



GOVERNMENT OF
WESTERN AUSTRALIA

Explosives and Dangerous Goods Act 1961

SUMMARY OF ACCIDENT REPORTS

1996

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EXPLOSIVES AND DANGEROUS GOODS DIVISION
MINERAL HOUSE, 100 PLAIN STREET, EAST PERTH, WESTERN AUSTRALIA

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SUMMARY OF ACCIDENT REPORTS 1996

Summary Overview

The general trend of accident numbers over the past five years has been downwards and 1996 saw a continuation of that trend. This is an environment of increased activity in the dangerous goods industry so it is particularly gratifying.

The storage accident rate shows a healthy downward trend and industry is to be encouraged in its performance in this area.

Transport accident numbers remained steady while the industry continued to grow at about 3-5% p.a. for the past five years. The Division is optimistic that the new National Uniform Transport of Dangerous Goods Regulations with the increased emphasis on training and more direct penalties, should cause a significant improvement in the accident rate over the next 1-2 years. The Division is also working to improve the accident reporting procedures for rail so it is likely that there will be an increase in the number of rail accidents reported next year.

Children continue to be the victims of explosives accidents. Although the number of accidents is very small (typically one or two per year), such accidents are always disturbing. The Division is continuing to encourage users of explosives to maintain the highest practical level of security.

Overall, minimising the accident rate across the entire dangerous goods area remains a high priority for the Division which will continue to work with industry to achieve the lowest possible number of accidents.

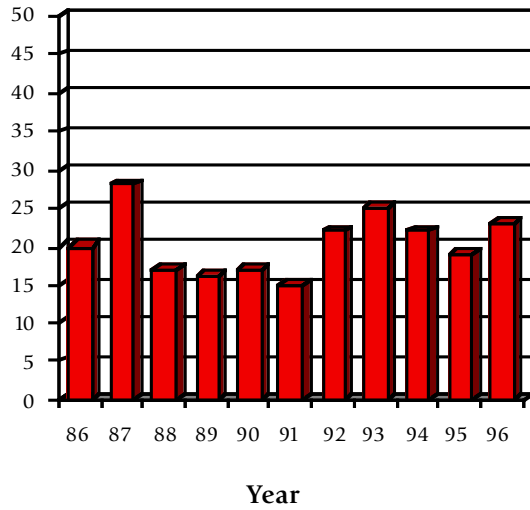


K Price
Director
Explosives and Dangerous Goods Division

26 February 1997

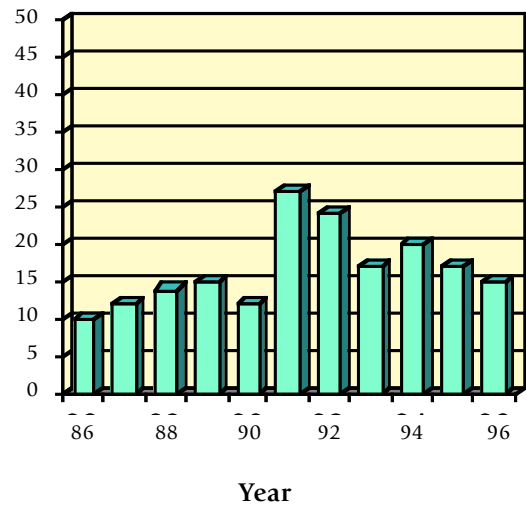
Explosives and Dangerous Goods Accident Statistics

Transport Accidents



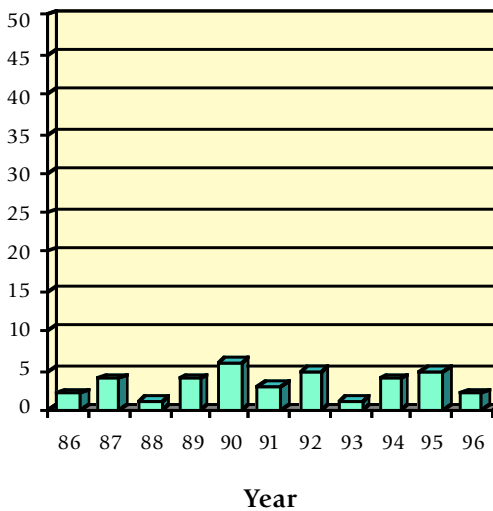
The number of dangerous goods transport accident reported in 1996 was slightly larger than the number reported in 1995. However, this number is in line with the ten year average of approximately 20.

Storage Accidents



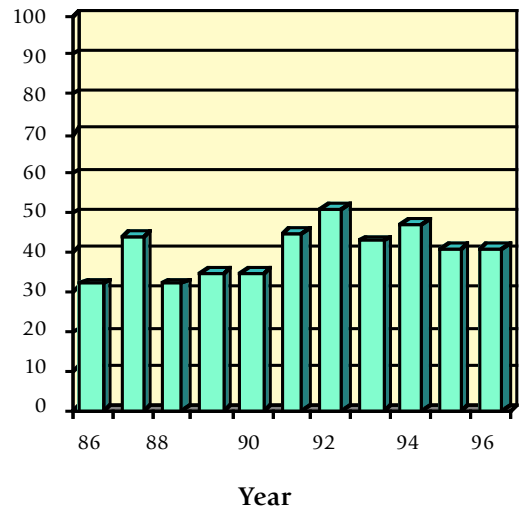
The number of storage accidents recorded in 1996 was slightly less than that reported in the previous year and consistent with a general healthy trend of decreasing number of accidents over the past 6 years.

Explosives Accidents



The number of accidents recorded in 1996 is comparable with the numbers recorded in the previous year; the low numbers suggest that the use of explosives is handled in a safe manner in Western Australia.

Total Accidents



The total number of accidents recorded in 1996 is similar to that reported in the previous years.

Explosives Accidents

Introduction

Two incidents involving explosives were reported to the Division in 1996 compared to five in 1995.

One minor incident, with potential to be catastrophic, involved a fire on an explosives mixing vehicle during charging operations on a shot. The fire, fuelled from a leaking fuel oil tank, continued to burn slowly for two days until it was extinguished by the fire crew. A Significant Incident Report was distributed to all mines reminding operators that maintenance is critical for the safe operation of these vehicles.

The other incident involved children heating detonators they thought were fire crackers. The detonators initiated causing serious injuries. This incident highlights the importance for explosives to be kept in a safe, secure location at all times.

Again, there was no incident involving sparklers reported to the Division during the year, supporting the permanent lifting of the ban on the sale of sparklers.

Explosives Accidents Summary Report

For the year 1996

	Date	Location	Goods	Class	Comments
W1/96	1/6/1996	MANDURAH	Detonators	1.1	Two boys were injured when they heated detonators found in a backyard shed, which they had mistaken for fire crackers.
W2/96	16/10/1996	TOM PRICE	Ammonium Nitrate	5.1	An ANFO mixing vehicle with a leaking fuel oil tank caught fire during charging operations and personnel were evacuated to a safe distance.

Explosives Accident Report

Date : 01 June 1996 **Time** : 1330 hrs
Location : Wyeree Road
 MANDURAH
Explosives : DETONATORS
Involved Class 1.1
 Compatibility Group B
 UN No. 0029
 Quantity Present : 20
 Quantity Involved : 20

Scenario :

Two boys were injured as a result of playing with detonators found in a backyard shed in a residential area of Mandurah.

The two boys found approximately 20 detonators in a backyard shed which they took to a neighbouring property. The boys then heated the detonators, thinking they were fire crackers, causing the detonators to initiate. The explosion caused serious injuries to one of the boys, including the loss of some fingers of his right hand, lacerations to his right leg and injuries to his eyes. The other boy suffered lacerations to his legs.

The owner of the detonators was found not to possess a current shotfirer permit and was charged by police.

