



Port of Tauranga

Connecting New Zealand and the World

**Dangerous Goods Code of Practice
– Tauranga Container Terminal**

March 2026

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1. Introduction

The **International Maritime Dangerous Goods Code (IMDG)**, the **New Zealand Hazardous Substances & New Organisms Act (HSNO)** and the **Health and Safety at Work Act: Hazardous Substances Regulations (HSW(HS))** defines how Dangerous Goods cargo are to be handled and stored at the Port of Tauranga (POT). These regulations collectively provide the guiding principles this Code of Practice.

This Code of Practice specifically covers how DG will be managed by the Port of Tauranga at the Tauranga Container Terminal. Please refer to additional codes for Mount Wharves and Ruakura.

Definitions	
Breakbulk	All cargo NOT in containers.
Containers	All cargo either in ISO containers, ISO flatracks, non-ISO enclosed containers and not palletized or shrink-wrapped or bulk bagged.
DG Class	The IMDG code and/or HSNO Act classification from Classes 1 to 9 assigned to cargo.
DLR	Discharge, Land & Reship when cargo is discharged from a vessel but departing on that same vessel as well.
DMV	Direct to/from Motor Vehicle – Export cargo to be loaded directly from motor vehicle to vessel at ship side. Import cargo to be unloaded directly from ship to motor vehicle. (DMV cargo is not to be stored on the wharf or placed in a stack, only transferred directly between the vessel and vehicle.)
DTZ	Designated Transfer Zone – An area for the transfer of Class 1 (Explosives) from one transport mode to another which acts in accordance with Reg. 9.44 Health and Safety at Work (Hazardous Substances) Regulations 2017).
HSW(HS) 2017	Health and Safety at Work (Hazardous Substances) Regulations 2017.
Limited Quantities	Dangerous Goods being transported as limited quantities have a maximum quantity per inner packaging or article; column 7a of IMDG Dangerous Goods List.
L&R	Land and Remove – All other Dangerous Goods cargo besides DMV can be stowed in specified positions in designated stacks and to be removed for load on vessel or from the port site within 72 hours (unless specified otherwise as per the code).

Definitions	
L&R 24 hours	Land and Remove (24hours max. time allowed at the terminal). All other Dangerous Goods Cargo besides DMV and L&R can be stowed in specified positions in designated stacks and to be removed for load on vessel or from the port site within 24 hours (unless specified otherwise as per the code).
NEQ	Nett Explosive Quantity also referred to as NEC (Nett explosive content). In a cargo consignment, it is the nett quantity of active explosive substance excluding all packaging and non-explosive wrapping etc.
R&D	Receipt and Delivery
SDS	Safety Data Sheet, previously known as MSDS (Material Safety Data Sheet).
Stowage	L&R cargo being placed at port in the container stacks to load the vessel or be picked up from port.
Storage	Tauranga Container Terminal is a transit depot as defined in the HSW(HS) 2017 and may not store DG substances longer than 72 hours. POT ensures we manage products that reduce the risks in the case it does exceed the dwell time due to the volatility of the shipping industry.
Transit	Cargo on board ship that is not to discharged at port and is just traveling through Tauranga port.
Transit Depot	See HSW(HS) 2017 interpretation.
Transship	Cargo that is discharged from one vessel and is to be loaded and departed on another vessel, requires temporary storage or stowage.

2. Official Rulings and Legislation

The Port of Tauranga's DG management are under the effect on the following Acts, Regulations and By-Laws. The official requirements are administered through the procedures of this Code of Practice.

1) Hazardous Substances & New Organisms (HSNO) Act 1996(2001)

The HSNO Act is the main law that manages the hazardous substances and new organisms, its aim is to protect the environment and the health and safety of individuals from the negative impacts of hazardous substances. The implementation of HSNO is mainly carried out by the Environmental Protection Authority (EPA). WorkSafe oversees the enforcement of workplace regulations. In 2021, the HSNO regulations embraced the Globally Harmonised System (GHS) classification for hazardous substances.

