#### 1323119 December 2000

Source: CNN.COM NEWS, DECEMBER 20, 2000, (http://www.cnn.com).

Location: Houston, USA Dead: 1

Injured: 5

#### Abstract

A river transportation incident. A collision occurred between a tug boat and a dredging boat killing an operator and injuring five others.

The incident occurred as the tug boat was pushing two empty barges when it collided with the dredger causing a hole above the waterline. Five operators fell into the icy water and where rescued and taken to hospital where they were treated for hypothermia. No vessel sank as a result. [fatality, injury]

Lessons

#### 1322217 December 2000

Source: CNN.COM NEWS, DECEMBER 17, 2000, (http://www.cnn.com).

Location: Oshkosh, Wisconsin, USA

Injured: 4 Dead: 0

#### Abstract

A rail transportation incident. A fire occurred onboard and box car containing sodium hydrosulphite. Nearby residents were evacuated.

Sodium hydrosulphite is highly flammable that can heat and ignite in the presence of moisture and air.

Four people were affected by fumes.

[fire - consequence, gas / vapour release]

#### Lessons

### 1321113 December 2000 Source: BBC NEWS, 13 DECEMBER, 2000, (http://www.bbc.co.uk). Location: Bermeja, ECUADOR Injured : -**Dead** : 6 Abstract An explosion occurred on a pipeline carrying crude oil. At least six people were killed in the explosion. It is thought that a bomb caused the rupture on the pipeline. Lessons [None Reported]

#### 1320806 December 2000

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, DECEMBER 7, 2000, (http://www.chemsafety.gov), Disclaimer: The Chemical Incident Reports Center (CIRC) is an information service provided by the U.S. Chemical Safety and Hazard Investigation Board (CSB). Users of this service should note that the contents of the CIRC are not intended to be a comprehensive listing of all incidents that have occurred; many incidents go unreported or are not entered into the database. Therefore, it is not appropriate to use the CIRC database to perfrom statistical analysis that extends conclusions beyond the content of the CIRC. Also, although the CSB never knowingly posts inaccurate information, the CSB is unable to independently verify all information that it receives from its various sources, much of which is based on initial reports. CIRC users should also note that the CSB receives more comprehensive reports about incidents that occur in the U.S.;

Location : Jal, USA

Injured: 0 Dead: 0

#### Abstract

An explosion occurred on a gas pipeline at a gas plant setting fire to two chemical tanks containing methanol and glycol.

comparisons made between U.S. incidents and those in other nations should take this fact into consideration.

The fire was containing within two hours and fortunately no one was injured in the incident.

Fire fighters used water to cool the tanks and foam on the flaming liquid.

An investigation into the incident is underway.

#### Lessons

#### 1321430 November 2000

Source: YAHOO NEWS, NOVEMBER 30, 2000, (http://www.uk.news.yahoo.com)

Location: Northampton, UK

Injured: 0 Dead: 0

#### Abstract

A rail transportation incident. Two carriages of a freight train derailed, fortunately the wagons stayed upright although the track was damaged in the incident. One wagon was carrying a freight container and another a 100 tonne flask, contents unknown. An investigation is underway into the cause of the derailment. Cost of repairs is estimated at £750,000 (2000).

[derailment - consequence, chemicals unknown]

#### Lessons

#### 1321330 November 2000 Source: YAHOO NEWS, NOVEMBER 30, 2000, (http://www.uk.news.yahoo.com) Location: Bristol, UK

Injured: 0 **Dead** : 0

Abstract

A rail transportation incident. An empty coal train derailed on its way from a power station spilling red diesel fuel onto nearby wetlands injuring many birds. No one was injured in the incident although it is reported that the driver was in shock. An investigation is underway to find the cause of the derailment. [derailment - consequence, freight train, spill, environmental]

Lessons

#### 1314926 November 2000

Source: BBC NEWS, 26 NOVEMBER, 2000, (http://www.bbc.co.uk).

Location : Cornwall, UK Injured : 0 Dead : 0

#### Abstract

A marine transportation incident. A cargo ship containing more that 40,000 tonnes of metal ores, 370 tonnes of diesel and a quantity of other fuels suffered steering problems in strong winds. The cargo ship became disabled off the coast of Cornwall raising fears of pollution.