Explosives Accident Report

Date : 16 October 1996 **Time** : 2110 hrs

Location : Marandoo Mine
TOM PRICE

Explosives Involved : AMMONIUM NITRATE

Class 5.1

Compatibility Group

UN No. 1942

Quantity Present : 4,500 kg

Quantity Involved : 0

DIESEL FUEL

Class 3

Compatibility Group

UN No.

Quantity Present : 400 litres

Quantity Involved : 100 litres

EXPLOSIVE, BLASTING, TYPE B

Class 1.1

Compatibility Group D

UN No. 0082

Quantity Present : 15 kg

Quantity Involved : 0

Scenario :

An ANFO mixing vehicle with a leaking fuel oil tank was used in charging operations at a surface mine. The vehicle caught fire halfway through loading a shot. The operators were not injured and mine personnel were evacuated to a distance of 1000 metres. The fire subsided to the area under the fuel oil tank, but continued to burn for 48 hours, at which time the fire crew extinguished the fire.

The leaking fuel oil tank provided the fuel for the fire and either damaged wiring or heat from the engine retard system provided the ignition source.

The company has since upgraded its maintenance program for ANFO mixing vehicles, and a report has been issued to all mines warning of the dangers of operating ANFO mixing vehicles that have leaking fuel oil tanks. Mine operators have also been advised to check for susceptibility to overheating of any engine retard systems.

EX : W2/96

File No. : 227/96

Dangerous Goods Storage Accidents

Introduction

Fifteen accidents involving the storage of dangerous goods were reported to the Division in 1996, compared with 17 in 1995 and 20 in 1994.

Clearly the most significant incident for the year occurred at South Guildford at a transport company's premises in which the release of toxic fumes caused the evacuation of surrounding businesses and residences to a distance of 500 metres. Several freight containers filled with bagged acrylamide were stored for prolonged periods in the February heat causing the product to polymerise, generating heat and fire and the subsequent release of toxic fumes. The Division instigated legal action for unlicensed and non-complying storage on the premises, resulting in fines in the order of \$10 000 being imposed on the company. Community concerns were subsequently acknowledged by the company and proposals to relocate its operations have been developed in consultation with the Division.

Another significant incident, also involving a transport company's facilities, saw fire in a shed spread to encompass lead nitrate and sodium sulphide being held on the premises. Breaches of the regulations were again found by the Inspectorate on investigation, including unlicensed storage and the lack of an emergency plan for the premises, and prosecution saw fines totalling \$11 000 being imposed.

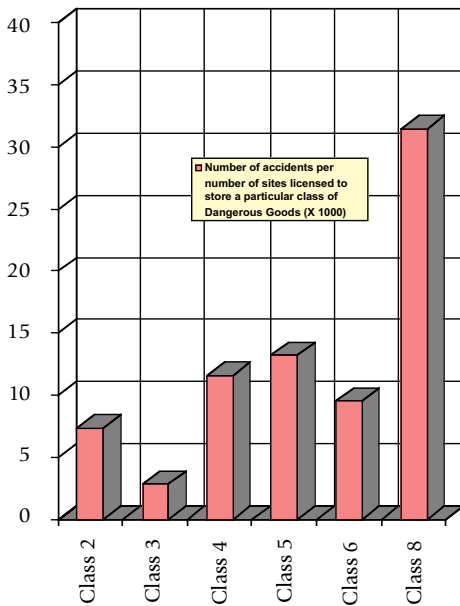
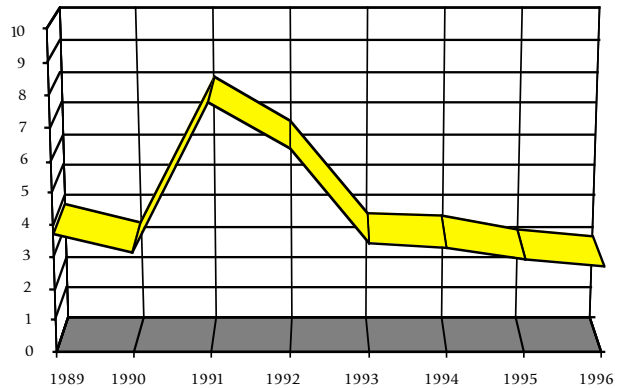
Legal action was also instigated, for failure to provide an emergency plan, following a compressed natural gas fire at Willetton. The Division regularly monitors levels of compliance by the industry and it is very concerning to observe that less than half of premises storing dangerous goods still do not have an adequate emergency plan. One strategy being implemented in response to this is the development of a partnership with Fire and Rescue Service (FRS). It is envisaged that FRS officers conducting routine building inspections could check for emergency plans where dangerous goods are stored on the premises. Advisory material could be provided at the time of inspection and significant problems brought to the Division's attention for investigation.

Overall it is pleasing to observe a downward trend in accident rates is emerging following 4 years of implementation of the Dangerous Goods Regulations 1992. This, combined with greater acceptance by industry of responsibility for safety and the State's well developed system for the management of emergencies should continue to improve the safety of our community.

Selected Storage Accident Statistics

Number of Accidents per 1000 Licensed Premises

Whilst the Division's activities can only impact on accident numbers (not prevent them), the 1996 figure confirms the general trend of increasing level of safety surrounding the storage of dangerous goods.

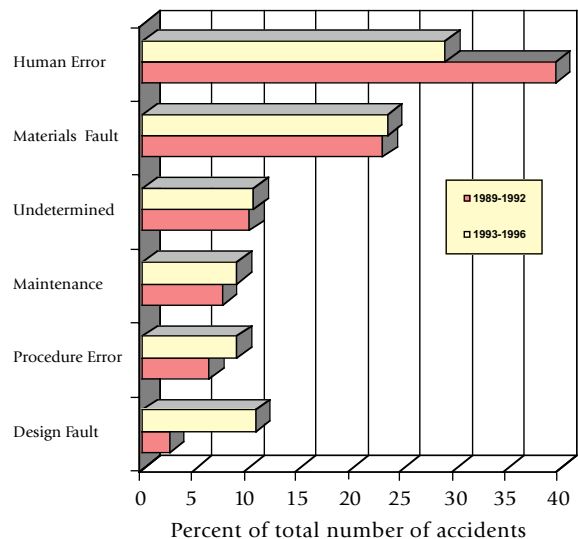


Storage Accidents by Dangerous Goods Class (1993-1996)

The data suggest a better safety record for flammable liquids (class 3) than any other class of dangerous goods over the past four years. This is probably due to the fact that class 3 Dangerous Goods have been regulated since 1967 whilst regulation of other dangerous goods commenced late in 1992. The anomalous high figure for class 8 dangerous goods (corrosive) is the result of bias caused by several spills of corrosive product at one particular chemical plant during commissioning.

Evolution of Causes of Storage Accidents (1993-1996 vs 1989-1992)

Compared to the 1989-1992 period, the proportion of accidents attributed to human error has significantly decreased in the last 4 years. It is likely that this reduction results from increased attention to procedures and training following introduction of the new regulations.



Dangerous Goods Storage Accidents Summary Report

For the Year 1996

	Date	Location	Goods	Class	Comments
W4/96	21/1/1996	MAIDA VALE	Lead Nitrate	5.1	Fire in transport/storage yard spread to encompass dangerous goods storage.
W1/96	5/2/1996	WANGARA	Hydrochloric Acid	8	500 litre acid spillage due to valve failure during mixture of hydrochloric and nitric acids.
W2/96	12/2/1996	SOUTH GUILDFORD	Acrylamide	6.1	Toxic fumes generated by polymerisation of acrylamide stored in shipping containers.
W3/96	14/3/1996	BOORAGOON	Sodium Hypochlorite Solution	8	Chlorine fumes generated by the accidental mixing of sodium hypochlorite solution and hydrochloric acid at a swimming pool.
W7/96	7/5/1996	DAMPIER	Combustible Liquid	C2	A 6000 litres spillage of combustible liquid was caused by the failure of a seatainer bladder.
W12/96	8/5/1996	KEMERTON	Chlorine	2.3	Chlorine release at a chemical plant resulted from chlorine being inadvertently introduced into a nitrogen system when a manual valve was opened.
W5/96	13/5/1996	FREMANTLE	Diesel Fuel	C1	22,800 litres of diesel fuel spilled into the bunded area of a terminal during pipeline transfer of product.
W8/96	16/5/1996	WILLETTON	Compressed Natural Gas	2.1	A gas cloud explosion occurred at a CNG cylinder depot. Suspected cause is static electricity.