2) Health and Safety at Work Act 2015 (HSWA)

The New Zealand Health and Safety at Work Act 2015 (HSWA) established the general duty to manage the risks associated with hazardous substances, while the detailed requirements for handling these substances are set out in the Health and Safety at Work (Hazardous Substances) Regulations 2017. The Health and Safety at Work Act of 2015 (HSWA) governs the new rules replacing the HSNO regulations management guidelines for the handling and storage of Classes 1-8 hazardous materials in the workplace.

3) Maritime Transport Act 1994

Applies the IMDG code and the IMO Rules for Maritime carriage of Dangerous Goods.

4) Maritime Rule Part 24A. Carriage of Cargos – Dangerous Goods

Implements the IMDG Code on ships and gives effect to Chapter VII of the SOLAS convention.

5) Maritime Rule Part 130B – Oil Transfer Site, Marine Oil Spill Contingency Plan. (Tier 1Plan)

This requires the Port of Tauranga 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 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.

6) Hazardous Substances (Classification) Notice 2017

Defines the DG Classes as (nearly) copies of the IMDG Code.

7) Health and Safety at Work (Hazardous Substances) Regulations 2017

Outlines all the fundamental controls for the usage and storage of pertinent dangerous goods in ways that safeguard persons and the environment in workplaces.

8) Resource Management Act

The Resource Management Act (RMA) 1991 impacts the storage of dangerous goods (DG) on New Zealand ports, primarily by managing the potential adverse environmental effects and controlling land use through resource consents and district/regional plans.

3. Documentation

Every shipment of DG cargo must have a dangerous goods declaration with emergency response information to comply with the IMDG Code and Dangerous Goods (DG) Rules. A Safety Data Sheet (SDS) with all necessary information should be included in this emergency response information. Without proper compliance documents, no cargo may be received or delivered. While the DG cargo is on POT property, this information is stored electronically and can be sent to Emergency Services in paper copy or electronically as needed.

A DG container in yard report is automatically generated and sent to the C&CL (Cargo & Customer Logistics) Supervisor and Lines every day at 0700. This report is used to check for units approaching or exceeding the allowed time in yard and liaise with the shipper/cargo owner to have the unit uplifted as soon as possible.

HAZARDOUS SUBSTANCES EXPORT PROCESS

1. Shippers ensure unit is compliant
 - a. Unit has 4x HAZ stickers/placards outside on each side.
 - b. Complete IMO hazardous declaration, IMDG class, UN number, proper shipping name, product name, EMS, emergency contact name, telephone, and signature.

RECEIVAL BY ROAD

1. IMO hazardous declaration required, and if a tank then a Tank Container Equipment Safety Checklist presented to R&D desk
2. All DG units on truck Red Lane so they can go to R&D desk for details to be checked and confirmed at the desk (driver and despatcher to fix any issues).
3. Stickers/placards on container checked (driver and despatcher to fix any issues).
4. After processing paperwork, truck can move to the exchange for unit to be uplifted by straddle.
5. DG place in yard with the IMDG code used for separation.

RECEIVAL BY RAIL

1. Container details are checked against the hazardous declaration form to ensure all details match.
2. Unit is received and placed in yard with the IMDG code used for separation. If we have not received the proper documentation, unit will stay onboard and travel back.
3. Hazardous declaration is photocopied and saved in relevant DG folder.

HAZARDOUS SUBSTANCES IMPORT GATE IN PROCESS

1. Inbound Bayplan received and processed by Planners.
2. Shipping line to supply us the hazardous declaration documents no later than 48 hours prior to vessel eta to C&CL team.
3. Documents saved or scanned to P:/shipping lines/vessel/DG imports.
4. Declarations are checked against the system to ensure any missing details are entered.

5. ANY DOCUMENTS THAT ARE INCOMPLETE OR ILLEGIBLE are replaced by shipping line
6. Unit may stay onboard the vessel and will not be discharged without the required documentation and will travel back.
7. Documents passed to Rail desk.
8. DG units going to MetroPort are printed using Report/TRG/Tauranga Reports/Rail DG Reports.
9. Declarations are photocopied and placed into plastic envelopes. One copy inside and one copy stapled to the outside.
10. MetroPort paperwork filed by vessel at rail desk.
11. Tauranga delivery paperwork by vessel at rail desk.