Fortunately the ship managed to gain power and was escorted to safety.

[bauxite, magnesium ore, diesel oil, fuel oil, steering failure, near miss]

#### Lessons

#### 4096 18 November 2000

Source: TIME EUROPE, NOVEMBER 20, 2000.

Location: Kitzsteinhorn, AUSTRIA

Injured: 8 Dead: 150+

#### Abstract

A rail transportation incident. A funicular train caught fire inside a tunnel. The train was carrying more than one hundred and fifty passengers to the top of a ski slope when the incident occurred.

The fire fed by fresh air sucked into the tunnel and up through the train killing nearly all passengers, eight managed to escape. The cause of the fire is not known. An investigation into the incident is underway.

[passenger train, fatality, injury, fire - consequence]

#### Lessons

#### 1309102 November 2000

Source: BBC NEWS, 2 NOVEMBER, 2000, (http://www.bbc.co.uk).

Location : Great Barrier Reef, AUSTRALIA

Injured: 0 Dead: 0

#### Abstract

A marine transportation incident. A container ship carrying hazardous materials, fuel and oil ran aground on a reef causing a hole in the bow section, there are no reports of any spillage.

An attempt to refloat the ship is being made.

[ship ran aground, chemicals unknown]

#### Lessons

#### 1316401 November 2000

Source: CNN INTERACTIVE, NOVEMBER 2, 2000, (http://www.cnn.com).

**Location**: Arizona, USA **Injured**: 3 **Dead**: 1

#### Abstract

A rail transportation incident. Two freight trains, one containing hazardous materials and the other diesel fuel collided causing several carriages to derail. A fire and small explosion occurred as a result. It is reported that three crewmembers were injured and one killed in the incident. Nearby residents were evacuated as a consequence. Fortunately no hazardous materials were released.

An investigation into the incident is being carried out.

[collision, derailment - consequence, fire - consequence, evacuation, injury, fatality]

#### Lessons

#### 13193November 2000 Location: Osun State, NIGERIA

Source: BBC NEWS, 6 NOVEMBER 2000, (http://www.bbc.co.uk).

Injured : -Dead: 100+

Abstract

A road transportation incident. A petrol tanker exploded into a ball of flames when in collision with a queue of stationary cars. More than one hundred people were killed in the incident.

[road tanker, fire - consequence, explosion, fatality]

Lessons

## 13183November 2000 Source: CNN.COM, NOVEMBER 23, 2000, (http://www.cnn.com). Location:, Injured: 0 **Dead** : 0 Abstract A rail transportation incident. A freight train carrying containers on flat bed cars derailed. It is reported that one of the containers was carrying chlorine. One of the cars carrying containers slid in the shallow parts of a river. Fortunately no spillage occurred. [derailment - consequence] Lessons [None Reported]

## Source : BBC NEWS, 5 NOVEMBER 2000, (http://www.bbc.co.uk). Location : , BRAZIL Injured : 0 Dead : 0 Abstract A marine transportation incident. An oil tanker spilled an estimated twenty thousand gallons of crude oil. The incident occurred when the tanker collided with a pier whilst trying to dock. Part of the tankers hull was ripped open. [marine tanker, collision] Lessons [None Reported]

#### 1309031 October 2000

Source: BBC NEWS, 31 OCTOBER, 2000, 1 NOVEMBER, 2000, (http://www.bbc.co.uk)..; CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 31 OCTOBER, 2000, (http://www.chemsafety.gov). Disclaimer: The Chemical Incident Reports Center (CIRC) is an information service provided by the U.S. Chemical Safety and Hazard Investigation Board (CSB). Users of this service should note that the contents of the CIRC are not intended to be a comprehensive listing of all incidents that have occurred; many incidents go unreported or are not entered into the database. Therefore, it is not appropriate to use the CIRC database to perfrom statistical analysis that extends conclusions beyond the content of the CIRC. Also, although the CSB never knowingly posts inaccurate information, the CSB is unable to independently verify all information that it receives from its various sources, much of which is based on initial reports. CIRC users should also note that the CSB receives more comprehensive reports about incidents that occur in the U.S.; comparisons made between U.S. incidents and those in other nations should take this fact into consideration.