Dangerous Goods Storage Accidents Summary Report

For the Year 1996

	Date	Location	Goods	Class	Comments
W6/96	23/5/1996	PICKERING BROOK	Chlorine	2.3	Chlorine gas leaked from the corroded fittings of two 68 kg chlorine cylinders that were disused but left in situ.
W13/96	17/7/1996	KWINANA	Ammonium Nitrate Liquid	5.1	A 23,000 kg spillage of liquid ammonium nitrate occurred due to accidental opening of a tank valve.
W9/96	8/8/1996	BUNBURY	Petrol	3	During commissioning of a new service station, 2 single-wall fiberglass underground tanks were found to have cracks in their shell.
W14/96	7/9/1996	KWINANA	Nitric Acid	8	A nitric acid tank overflowed at a chemical plant due to level indicators not being density compensated and a high level switch fault.
W10/96	8/10/1996	CANNING VALE	Liquefied Anhydrous Ammonia	2.3	A pump gland failure resulted in the venting of liquid ammonia from a refrigeration system.
W11/96	31/10/1996	KEWDALE	Paint Related Material	8	Packages on pallet found leaking whilst being held in a transport yard.
W15/96	9/12/1996	KWINANA	Titanium Tetrachloride	8	Incorrect isolation of a process line during routine maintenance resulted in 117 kg of vaporised titanium tetrachloride being released.

Dangerous Goods Storage Accident Report

Date : 21 January 1996 **Time** : 1700 hrs
Location : Everitt Place
 MAIDA VALE
Dangerous Goods Involved : LEAD NITRATE
 Class 5.1
 Sub-Risk 6.1
 UN No. 1469
 Packaging Group : II
 Quantity Involved : 10,500 kg
 Quantity Spilled : 10,500 kg
 SODIUM SULPHIDE
 Class 8
 Sub-Risk -
 UN No. 1849
 Packaging Group : II
 Quantity Present : 11,000 kg
 Quantity Involved : 11,000 kg

Scenario :

A fire occurred on the premises of a dangerous storage facility/transport yard.

The cause of the fire was unknown. It is believed to have spread from its source, an unassociated fibrocement shed, to encompass some of the dangerous goods on the premises - lead nitrate and sodium sulphide.

Other classes of dangerous goods were stored on site, but were not involved in the fire.

The fire was quickly brought under control by the emergency services.

The occupier of the premises was prosecuted for breaches of the Dangerous Goods Regulations, including failure to provide an emergency response plan.

Dangerous Goods Storage Accident Report

Date : 05 February 1996 **Time** : 1445 hrs

Location : Prindiville Drive

WANGARA

Dangerous Goods Involved : HYDROCHLORIC ACID

Class 8

Sub-Risk -

UN No. 1789

Packaging Group : II

Quantity Involved : 1,300 litres

Quantity Spilled : 250 litres

NITRIC ACID

Class 8

Sub-Risk -

UN No. 2031

Packaging Group: II

Quantity Present : 800 litres

Quantity Involved : 250 litres

Scenario :

The heat generated by a 500 litres mixture of hydrochloric and nitric acids in a 3,000 litres stainless steel vessel resulted in the failure of a plastic valve fitted to this vessel. The valve became loose and came out of its fitting due to the combined action of heat and pressure. The acid mixture spilled into the bund. The spillage could not be contained within the bund because of failure of one of the (previously damaged) bund walls.

The acid mixture spilled into the sandy ground within the property.

The spill was later diluted with water and neutralised with sodium carbonate; the contaminated soil was collected and placed in containers for disposal at a later date.

Dangerous Goods Storage Accident Report

Date : 12 February 1996 **Time** : 0530 hrs
Location : Kalamunda Road
 SOUTH GUILDFORD
Dangerous Goods Involved : ACRYLAMIDE
 Class 6.1
 Sub-Risk -
 UN No. 2074
 Packaging Group : III
 Quantity Involved : 90,000 kg
 Quantity Spilled : 30,000 kg

Scenario :

People within 500 metres of transport yard were evacuated when the polymerisation of a consignment of chemical caused toxic fumes to be generated from one of six large shipping containers stored on the premises.

Five fire brigade officers, two factory workers and a tow truck driver were significantly affected by the fumes and had to be taken to hospital for observation; they were later released.

At the height of the incident, the top of the container bulged by at least 150 mm due to the pressure generated by the polymerisation reaction. The container was cooled with water fog to reduce the heat generated by the reaction.

The initial emergency response was terminated at 1045 hrs. However, later in the afternoon the contents of a second container also polymerised.

The contents of the 4 remaining containers were found to be in good condition and were transported away.

The polymerisation reaction is believed to have been due to storage of the chemical at high temperatures for an extended period of time: a maximum temperature of 42.4 deg.C was recorded on the day before the incident.

The occupier of the premises was prosecuted for improper and unlicensed storage of dangerous goods.

Dangerous Goods Storage Accident Report

Date : 14 March 1996 **Time** : 1620 hrs
Location : Marmion Street
 BOORAGOON
Dangerous Goods Involved : SODIUM HYPOCHLORITE SOLUTION
 Class 8
 Sub-Risk -
 UN No. 1791
 Packaging Group : II
 Quantity Involved : 40 litres
 Quantity Spilled : 20 litres
 HYDROCHLORIC ACID
 Class 8
 Sub-Risk -
 UN No. 1789
 Packaging Group : II
 Quantity Present : 60 litres
 Quantity Involved : 25 litres

Scenario :

Chlorine fumes were generated at a swimming pool when approximately 20 litres of sodium hypochlorite solution were decanted, by an employee, into an vat containing 25 litres of hydrochloric acid.

The pool was evacuated and the emergency services were alerted. Six people were affected and taken to hospital for observation.

The liquid in the acid vat was diluted into the backwash pit, and the area ventilated.

The Department issued instructions to improve segregation measures to minimise the possibility of inadvertant mixing in future.

Dangerous Goods Storage Accident Report

Date : 07 May 1996 **Time** : 1900 hrs
Location : Supply Base Road
 DAMPIER
Dangerous Goods Involved : COMBUSTIBLE LIQUID
 Class C2
 Sub-Risk -
 UN No.
 Packaging Group : -
 Quantity Involved : 21,000 litres
 Quantity Spilled : 6,000 litres

Scenario :

Seatainers containing combustible liquid were being unloaded when, due to a crane breakdown, they could not be laid down directly into their designated bunded area. Instead they were laid down onto a flat, unbunded area some 100-150 metres from the bunded area.

Whilst the seatainers were in this unbunded location, a leak developed from one of the seatainer bladders. Approximately 6,000 litres of product were lost of which 2,000-3,000 litres spilt onto the surrounding area. The extent of the spillage was minimised by the erection of a temporary earthen bund. The remaining 3,000-4,000 litres of product were contained inside the designated bunded area when the leaking seatainer was relocated into this area using available equipment.

All contaminated earth from both areas was then disposed of in accordance with Department of Environmental Protection requirements.