LOADING TO ROAD

1. Truck transaction processed at R&D office.
2. Hazardous Declaration document given to driver.

LOADING TO RAIL

1. Printed envelopes given to shunter to place on train wagons.

4. Handling for Specific Class of Dangerous Goods

CLASS 1 (EXPLOSIVES)

Class	Rules	Transit Cargo	Transshipment Cargo
1	<p>All Class 1 DMV Discharge direct to/from motor vehicle. Exceptions: All Class 1.4 and 1.3G. To be removed from Port within 24 hours.</p> <p>Discharge: First cargo off before any other bays worked loaded directly from crane to motor vehicle to leave wharf immediately.</p> <p>Load: Last cargo to load on vessel before departure with no other cargo worked at the same time loaded directly by crane from motor vehicle.</p>	<p>All Class 1.4 and 1.3G may remain on board.</p> <p>All other class 1 containers are to be unloaded first, removed from site and reloaded last prior to departure unless EPA approval gained to handle it differently.</p>	<p>24 hours only storage for: All Class 1.4 and 1.3G.</p> <p>All other Class 1 to be removed from the terminal unless EPA approval gained to handle it differently.</p>

CLASS 2, 3, 4, 6, 8, 9

Class	Rules	Transit Cargo	Transshipment Cargo
2 – Compressed Gases	Class 2 to be removed within 72 hours	Cargo may remain on vessel	72 hours storage for Class 2
3 – Flammable Liquids	Class 3 to be removed within 72 hours – stowage max 1 high for ISO tanks	Cargo may remain on vessel	72 hours storage for Class 3
4 – Flammable Solids	Class 4 to be removed within 72 hours	Cargo may remain on vessel	72 hours storage for Class 4
6 – Toxic Substances	Class 6 to be removed within 72 hours	Cargo may remain on vessel	72 hours storage for Class 6
8 – Corrosive Substances	Class 8 to be removed within 72 hours	Cargo may remain on vessel	72 hours storage for Class 8
9 – Ecotoxic Materials	Class 9 to be removed within 72 hours	Cargo may remain on vessel	72 hours storage

CLASS 5 OXIDIZING AGENTS

Class	Rules	Transit Cargo	Transshipment Cargo
5	Class 5.1 Ammonium Nitrate to be removed within 24 hours, Class 5.2 Organic Peroxides to be removed within 24 hours	Cargo may remain on vessel	Class 5.1 Ammonium Nitrate to be removed within 24 hours Class 5.2 Organic Peroxides to be removed within 24 hours

Ammonium Nitrate- For shipments of Ammonium Nitrate above 400 tonnes (limited as per the Australian standard, maximum it can go on the port). A specific risk assessment will be conducted and a compliance certifier and WorkSafe will be consulted before confirming with the line if the cargo can be safely handled. Shipping lines need to advise the POT regarding import cargo before the consignment is loaded on inbound vessel and have gained approval from the POT. Export cargo require approval from the POT as well before cargo arrival to the port.

CLASS 7 RADIOACTIVE SUBSTANCES

Class	Rules	Transit Cargo	Transshipment Cargo
7	All Class 7 – DMV (Direct from/to Motor Vehicle) – No Class 7 to be handled without the approval from the Office of Radiation Safety (ORS), the EPA, and MFAT. Handling to be in strict accordance with the EPA approval document. As a general guideline however, Class 7 is first off/last on DMV with all other operations ceased on the vessel.	All Class 7 cargo transiting require clearance from Ministry of Foreign Affairs and Trade (MFAT); EPA approval; import/export approval from the Office of Radiation Safety - consent to be procured by line operator or shipper. Once permit granted, cargo can transit – must remain onboard. To be loaded underdeck in areas not worked in port. Line required to forward the MFAT consent, the Office of Radiation Safety (ORS) and the Environmental Protection Agency (EPA) approvals to the Port and harbourmaster.	Port will not store tranship cargo.

5. Stowage in Port Areas

Container stowage will be stowed in designated stacks under the IMDG separation and segregation requirements. The “Land and Remove” procedures will be utilised to manage all import/export DG cargos. DG containers storage is for 72 hours maximum unless the 24hrs L&R requirements apply. All shipping DG container designated stowage areas shown in appendix 1.

