces, working areas. Use water spray to protect bridge, living quarters and personnel from precipitation of vapours evolving from the hold (water curtain).

Special cases:	
UN 2977, UN 2978	Avoid contact, even when wearing protective clothing. Keep clear of evolving vapours. Even short time inhalation of small quantities of vapour can cause breathing difficulties. Bear in mind that gases are heavier than air. Measure should be taken to prevent leaking gasses from penetrating into any other part of the ship. Keep bridge and living quarters upwind. Protect crew and living quarters against corrosive and toxic vapours by using water spring to drive vapours away.
UN 2919, UN 3331	Do no enter space without protective equipment. Keep clear. Radio for expert ADVICE. For radioactive material, *transported under special arrangement*, use special precautions, operational controls or emergency procedures as specifically designated by the competent authorities in their approval certificates and declared by the shipper in its transport documents.
Subsidiary labels class 4.2 or class 4.3	These are pyrophoric substances, water will ignite the material. DO NOT USE WATER. Radio for expert ADVICE.

Restowing of packages **UN 2977, UN 3324,** **UN 3325, UN 3326,** **UN 3327, UN 3328,** **UN 3329, UN 3330,** **UN 3331**	Check package labels and transport documents to determine whether packages contain fissile material. Prior to any restowing of these packages, radio for expert ADVICE.

FIRE SCHEDULE India

F-I

RADIOACTIVE MATERIAL

General comments		Evacuate compartment or downwind area of non-essential personnel. Do not touch damaged packages. In cases of suspected radioactive contamination, limit entry of firefighters for the shortest time possible. For ships carrying radiation monitoring equipment, measure radiation levels. Radio for expert ADVICE. After the fire has been extinguished, clean ship's surface with copious quantities of water. Decontaminate firefighters before protective clothing is removed. Isolate potentially contaminated clothing and equipment. If exposure of personnel is suspected, clean body and hair with warm water and soap; discharge resultant washings directly overboard. Record the names of potentially exposed persons. Ensure medical examination of these persons after reaching any medical staff. For ships carrying radiation monitoring equipment, continue monitoring of radiation levels after fire is extinguished.
Cargo on fire on deck	**Packages**	Create water spray from as many hoses as possible.
	Cargo Transport Units	Create water spray from as many hoses as possible. Cool burning transport units and nearby cargo exposed to the fire with copious quantities of water.
Cargo on fire under deck		Stop ventilation and close hatches. Use cargo space fixed fire-extinguishing system. If this is not available, create water spray using copious quantities of water.
Cargo exposed to fire		If practicable, remove or jettison packages which are likely to be involved in the fire. Otherwise, cool for several hours using copious quantities of water.

Special cases:	
UN 2977, UN 2978	Chemical hazard greatly exceeds radiation hazard. Material reacts with moisture to form toxic and corrosive gas. The run-off may be corrosive. Keep clear. Exposed cargoes may explode in a fire. Create water spray. Leak may be evident by visible and irritating vapours. Released vapours may also react violently with hydrocarbons (fuel).
UN 3332, UN 3333	If the source capsule is identified as being out of its packaging, do not touch. Stay away, minimise exposure to radiation by limiting time near material and by maximizing distance. Radio for expert ADVICE.
Subsidiary label class 4.2 **or class 4.3**	All radioactive material with subsidiary risk label 4.2 or 4.3 affixed (eg pyrophoric uranium or thorium metal): Radio for expert ADVICE. ***On deck:*** Do not use water onto the material. Cool nearby cargo with copious quantities of water, although the fire could intensify for a short period. Do not spray small quantities of water onto the fire, use copious quantities of water. ***Under deck:*** Stop ventilation and close hatches. The fixed gas fire-extinguishing system should be used. If this is not available, do not use water onto the material in enclosed spaces under deck. With open hatches, cool nearby cargo with copious quantities, although the fire could intensify for a short period. Do not spray small quantities of water onto the fire, use copious quantities of water only.