Dangerous Goods Storage Accident Report

Date : 08 May 1996 **Time** : 2300 hrs

Location : Marriott Road
KEMERTON

Dangerous Goods Involved : CHLORINE
Class 2.3
Sub-Risk 5.1
UN No. 1017
Packaging Group : -
Quantity Involved : N/A
Quantity Spilled : 165 kg

Scenario :

A release of chlorine occurred from the chlorination process of a chemical plant when chlorine was inadvertently introduced into a neutralisation system.

The neutralisation system was undergoing commissioning and was being purged with nitrogen in preparation for maintenance.

Due to an open isolation valve and greater line pressure, chlorine entered the nitrogen purge system resulting in discharge to atmosphere.

A field operator required oxygen therapy to recover from chlorine inhalation. Operators then carried out an investigation to determine the source of the chlorine and isolated the valve.

The company has investigated the incident and has made procedural and engineering modifications to minimise the likelihood of a recurrence.

Dangerous Goods Storage Accident Report

Date : 13 May 1996 **Time** : 2115 hrs
Location : Knutsford Street
 FREMANTLE
Dangerous Goods Involved : DIESEL FUEL
 Class C1
 Sub-Risk -
 UN No.
 Packaging Group :
 Quantity Involved : -
 Quantity Spilled : 22,800 litres

Scenario :

An incident occurred during the pipeline transfer of product from the Refinery at Kwinana to a storage facility at Fremantle.

The product line used for the transfer has a short section which passes through a terminal. A spur line which runs off this section is used by the terminal operator for internal use.

An employee of the company left a hose connected to the line after carrying out meter testing. The separating valve was also left fractionally open.

The pumping pressure from the Refinery split the hose allowing product to spill into the bunded area.

The entire spillage was contained within the bunded area and was later recovered.

Dangerous Goods Storage Accident Report

Date : 16 May 1996 **Time** : 1815 hrs

Location : Yampi Way
WILLETTON

Dangerous Goods Involved : COMPRESSED NATURAL GAS
Class 2.1

Sub-Risk : -

UN No. 1971

Packaging Group : I

Quantity Involved : 11,300 litres

Quantity Spilled : 4,700 litres

Scenario :

A vapour cloud explosion occurred at a CNG cylinder depot. The gas escape was due to leakage from at least one cylinder's valve; the source of ignition is believed to be static electricity.

Prior to the incident, a person detected a gas odour at the cylinder storage area and walked towards that area. The ignition occurred as he approached the area; this person received superficial burns to the face and hands.

Prosecution action has been initiated by the Department against the occupier of the premises for lack of an emergency response plan.

Dangerous Goods Storage Accident Report

Date : 23 May 1996 **Time** : 1500 hrs

Location : Pickering Brook Road
PICKERING BROOK

Dangerous Goods Involved : CHLORINE
Class 2.3
Sub-Risk 5.1
UN No. 1017
Packaging Group : -
Quantity Involved : 204 kg
Quantity Spilled : 40 kg

Scenario :

Chlorine gas leaked from two 68 kg chlorine cylinders that had been left connected, but not in use, for water treatment at a disused prison complex. The fittings to the cylinders had corroded and one of the cylinders had started to leak.

The leakage was noticed by the caretakers of the premises, and the chlorine gas supplier was alerted. An attempt by the gas supplier representative to stem the leak resulted in a worsening of the situation. When the leakage had not abated after some hours, the emergency services were alerted and attended on-site. The gas supplier arranged for the leaking cylinders to be capped, and removed from the site the following day. No injuries resulted from the leak.

The Department issued a directive to the occupier to review the safety of other chlorine storage facilities under its control.

Dangerous Goods Storage Accident Report

Date : 17 July 1996 **Time** : 1530 hrs

Location : Kwinana Beach Road
KWINANA

Dangerous Goods Involved : AMMONIUM NITRATE LIQUID
Class 5.1

Sub-Risk : -

UN No. 2426

Packaging Group : II

Quantity Involved : 900,000 kg

Quantity Spilled : 23,000 kg

Scenario :

A partially open sample valve on a storage tank resulted in spillage of ammonium nitrate solution.

Due to the tank and valve being located outdoor and subject to high winds, it was postulated that wind blown debris had knocked open the long handled ball valve.

The spill was contained within the site containment system prior to controlled environmental discharge.

The valve has been chained to prevent recurrence.

Dangerous Goods Storage Accident Report

Date : 08 August 1996 **Time** : 0000 hrs
Location : Australind Bypass Road
BUNBURY
Dangerous Goods Involved : PETROL
Class 3
Sub-Risk -
UN No. 1203
Packaging Group : II
Quantity Involved : 19,000 litres
Quantity Spilled : 0
DIESEL FUEL
Class C1
Sub-Risk -
UN No.
Packaging Group : -
Quantity Present : 25,000 litres
Quantity Involved : 0

Scenario :

During the commissioning of a new service station site, water was discovered in one of the underground petrol single wall fibreglass tanks.

Examination of the tank revealed the presence of cracks in the shell of the tank.

Several fibreglass underground tanks were installed at this site which has a high water table. Cracks were also discovered in another tank.

Incorrect installation method is suspected; the matter is likely to be the subject of litigations and lengthy investigations.

Dangerous Goods Storage Accident Report

Date : 07 September 1996 **Time** : 0500 hrs

Location : Kwinana Beach Road
KWINANA

Dangerous Goods : NITRIC ACID

Involved

Class 8

Sub-Risk -

UN No. 2031

Packaging Group : II

Quantity Involved : 200,000 kg

Quantity Spilled : 10,000 kg

Scenario :

During plant start up, weak nitric acid which is generated and stored for later concentration, overflowed from its storage tank.

The cause of the overflow was found to be a level measuring device not being density compensated for the weaker acid strength and a secondary high level alarm not functioning.

The product spilled into the associated bund and was recovered to another nitric acid storage tank.

All alarms have since been checked and density compensated indicators installed to minimise recurrence.

Dangerous Goods Storage Accident Report

Date : 08 October 1996 **Time** : 1400 hrs

Location : Baile Road
CANNING VALE

Dangerous Goods Involved : LIQUEFIED ANHYDROUS AMMONIA
Class 2.3

Sub-Risk 8

UN No. 1005

Packaging Group : -

Quantity Involved : 30,000 kg

Quantity Spilled : 300 kg

Scenario :

The failure of a gland on a transfer pump resulted in a liquid ammonia leak from a refrigeration system. Operators evacuated the room containing the pump and also part of the production facilities. The emergency services were notified and followed the operator's instructions to isolate the leak. No-one was injured in the incident.

The company has upgraded its maintenance program to include regular maintenance of the pump and is reviewing the suitability of the current design for their operations.

Dangerous Goods Storage Accident Report

Date : 31 October 1996 **Time** : 0730 hrs

Location : Sheffield Road
KEWDALE

Dangerous Goods Involved : PAINT RELATED MATERIAL
Class 8

Sub-Risk -

UN No. 3066

Packaging Group : III

Quantity Involved : 80 litres

Quantity Spilled : 20 litres

PAINT

Class 3

Sub-Risk -

UN No. 1263

Packaging Group : III

Quantity Present : 96 litres

Quantity Involved : 2 litres

Scenario :

Liquid was observed leaking from a consignment on a pallet located in the dangerous goods storage area of a transport depot. The Fire and Rescue Service (FRS) was called and the area immediately surrounding the hazardous zone was evacuated. The safety representative of the storage site and the FRS cordoned off the hazardous area. Based on the cargo manifest, proper safety equipment and procedures were used to separate the defective packages from other consignments. The defective packages were delivered to a professional waste disposal organisation. The owner of the damaged consignment removed the remaining (intact) part of their consignment to their own premises.