DG cargo dwell times at the terminal managed through N4 and monitored by the C&CL team. DG receipt opens 48 hours before scheduled ship arrival except for DMV classes.

DG cargo in stowage with the same DG class can be stacked “like for like”. ISO-tanks to be stacked only 1-high as per the classified class in this COP. DG placards to be visible on sides of cargo during the storage period.

A DG container in yard report is automatically generated and sent to the C&CL (Cargo & Customer Logistics) Supervisor and Lines every day at 0700. This report is used to check for units approaching or exceeding the allowed time in yard and liaise with the shipper/cargo owner to have the unit uplifted inside the 72 hours deadline or earlier as stated in this COP.

Class 1 & 7- The Port is not permitted to store these cargo (exception of Class 1.3G and Class 1.4) and will be treated as DMV.

Class 2 Gases- Cylinders of gas of any class to be stored in open air for adequate ventilation, 3 meters away from building or other DG goods and with clear access in event of an emergency.

Classes 3, 4, 5, 6, 8, 9- Stored as per the IMDG code.

RECEIPT & DESPATCH PROCEDURES

Dwell times for various DG class at the Port

1. DMV (Direct to Motor Vehicle)

All Class 1 (Except 1.3G and All Class 1.4)	Explosives
All Class 7	Radioactive Substances

2. L&R (24 hours)

Class 1.3G, All Class 1.4	
Class 5.1	Ammonium Nitrate
Class 5.2	Organic Peroxides

3. L&R (72 hours)

Class 2
Class 3
Class 4
Class 6
Class 8
Class 9

DG SEGREGATION IN STOWAGE AREAS

The IMDG Code requirements for separation on vessel is mirrored for container stowage in yard as per the below table.

Container stacks are to be regarded as cells; mixed classes won't go in the same rows.

Container stowage placement in stacks is automatically allocated through the Navis N4 programme and the Terminal Operators use the XPS system as well to ensure segregation rules are followed and any breaches are rectified. TCT Operations Supervisors to monitor the DG designated stacks are following the IMDG separation and segregation.

SEGREGATION SHALL ALSO TAKE ACCOUNT OF A SINGLE SUBSIDIARY RISK LABEL.																		
		1.1, 1.2, 1.5	1.3, 1.6	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, 1.6	*	*	*	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
Toxic 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 (including self-reactive substances and solid desensitized explosives)	4.1	4	3	2	1	X	X	X	X	1	X	1	2	X	3	2	1	X
Substances, liable to spontaneous combustion	4.2	4	3	2	2	1	2	2	1	X	1	2	2	1	3	2	1	X
Substances which, in contact with water, emit flammable gases	4.3	4	4	2	X	X	X	1	X	1	X	2	2	X	2	2	1	X
Oxidizing substances (agents)	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
Toxic substances	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
Corrosive substances	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

Table interpretation index below.

Numbers and Symbols of Table Above Index

- 1 – “Away from” 3 meters vertical
- 2 – “Separated from” 6 meters horizontal
- 3 – “Separated by complete compartment or hold from” 12 meters horizontal
- 4 – “Separated longitudinally by and intervening complete compartment or hold from” 24 meters horizontal

SPECIFIC PORT SEGREGATION REQUIREMENTS

	Segregation Requirement	Vertical	Horizontal
1.	Away from	Not allowed	Fore and aft – one container space Athwartships – one container space
2.	Separate from	Not allowed	Fore and aft – one container space Athwartships – two container spaces
3.	Separate by a complete compartment or hold from	Not allowed	Fore and aft – two container spaces Athwartships – three container spaces
4.	Separate longitudinally by an intervening compartment	Not allowed	Fore and aft – minimum 24 meters Athwartships – minimum 24 meters

DG STORAGE MORE THAN 72 HOURS

The Port is a transit depot and has no authority to hold DG containers for more than 72 hours. However, due to the nature of the shipping industry, our ability to meet the 72 hours dwell times may be impacted. TCT mitigates the risks through careful separation planning and handling of these units as well as through our emergency procedures.

MOBILE CONTAINMENT BUNDS

POT has 3 mobile bunds and a permanent spill pit to contain leaking containers. One of our mobile bunds is designed to be used onboard the vessel. Due to the lack of feasibility for a port to maintain a secondary containment system, DG leaks and spills are managed through our storm water valve system detailed in the TCT Emergency Procedures manual.

6. Emergency Procedures

The emergency protocols outlined in the Port of Tauranga Limited Emergency Procedures Manual is to be utilised if a shipment of dangerous goods leaks, spills, or is damaged.

At the employee, shift manager, and manager levels, each department (Planners, Operations, etc) must conduct regular training and exercises.

All working positions for shift managers and higher must have copies of the Emergency Procedures Manual and the handbooks are accessible in electronic format in M files.

At the instance of a DG container leak, TCT Ops will set up an initial exclusion zone at 100 meters. TCT Ops/TCT Planners will locate the DG certificate and SDS, adjust the exclusion zone per the ERG and call Fire and Emergency NZ (FENZ). The incident will be escalated to the TCT Management Team.

POT will act in accordance with the Fire and Emergency's decision about the response to any leaking container or cargo. After FENZ has determined that the spill incident is safe, POT uses Intergroup for spill cleanups.

Chemical incidents in New Zealand have a 24/7 emergency response advisory service under ChemCall; phone number 0800 243622. Responsible Care New Zealand operates this service and provides expert technical advice, SDS access, and cooperation with the emergency services to manage the risks involved to property, people, and the environment. KiwiRail utilises this service for their emergency response procedures and the TCT Rail department utilizes ChemCalls 24/7 number for DGs on rail.

Copies of the Australian & New Zealand Emergency Response Guidebook (ERG) are available in the Incident Management Room (Wilson meeting Room), TCT R&D, TCT Rail and TCT Ops. In addition to FENZ, the harbourmaster and WorkSafe will be notified.

C block row 30 is the designated Class 1 stowage location. In the event of an onboard emergency which could potentially impact Class 1, if it is safe to do so, Class 1 will be discharged and placed in C block row 30. **Strictly in the case of an emergency.**

If the Class 1 cannot be safely discharged, the Quay side will be evacuated. Port Control and Harbourmaster will be informed and an exclusion zone based on the NEQ will be implemented including seaside.

BREAKBULK DG CARGO

DMV.

7. Class 1 (Explosives) – Handling Procedures

Class 1 consignment of goods below do not require special procedures.

Quantities of Class 1 Substances that activate requirements for Designated Transfer Zone and other special protection requirements	
1.1B, 1.2B and 1.4B	5 KG
1.1 (other than 1.1B and 1.1C) 1.2 and 1.5	50 KG
1.1C and 1.3 (Other than 1.3G)	100 KG
1.3G and 1.4 (Other than 1.4S)	200 KG
1.4S	1000 KG

EPA approved the following maximum volumes for Class 1 on each berth.

Recommended Maximum NEQ packed in ISO Containers for Each Explosives Handling Berth

Port	Berth	Max Recommended NEQ in kgs When Packed in ISO Containers
Tauranga	Sulphur Point Berth 24	55000
	Sulphur Point Berth 23	55000

The port has determined that the permissible NEQ that can be handled is within 238m radius of the public safeguarding distance to handle class 1 cargoes as per the below table.

Berth	Public Safeguard Distance	Qty HD1.1 Containers	Qty HD 1.1 Breakbulk	Qty HD 1.2	Qty HD 1.3	Qty Ammonium Nitrate 5.1
Berth 23 Sulphur Point	238	36,000 kg	3,000 kg	3,000 kg	200,000 kg	400 tonnes
Berth 24 Sulphur Point	238	36,000 kg	3,000 kg	3,000 kg	200,000 kg	400 tonnes

The Person in Charge of the operations must have approved training. The person in charge of the operation to be readily available with complete details of the sensitivity and safe environmental limits of the particular Class 1 DG being transferred.

In case of an approaching thunderstorm, the operations will cease. The thunderstorm evacuation distances are given in appendix 2 from the NEQ calculation table.