Dangerous Goods Storage Accident Report

Date : 09 December 1996 **Time** : 0900 hrs

Location : Mason Road
KWINANA

Dangerous Goods Involved : TITANIUM TETRACHLORIDE
Class 8

Sub-Risk : -

UN No. 1838

Packaging Group : II

Quantity Involved : N/A

Quantity Spilled : 117 kg

Scenario :

During routine maintenance activity an incorrect valve was tagged closed and another valve was left open. This allowed 117 kg of vaporised titanium tetrachloride to be released over 3 minutes. The emergency response and Kwinana Industries Mutual Aid system swung into action to mitigate the consequences of the release.

Dangerous Goods Transport Accidents

Introduction

Twenty three transport incidents were reported to the Division during 1996; two during rail transport and twenty one on road. This is slightly more than last year and above the ten year average of approximately twenty. Five road incidents involved packaged dangerous goods and 16 road incidents involved transport in bulk containers.

Nine of the twenty three recorded incidents were traffic related road and rail crashes. The causes of these crashes are outside of the scope of the current Dangerous Goods Regulations 1992. In general, these road and rail crashes were significantly more serious in terms of actual personal injury or the potential for personal injury than other incidents; the single vehicle road crash at Hyden involved a driver fatality and other road crashes involved personal injury. It is a tribute to the high compliance to international engineering design standards of the dangerous goods tanks and packages, that loss of containment in these crashes was low. This demonstrates the strength of the current legislation and administration which requires strict approval processes for packages and bulk tanks and apply the design standards of world best practice.

The total number of transport incidents has plateau-ed at about twenty each year. This is in an environment where the transport of dangerous goods in WA is increasing in quantity with more downstream processing of minerals; over the last five years there has been a 24% increase in the number of licensed vehicles.

One rail incident caused a major emergency at Hines Hill when two freight trains collided. A large scale diesel fire resulted and two persons died. The dangerous goods on board the trains were not involved in the cause of the crash or the fire.

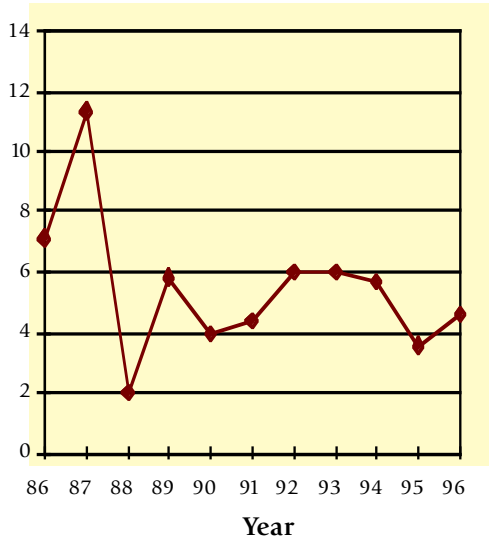
1997 will see the introduction of the new national road and rail transport of dangerous goods legislation. This legislation is more user-friendly and assigns unambiguous responsibilities to all parties involved in transport. It will require managers in control of

loading operations to provide appropriate training and supervision which should improve the current problems of improper stowage of packages and spillage's in the transfer of bulk liquids. These features of the legislation, together with the introduction of on-the-spot fines should result in improved compliance and reduced transport incidents and further boost the ongoing safety improvement of the transport of dangerous goods in WA.

The traffic accident type road crash is the most difficult to address. Legislation of this and other Government departments impinging on road safety is changing to better deal with the many human factors that make transport drivers susceptible to road crashes. The legislation will encourage transport companies to improve their driver management to deal with driver fatigue, driver health, alcohol and drugs and to find ways to gain driver commitment to safety procedures.

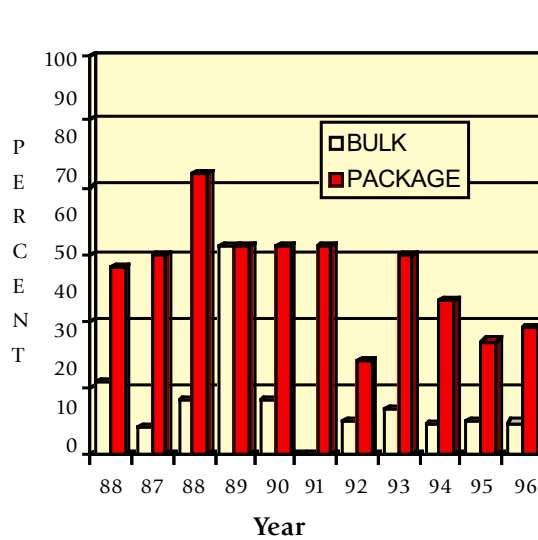
Selected Road Transport Accidents Statistics

Number of Accidents Per 1000 Licensed Vehicles (Bulk Only)



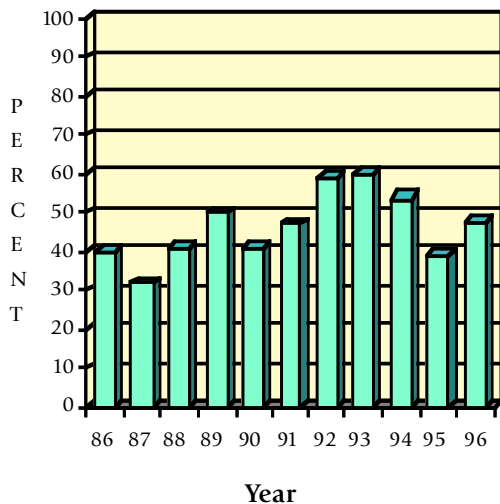
The 1996 value is slightly higher than in 1995 due to a higher number of bulk vehicle incidents. No clear trend is visible with values fluctuating between 2 and 6 for the last 8 years.

Non Complying Vehicles in Accidents - Bulk / Package



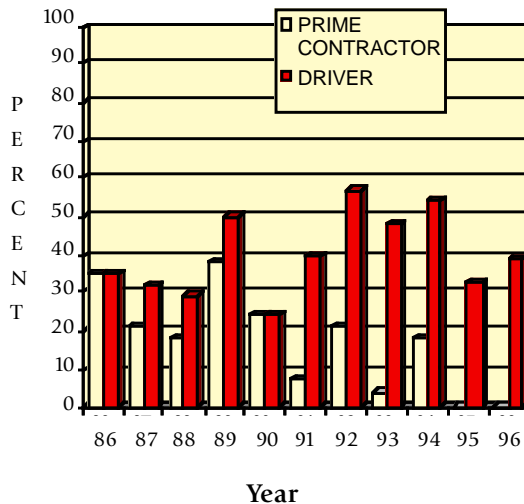
The 1996 value is not significantly different from the previous year. While bulk vehicles have very good compliance with the ADG Code, there is room for improvement for packaged vehicles; substandard stowage is the main problem.

Percentage of Accidents Caused by Operator Deviation from Standard Procedures



The above figure includes only deviation from dangerous goods legislation: it does not include deviation from other road safety legislation or company rules. Not following standard procedure was still a major problem in 1996 and no significant improvement can be seen over the last ten years.

Driver and Prime Contractor Contribution to Operator Deviation Caused Accidents



The 1996 values are substantially the same as in the previous year. The introduction of the compulsory refresher driver training course in January 1997 is expected to improve the situation.