At the place of the Class 1 transfer from one form of Transport to another, the person in charge of the operation must:

A. Planning

1. Determine the size of the Designated Transfer Zone (DTZ) based on the NEQ. See appendix 2.
2. Plan for “first lift discharge and last lift load”.

B. Operation

1. Set up a Designated Transfer Zone (DTZ) that controls all vehicles, vessels or other transports involved in the operation.
2. Display Class 1 warning signs on the perimeter of DTZ.
3. Restrict access to all staff and members not directly involved in the operation of the Class 1 transport.
4. Impose a strict “No Smoking” ban.
5. All other work will cease in the DTZ while the Class 1 transfer is taking place.

PORT CONTACTS FOR CLASS 1 TRANSFER

The shipping line / consignee / shipper to provide contact details of the trucking company picking/dropping off unit to the shift managers at the terminal by email tctplanningsupervisors@port-tauranga.co.nz and the planners at tctplanners@port-tauranga.co.nz and phone on 07 572 8607.

CLASS 1 (EXPLOSIVES) – TRANSIT CARGO

The Port has no certified Class 1 storage areas excluding Class 1.4 and Class 1.3G. In the absence of EPA approval all transit cargo must be removed from the terminal (DMV).

Note: UN 0161, Class 1.3C, in quantities greater than 500KG it becomes Class 1.1C.

CLASS 1 (EXPLOSIVES) – TRANSSHIPMENTS

POT does not provide storage for Class 1 transshipments; import handling rules apply to transshipments.

8. Tank Container Equipment Safety Checklist

In addition to the hazardous packing certificates, for ISO tanks with bulk liquid hazardous content, they must have the Tank Container Equipment Safety checklist in appendix 4 done and signed by the shipper and submitted as mandatory documentation. At times, 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 shipper has done everything they have said they will do in the checklist as per appendix 4 with the necessary documentation.

9. Class 7: Contingency Plan covering drummed Uranium Oxide Concentrate packed in shipping containers transiting or transshipping through overseas shipping ports and terminals

Distribution: EPA

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 transshipping 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, and the ORS.

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 transshipment operations are extremely low in line with the packing group assigned by the International Atomic Energy Agency (IAEA).

Uranium Oxide Concentrate

Uranium is a naturally occurring, 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 is 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 transshipment and discharge points.



Typical placard on UN2912 Class 7 Shipping container

Incident reporting

If an incident occurs the following information to 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 operator's incident response procedures.

- The responsibility for the initial response will generally sit with the terminal operator who would invoke 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. This information is held by the POT Planning department. 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>

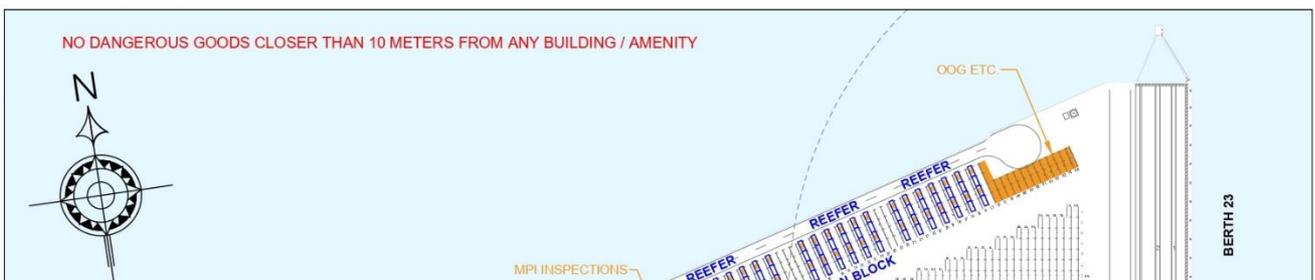
10. Roles and responsibilities

Role	Responsibility
C&CL Manager	Monitoring dwell times and contacting shipping lines for container removal within that designated time.
TCT Ops Supervisor	Ensure segregation rules and TCT DG Haz layout compliance.

11. Document Control

Version	Date	Author	Approved By	Next Review Date
1.0	3 rd March 2026	Vessel Planner Terminal Shipping & Planning Manager		3 rd March 2027

Appendix 1: Designated DG Stowage and Storage Areas



Appendix 2: Nett Explosives Quantity for Designated Transfer Zones

The source is Opus Consultants Ltd.'s 2008 study, "A Study to Derive Limits for Handling Shipments of Explosives at Selected Ports in New Zealand."

	HD 1.1		HD 1.2	HD 1.3	HD 1.4	Thunderstorm Evacuation Distances ^c
	Containerized (24kPa)	Break Bulk (9kPa)	Public Safeguard Distance	Public Safeguard Distance	Public Safeguard Distance	
Net Explosive Quantity (kg)	Public Safeguard Distance (m)					
5	60	90	71	0	25	25
10	60	90	80	0	25	25
15	60	90	86	0	25	25
20	60	90	91	0	25	27
25	60	90	95	0	25	29
30	60	90	98	0	25	31
40	60	90	103	0	25	34
50	60	90	107	0	25	90
60	90	135	111	0	25	90
70	90	135	114	0	25	90
80	90	135	117	0	25	90
90	90	135	120	0	25	90
100	90	135	122	0	25	90
200	90	135	138	60	25	90
300	90	135	148	60	25	90
400	90	135	156	60	25	90
500	90	135	163	60	25	90
600	90	135	168	60	25	90
700	90	135	173	60	25	90
800	90	138	177	60	25	93
900	90	143	181	60	25	97
1,000	90	148	184	60	25	100
1,200	135	158	190	60	25	106
1,400	135	166	196	60	25	112
1,600	135	174	200	60	25	117
1,800	135	181	205	60	25	122
2,000	135	187	209	60	25	126
2,500	135	201	217	60	25	136
3,000	135	214	224	60	25	144
3,500	135	225	231	60	25	152
4,000	135	235	236	60	25	159

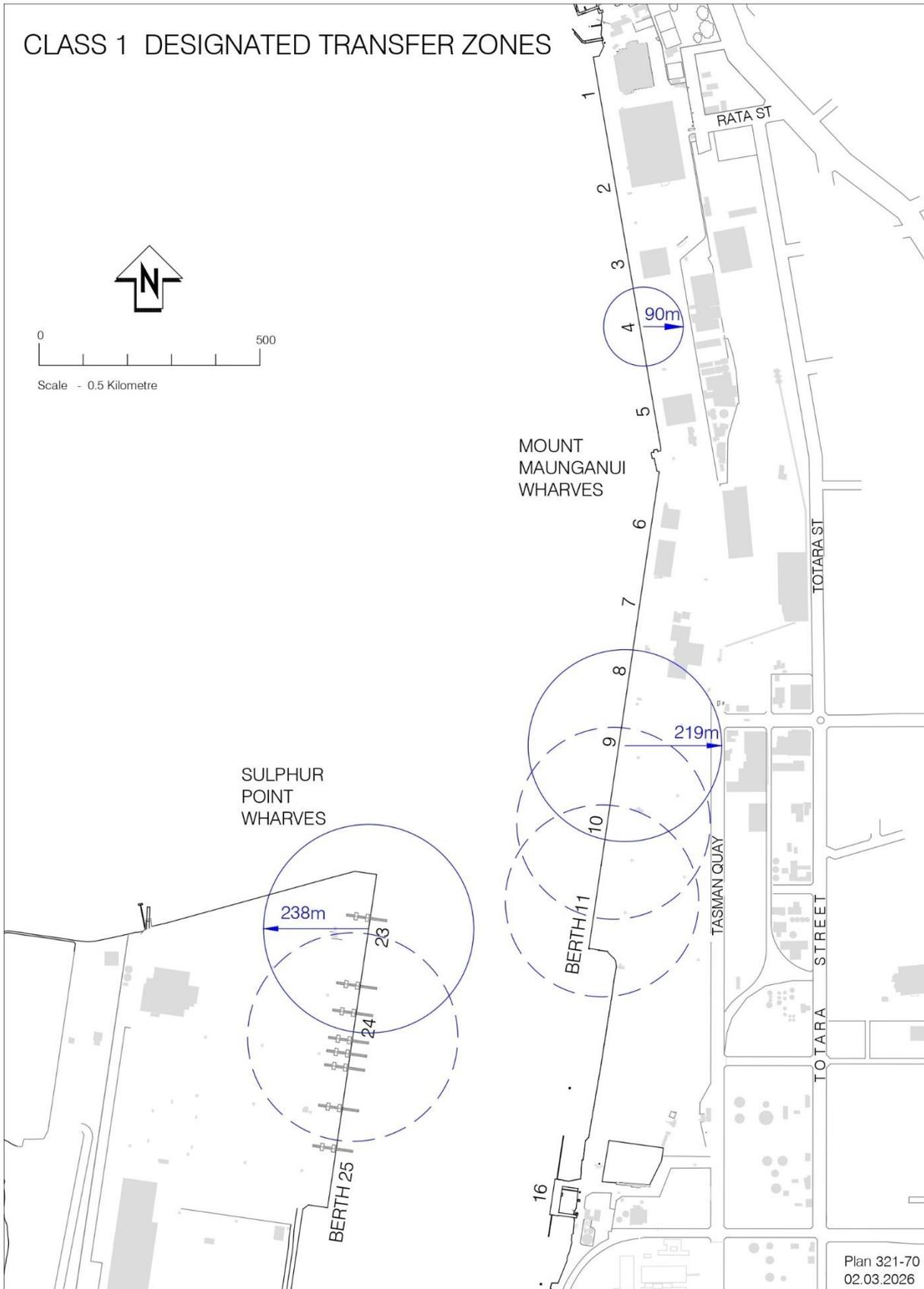
4,500	135	245	241	60	25	165
5,000	135	254	246	60	25	171
5,500	135	262	250	60	25	177
6,000	135	269	254	60	25	182
6,500	135	277	258	60	25	187
7,000	138	284	261	62	25	191
7,500	141	290	265	63	25	196