Dangerous Goods Transport Accident Summary Report

For the Year 1996

	Date	Location	Goods	Class	Comments
W23/96	11/1/1996	KEMERTON	Hydrochloric Acid	8	A build up of pressure during loading resulted in the cracking of the receiving tank mounted on a road vehicle.
W1/96	14/1/1996	HINES HILL	Calcium Hypchlorite	5.1	Two persons died, one person was severely injured and a large scale diesel fire occurred when two freight trains collided 240 kms East of Perth.
W3/96	25/1/1996	KEMERTON	Toluene	3	Toluene spilt during bulk liquid transfer because a tank compartment was incorrectly assumed to be empty and a tank valve malfunctioned.
W4/96	7/2/1996	MT MAGNET	Ammonium Nitrate	5.1	A road train loaded with bulk bags of ammonium nitrate swerved causing two bags to dislodge from the rear trailer.
W5/96	20/2/1996	ARTHUR RIVER	Liquefied Petroleum Gas	2.1	A LPG tanker overturned after colliding with the rear end of a vehicle travelling in front. Both the drivers of the tanker and the other vehicle as well as a passenger of the other vehicle were injured. There was no significant escape of LPG.
W24/96	20/2/1996	KEMERTON	Hydrochloric Acid	8	During the loading operation, a reaction between sodium hydroxide and hydrochloric acid caused a rapid build up of pressure which resulted in the cracking of the tank shell.
W7/96	21/4/1996	CUE	Sodium Cyanide	6.1	The third trailer of a road train transporting IBCs of cyanide pellets in shipping containers, rolled over. The containers were found to be intact and there was no evidence of any loss of product.

Dangerous Goods Transport Accident Summary Report

	Date	Location	Goods	Class	Comments
W6/96	3/5/1996	WILUNA	Oxidizing Liquid, N.O.S.	5.1	The second tanker trailer of a road train transporting ammonium nitrate mixture became separated from its dolly. The discharge pipe of the tanker was damaged by the impact allowing some product to spill.
W8/96	20/6/1996	OSBORNE PARK	Liquid Nitrogen	2.2	A semi-trailer tanker fully laden with liquid nitrogen toppled on its side when the ground under its resting legs subsided. No product escaped. Only minor damage was sustained by the tanker.
W9/96	2/7/1996	NORSEMAN	Cyanide Solutions	6.1	A trailer of a road train rolled over causing an isotainer containing sodium cyanide solution to detach. No product was spilt.
W10/96	12/7/1996	WUBIN	Nitric Acid	8	A leak of nitric acid from a consignment loaded on a road trailer occurred because of incorrect securing of the cargo and absence of safety caps on the acid containers.
W12/96	25/7/1996	WELSHPOOL	Nitric/Sulphuric Acid Mix	8	A 200 litres drum containing an acid mixture fell off a truck while being transported causing 1.5 litres of acid being spilled on the road.
W15/96	2/8/1996	KALGOORLIE	Explosives, Blasting, Type E	1.5	A bulk tanker containing blasting agent became disconnected from its prime mover during a trip because it was not correctly secured. No product was spilt.
W11/96	6/8/1996	MEEKATHARRA	Ammonium Nitrate	5.1	24,000 kg of solid ammonium nitrate were spilt on the road when the rear trailer of a road train overturned because the driver lost control of his vehicles when trying to avoid a parked vehicle.

Dangerous Goods Transport Accident Summary Report

Date	Location	Goods	Class	Comments
W25/96 11/8/1996	KEMERTON	Hydrochloric Acid	8	A road tanker was overfilled due to operator error in programming the delivery data.
W13/96 20/8/1996	DARDANUP	Petrol	3	The fuel hydrant fitting from the fill point of an underground fuel tank broke away resulting in a 40 litres spill of petrol.
W14/96 20/8/1996	MOUNT BARKER	Liquefied Petroleum Gas	2.1	The driver of a LP Gas road tanker was forced to leave the road to avoid an oncoming cattle truck. The tanker slid onto its side in a paddock adjacent to the road. There was no loss of product.
W17/96 2/10/1996	BUNBURY	Hydrochloric Acid	8	Approximately 15 litres of hydrochloric acid were spilt on the road because of a malfunctioning valve on a road tanker.
W16/96 2/10/1996	NORTHAM	Liquid Oxygen	2.2	An empty liquid oxygen road tanker collided with a freight train at a railway level crossing 2km East of Northam.
W19/96 27/10/1996	NORTHAM	Petrol	3	Petrol was observed to be leaking from an internal valve of a railway tanker. The fuel was decanted prior to moving the tanker for repair.
W20/96 20/11/1996	SPEARWOOD	Flammable Liquid, NOS	3	Four drums of maldison insecticide fell from a truck during transport. The ten litres of spilt product were neutralised and disposed of appropriately.
W21/96 5/12/1996	HYDEN	Nitric Acid	8	A vehicle transporting corrosive materials rolled over resulting in the death of the driver and a spill of nitric acid. Emergency services closed the road until the site was rendered safe.
W22/96 19/12/1996	NAVAL BASE	Nitric Acid	8	Five drums of nitric acid fell from a vehicle during transport causing 30 litres of acid to spill on the road.

Dangerous Goods Transport Accidents Report

Date : 11 January 1996 **Time** : 1315 hrs
Location : Chemical Plant
 KEMERTON
Dangerous Goods Involved : HYDROCHLORIC ACID
 Class 8
 Sub-Risk -
 UN No. 1789
 Packaging Group : II
 Quantity Involved : 6,000 litres
 Quantity Spilled : 0 litres

Scenario :

A valve on a vapour recovery unit had been left closed during a transfer operation into a road tank vehicle. The resultant pressure build-up caused cracks to develop in the tank shell; supply of acid was immediately stopped.

Due to the damage to the tank the acid already loaded was transferred back to the supply tank using the vehicle pump. There was no spillage of product.

Dangerous Goods Transport Accidents Report

Date : 14 January 1996 **Time** : 0001 hrs
Location : Rail siding
 HINES HILL
Dangerous Goods Involved : CALCIUM HYPOCHLORITE
 Class 5.1
 Sub-Risk -
 UN No. 2280
 Packaging Group : II
 Quantity Involved : 3,144 kg
 Quantity Spilled : 3,144 kg
 BATTERIES (WET, FILLED WITH ACID)
 Class 8
 Sub-Risk -
 UN No. 2794
 Packaging Group : III
 Quantity Present : 19,100 kg
 Quantity Involved : 19,100 kg
 DIESEL
 Class 3
 Sub-Risk -
 UN No.
 Packaging Group : -
 Quantity Present : 338,000 litres
 Quantity Involved : 338,000 litres

Scenario :

Two persons died, one person was severely injured and a large scale diesel fire occurred when two freight trains, one of them carrying diesel, collided at Hines Hill (approximately 240 km East of Perth).

The accident was due to the driver of one of the trains not respecting a STOP signal. A massive emergency response was immediately put in place.

Dangerous Goods Transport Accidents Report

Date : 25 January 1996 **Time** : 1100 hrs
Location : Marriot Road
 KEMERTON
Dangerous Goods Involved : TOLUENE
 Class 3
 Sub-Risk -
 UN No. 1294
 Packaging Group : II
 Quantity Involved : 27,000 litres
 Quantity Spilled : 1 litre

Scenario :

During transfer operations, a driver disconnected a delivery hose to a receiving tank assuming that the delivery tank compartment had been completely drained. On opening the discharge valve, toluene continued to pour from the discharging pipe. The valve was closed, the hose reconnected and the residual toluene was transferred.

On return to base, the tanker was degassed and the internal valve removed for inspection. It was found that the "O" ring on the internal valve had deteriorated and was not providing a proper seal.

Dangerous Goods Transport Accidents Report

Date : 07 February 1996 **Time** : 1100 hrs
Location : Great Northern Highway
 MT MAGNET
Dangerous Goods Involved : AMMONIUM NITRATE
 Class 5.1
 Sub-Risk -
 UN No. 1942
 Packaging Group : III
 Quantity Involved : 43,000 kg
 Quantity Spilled : 2,150 kg

Scenario :

The driver of a double road train transporting forty Intermediate Bulk Containers of ammonium nitrate swerved to avoid a cow, approximately 40km south of Mount Magnet. The sudden movement caused a bag to be dislodged from the rear trailer and another to protrude beyond the trailer. As the driver was unable to move the bag back into place, he allowed it to fall to the ground. The driver then re-secured the load and continued to Mt Magnet, where he contacted his employers and advised them of the incident.