8,000	144	296	268	64	25	200
8,500	147	303	271	66	25	204
9,000	150	308	273	67	25	208
9,500	153	314	276	68	25	212
10,000	156	319	279	69	25	215
11,000	161	330	283	72	25	222
12,000	165	339	288	74	25	229
13,000	170	348	292	76	25	235
14,000	174	357	296	78	25	241
15,000	178	365	300	79	25	247
16,000	182	373	303	81	25	252
17,000	186	381	307	83	25	257
18,000	189	388	310	84	25	262
19,000	193	395	313	86	25	267
20,000	196	402	316	87	25	271
22,000	202	415	321	90	25	280
24,000	208	427	326	93	25	288
26,000	214	439	331	95	25	296
28,000	219	450	335	98	25	304
30,000	224	460	339	100	25	311
32,000	229	470	343	102	25	317
34,000	234	480	347	104	25	324
36,000	238	489	351	106	25	330
38,000	243	498	354	108	25	336
40,000	247	507	357	110	25	342
42,000	251	515	361	112	25	347
44,000	255	523	364	113	25	353
46,000	258	531	367	115	25	358
48,000	262	538	369	117	25	363
50,000	266	546	372	118	25	368
55,000	274	563	379	122	25	380
60,000	282	580	385	126	25	391
65,000	290	596	390	129	25	402

70,000	297	610	395	132	25	412
75,000	304	625	400	135	25	420
80,000	311	638	405	138	25	431
85,000	317	651	409	141	25	440
90,000	323	664	414	144	25	448
95,000	329	676	418	147	25	456
100,000	335	687	421	149	25	464
120,000	356	730	436	158	25	493
140,000	374	769	448	167	25	519
160,000	391	804	459	174	25	541
180,000	407	836	468	181	25	564
200,000	422	866	477	188	25	585

Appendix 3: Designated Transfer Zones

CLASS 1 DESIGNATED TRANSFER ZONES



Appendix 4: Tank Container Audit Checklist

TANK CONTAINER EQUIPMENT SAFETY CHECKLIST



Date of Delivery _____

Exporter _____

Pack Point _____

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

CHECKLIST		
#	DESCRIPTION	Please tick <input type="checkbox"/>
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 Name and 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			



PASS/ FAIL