The spill was cleared away by the Shire of Mt Magnet.

Dangerous Goods Transport Accidents Report

Date : 20 February 1996 **Time** : 0145 hrs

Location : Albany Highway
ARTHUR RIVER

Dangerous Goods Involved : LIQUEFIED PETROLEUM GAS
Class 2.1

Quantity Spilled : 0

Scenario :

A tanker loaded with LPG was travelling along Albany Highway between Arthur River and Kojonup. The driver of the tanker saw the headlights of a vehicle in front of him and travelling in the same direction, but he did not see any tail-lights. The tanker collided with the rear trailer of the vehicle at an estimated speed of 90kph. The estimated speed of the other vehicle was 20-30kph maximum.

The driver of the tanker sustained shock and bruising and the driver and passenger of the other vehicle sustained back injuries.

As a result of the collision, the tanker overturned and landed over a levee bank. There was no leakage of LPG, apart from some venting from a section of pipe work.

Traffic had to be diverted around the accident site via Wagin and Woodanilling until the tanker could be righted and the LPG transferred to another tanker. Representatives from the gas company were in attendance to supervise the recovery of the LPG.

Dangerous Goods Transport Accidents Report

Date : 20 February 1996 **Time** : 0930 hrs

Location : Chemical Plant
KEMERTON

Dangerous Goods : HYDROCHLORIC ACID

Involved Class 8

Sub-Risk -

UN No. 1789

Packaging Group : II

Quantity Involved : 6,300 litres

Quantity Spilled : 300 litres

Scenario :

Sodium hydroxide solution from a previous delivery had leaked into an adjacent compartment via a manifold and a faulty valve. When hydrochloric acid was delivered to the compartment, a violent reaction ensued causing pressure to build in the compartment and resulting in cracking of the tank shell.

Dangerous Goods Transport Accidents Report

Date : 21 April 1996 **Time** : 0200 hrs

Location : Great Northern Highway
CUE

Dangerous Goods Involved : SODIUM CYANIDE
Class 6.1

Sub-Risk : -

No. 1689

Packaging Group : I

Quantity Involved : 23,000 kg

Quantity Spilled : 0

Scenario :

The driver of the vehicle transporting three shipping containers carrying IBCs of sodium cyanide pellets had bent down to pick up a cassette tape from the floor of the vehicle and had veered onto the shoulder of the road as he approached a bend. Rather than brake heavily which may have caused the vehicle to jack-knife, he drove through the apex of the bend. The rear trailer of the vehicle slid around off the road surface and 'dug in' on the soft gravel shoulder of the road. The rear trailer toppled over onto its side as the vehicle came to rest. The freight container was intact and had not suffered serious damage and there was no evidence of any loss of product. The container was re-consigned to Telfer for examination. Police, Fire Brigade and Emergency Services were notified.

Dangerous Goods Transport Accidents Report

Date : 02 July 1996 **Time** : 0930 hrs

Location : Chalice Mine Access Road
NORSEMAN

Dangerous Goods Involved : CYANIDE SOLUTIONS
Class 6.1

Sub-Risk : -

UN No. 1935

Packaging Group : I

Quantity Involved : 41,200 kg

Quantity Spilled : 0

Scenario :

A double road train carrying two isotainers of sodium cyanide solution hit a soft spot on the access road to the minesite causing the second trailer to roll over and the isotainer to become detached. No product was spilt and the site was cleared of all damaged equipment.

Dangerous Goods Transport Accidents Report

Date : 2 July 1996 **Time** : 1945 hrs

Location : Great Northern Highway

WUBIN

Dangerous : NITRIC ACID

Goods Involved : Class 8

Sub-Risk : -

UN No. : 2031

Packaging Group : II

Quantity Involved : 400 litres

Quantity Spilled : 15 litres

Scenario :

70 km North of Wubin, the driver of a road train noticed a leak from a consignment of nitric acid loaded on his trailer. Local emergency services were notified and traffic on the Great Northern highway was diverted until the trailer was moved away from the highway. The Perth fire brigade arrived the next day. The cause of the incident was traced to the absence of safety caps on the acid containers and incorrect stowing. The load was restacked and the trip was allowed to be completed.

Dangerous Goods Transport Accidents Report

Date : 25 July 1996 **Time** : 1330 hrs

Location : Leach Highway
WELSHPOOL

Dangerous Goods Involved : NITRIC/SULPHURIC ACID MIX
Class 8

Sub-Risk : -

UN No. 1760

Packaging Group : III

Quantity Involved : 200 litres

Quantity Spilled : 1.5 litres

Scenario :

A 200 litre drum containing a mixture of nitric acid and sulphuric acid fell off a pallet whilst being transported on a utility truck, causing 1.5 litres of the corrosive liquid to be spilled on the road.

Dangerous Goods Transport Accidents Report

Date : 02 August 1996 **Time** : 0945 hrs
Location : Kalgoorlie Explosives Reserve
KALGOORLIE
Dangerous Goods Involved : EXPLOSIVE, BLASTING, TYPE E
Class 1.5
Sub-Risk : -
UN No. 0332
Packaging Group : -
Quantity Involved : 24,000 kg
Quantity Spilled : 0

Scenario :

A semi trailer tanker laden with blasting agent was accidentally disconnected from its prime mover and dropped to the ground during a trip from the Kalgoorlie Explosive Reserve to the weighbridge. The driver had failed to check if the locking mechanism on the turntable was in place. A crane was used to lift the tanker which was secured to the prime mover. The product was transferred to another tanker. The damaged tanker was cleared of any product residue and delivered to an engineering workshop for inspection and repair.

Dangerous Goods Transport Accidents Report

Date : 06 August 1996 **Time** : 0530 hrs

Location : Great Northern Highway
MEEKATHARRA

Dangerous Goods Involved : AMMONIUM NITRATE
Class 5.1

Sub-Risk : -

UN No. 1942

Packaging Group : III

Quantity Involved : 24,000 kg

Quantity Spilled : 24,000 kg

Scenario :

The rear trailer of a three trailer road train loaded with solid ammonium nitrate rolled over causing the 24,000 kg of product to spill over the roadway. The rollover occurred because the driver of the road train tried to avoid a vehicle parked on the wrong side of the road with its lights facing oncoming traffic. The driver of the road train moved to the centre of the road and, in doing so, lost control of the trailers. The A frame towing eye of the rear trailer broke and the rear trailer and dolly went out of control.

The trailer and dolly were lying across the road and a Landcruiser crashed into the overturned trailer. The truck driver sustained bruises and a broken toe and was taken to the Meekatharra Hospital.

An engineer's inspection of the trailer and dolly indicated that there was no mechanical faults. The spilt product was cleaned up by personnel from St Barbara Mines and disposed of in accordance with the Department of Minerals and Energy - Mining Operations Division's instructions.

Dangerous Goods Transport Accidents Report

Date : 11 August 1996 **Time** : 1620 hrs
Location : Chemical Plant
 KEMERTON
Dangerous Goods Involved : HYDROCHLORIC ACID
 Class 8
 Sub-Risk -
 UN No. 1789
 Packaging Group : II
 Quantity Involved : 13,200 litres
 Quantity Spilled : 50 litres

Scenario :

The amount of acid to be delivered to a road tanker was incorrectly entered into a batch totaliser and the tank overfilled. The driver immediately stopped delivery of the acid and the spilt acid was contained and neutralized on site.

The volume of acid in the tanker was reduced to allow correct ullage before the tanker departed.

Dangerous Goods Transport Accidents Report

Date : 20 August 1996 **Time** : 0920 hrs
Location : Charlotte Street
DARDANUP
Dangerous Goods Involved : PETROL
Class 3
Sub-Risk -
UN No. 1203
Packaging Group : II
Quantity Involved : 6,300 litres
Quantity Spilled : 40 litres

Scenario :

While supplying fuel to an underground tank the hydrant fitting to the fill point broke away under the weight of the hose and fuel. Approximately forty litres of petrol were spilt before the driver could stop the flow by closing the valves.

The emergency services were called and the spilt petrol was covered with foam to prevent ignition and the fuel contained before the area was declared safe.

Dangerous Goods Transport Accidents Report

Date : 20 August 1996 **Time** : 2015 hrs
Location : Albany Highway
MOUNT BARKER
Dangerous Goods Involved : LIQUEFIED PETROLEUM GAS
Class 2.1
Sub-Risk : -
UN No. 1075
Packaging Group : -
Quantity Involved : 45,000 litres
Quantity Spilled : 0

Scenario :

The driver of a road tanker carrying 45,000 litres of Liquefied Petroleum Gas was proceeding North along Albany Highway and while driving approximately 62km north of Mount Barker took evasive action by swerving to the right to avoid an oncoming cattle truck. The road tanker left the road, crossed a drainage ditch and slid onto its side on the adjacent paddock. There was no loss of product and the driver was not injured.

Dangerous Goods Transport Accidents Report

Date : 02 October 1996 **Time** : 0400 hrs

Location : Old Coast Road
BUNBURY

Dangerous Goods : HYDROCHLORIC ACID

Involved Class 8

Sub-Risk -

UN No. 1789

Packaging Group : II

Quantity Involved : 20,330 litres

Quantity Spilled : 15 litres

Scenario :

The driver of a road tanker containing hydrochloric acid noticed evidence of a leak. The transport emergency plan was initiated. The truck was returned to the loading site and the cargo was discharged; the road was inspected and a small area where the truck parked was neutralised by the volunteer fire brigade. The all clear was declared by the police and the tanker was authorised to return to its base. The cause of the leak was traced to a malfunctioning valve.

Dangerous Goods Transport Accidents Report

Date : 02 October 1996 **Time** : 0900 hrs

Location : Great Eastern Highway
NORTHAM

Dangerous Goods Involved : LIQUID OXYGEN
Class 2.2
Sub-Risk 5.1
UN No. 1073
Packaging Group : -
Quantity Involved : 0
Quantity Spilled : 0

Scenario :

An empty semi trailer tanker of liquid oxygen collided with a Westrail locomotive after the driver failed to see or observe a railway crossing warning lights. Damages were caused to the prime mover, tanker and locomotive. Five wagons were derailed and the track was damaged.

The local police and fire brigade attended this accident. The empty liquid oxygen tanker was transported for repair. The repairs to the damaged wheat train carriages and sleepers on the track were completed the same day. Neither the truck driver nor the train driver were injured.

Dangerous Goods Transport Accidents Report

Date : 27 October 1996 **Time** : 0045 hrs

Location : Avon Yard
NORTHAM

Dangerous Goods Involved : PETROL
Class 3
Sub-Risk -
UN No. 1203
Packaging Group : II
Quantity Involved : 40,000 litres
Quantity Spilled : 20 litres

Scenario :

A rail tanker was observed to be leaking unleaded motor spirit through a faulty internal valve.

Emergency services and the tanker owner were alerted and the fuel was decanted prior to returning the tanker for repair.

Dangerous Goods Transport Accidents Report

Date : 20 November 1996 **Time** : 1330 hrs

Location : Stock Road, 1 km south of Spearwood ave
SPEARWOOD

Dangerous Goods Involved : FLAMMABLE LIQUID, NOS
Class 3

Sub-Risk : -

UN No. 1993

Packaging Group : III

Quantity Involved : 3,920 litres

Quantity Spilled : 20 litres

Scenario :

Four drums of maldison insecticide fell from a truck while being transported and about ten litres of product was spilt on the road. After consultation with the consignor, the spilt product was neutralised with soda ash and soaked up with sand. The residue was cleaned up and taken away for disposal by a method approved by the Department of Environmental Protection.

Dangerous Goods Transport Accidents Report

Date : 05 December 1996 **Time** : 2315 hrs

Location : Kondinin - Hyden Road
HYDEN

Dangerous Goods Involved : NITRIC ACID
Class 8

Sub-Risk -

UN No. 2031

Packaging Group : II

Quantity Involved : 820 litres

Quantity Spilled : 820 litres

HYDROFLUORIC ACID

Class 8

Sub-Risk -

UN No. 1790

Packaging Group : I

Quantity Present : 12 litres

Quantity Involved : 0

Scenario :

A prime mover/semi trailer combination transporting packaged dangerous goods rolled over and hit a tree while travelling to a remote minesite.

The nature of the vehicle's cargo was not readily apparent to the emergency services who arrived on the scene because the driver had been killed and the dangerous goods manifest could not be located since the driver's cabin was extensively damaged. The nature of the cargo was identified two hours later. Nitric acid was observed to be leaking but due to the superior containment of the hydrofluoric acid in packages of 0.5 litre plastic bottles this product did not spill. Cleanup of the site was deferred until first light when the location of all dangerous goods could be verified. The road remained closed while the cleanup continued. The acid was neutralised with lime after the body of the dead driver had been removed.

The road was eventually opened at 1905 hours the following day.

DGAT : W21/96

File No. : 259/96

Dangerous Goods Transport Accidents Report

Date : 19 December 1996 **Time** : 1130 hrs

Location : Cnr Cockburn & Rockingham Roads
NAVAL BASE

Dangerous Goods Involved : NITRIC ACID
Class 8
Sub-Risk -
UN No. 1826
Packaging Group : II
Quantity Involved : 510 litres
Quantity Spilled : 30 litres

Scenario :

Five plastic drums of nitric acid fell from a vehicle during transport. Two of the drums split and 30 litres of acid spilt on the road. The incident was attended to by the police and the fire brigade.

APPENDIX 1

ACCIDENT RECORDING POLICY

Purpose

To stipulate the criteria upon which incidents involving explosives or dangerous goods reported to the division are to be designated as **Recorded Accidents**.

Scope

All incidents involving the transport, storage and handling of explosives and dangerous goods where such transport, storage or handling is within the scope of the Explosives and Dangerous Goods Act 1961.

Criteria

Respective Branch Managers shall assess each reported incident to determine whether they are **Recorded Accidents** according to the following criteria.

1. Any incident involving explosives or dangerous goods that impacts on or presents a significant potential to impact on public safety.
2. Any unintentional fire or explosion (including sabotage) involving or impinging on explosives or dangerous goods containers or storage facilities
3. Any uncontrolled release of explosives or dangerous goods:
 - from a bulk container or pipeline;
 - that travels or impacts off the site where storage or handling occurs; or
 - that causes serious injury to any person or substantial damage to property;
4. Any incident where explosives or dangerous goods containers can be shown to have fallen from a vehicle whilst it is in transit.
5. Any incident where a bulk container carrying explosives or dangerous good is subjected to impact; typically through rollover or collision.

Examples of incidents that **are not** intended to be classified as Recorded Accidents are:

- packages falling from a forklift, sustaining damage and minor leakage with no subsequent injury, property damage or off-site effect.
- where small numbers of packages of dangerous goods are found on the roadside (with or without contents) and their origins remain undetermined.
- vehicle traffic accidents where the containers, their fittings and the dangerous goods remain intact and have not been subjected to impact, and where the dangerous goods are inconsequential to the incident.
- an escape of dangerous goods that is expected during normal operations, maintenance or transfers.
- incidents that involve substances not classified as dangerous goods but are captured by WAHMEMS due to uncertainty or misinformation.



K Price
Director
Explosives and Dangerous Goods Division

3 May, 1996