Location: English Channel, Off Alderney,

Injured: 0 Dead: 0

#### Abstract

A marine transportation incident. A marine tanker containing mainly styrene, a colourless, clear, odourless toxic liquid, sank in gale force winds after running aground. Other materials onboard included isopropanol, alcohol and methyl ethyl ketone. Fourteen crewmembers were winched to safety onboard a helicopter. It has been reported that styrene had been seen leaking from the vessel as it sank.

Styrene is a carcinogenic, is slightly soluble in water and very corrosive. There are concerns that the spillage may cause environmental and ecological damage to sea life and nearby coastlines.

[sinking, spill, strong winds, ship ran aground]

#### Lessons

1318111 October 2000
Source : BBC NEWS, 12 OCTOBER, 2000, (http://www.bbc.co.uk). Location : Nigeria, AFRICA
Injured : - Dead : -
Abstract
A road transportation incident. A road tanker carrying fuel exploded when in collision with a bus carrying fifty-six people.  [explosion]
Lessons (Name Deposits II)
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

#### 1319803 October 2000

Source: BBC NEWS, 3 OCTOBER 2000, (http://www.bbc.co.uk).

Location:, SINGAPORE OFFSHORE

Injured: 0

#### Abstract

Dead:0

A marine transportation incident. An oil tanker containing over 40,000 tonnes of crude oil released 7,000 tonnes of the product into the sea after running aground.

There are reports of no injuries but four cargo tanks have been damaged in the incident. A 300-meter boom is being used to contain the spill and to prevent more oil from escaping.

[marine tanker, damage to equipment, ship ran aground]

#### Lessons

# Source: BBC NEWS, 3 OCTOBER, 2000, (http://www.bbc.co.uk). Location: Shanxi, CHINA Injured: 0 Dead: 0 Abstract A road transportation incident. A road tanker carrying sodium cyanide plunged into a river. An emergency barrier was immediately set up to contain the cyanide that had spilled into the river. Chemicals were poured into the river to neutralise the cyanide. No one is reported to have been injured or killed in the incident. Lessons [None Reported]

#### 1321826 September 2000

Source: CNN.COM, SEPTEMBER 26, 2000, (http://www.cnn.com).

Location: New York, USA
Injured: Dead: 1

#### Abstract

A road transportation incident. An explosion and fire occurred when a road tanker carrying gasoline was in collision with a van. The driver of the van was killed. Nearby residents were evacuated as a precaution.

It is not known whether the road tanker was at full capacity of 9,8000 gallons at the time of the incident.

[fire - consequence, fatality, evacuation

#### Lessons

#### 1321925 September 2000

Source: CNN.COM, SEPTEMBER 25, 2000, (http://www.cnn.com).

**Location**: Florida, USA **Injured**: 2 **Dead**: 0

#### Abstract

A rail transportation incident. A cargo train carrying sugar cane and potash collided with two parked cargo trains triggering a fire. As a result of the collision six cars and three locomotives derailed injuring two people. It was reported that no hazardous materials were onboard at the time of the incident. [freight train, collision, fire - consequence, derailment - consequence, injury]

Lessons

#### 1320409 September 2000

Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 2000.

Location: Urumqi, Zinjiang, CHINA

Injured: 300+ Dead: 60

#### Abstract

A road transportation incident. An explosion occurred on a truck carrying explosives for disposal. The incident occurred due to an uneven road causing excessive vibration. Sixty people were killed and more than three hundred injured in the incident. A nearby residential area was damaged. [fatality, injury, damage to equipment]

#### Lessons

## 1303708 September 2000 Source: YAHOO UK & IRELAND NEWS, SEPTEMBER 9, 2000, (http://www.yahoo.co.uk). Location:, CHINA Injured: 300+ Dead: 60+ Abstract A road transportation incident. A truck carrying explosives for disposal exploded during transit killing approximately sixty people and injuring at least three

A road transportation incident. A truck carrying explosives for disposal exploded during transit killing approximately sixty people and injuring at least three hundred others.

An investigation into the incident is underway.

[explosion, fatality, injury]

#### Lessons

## 1322007 September 2000 Source: CNN.COM, SEPTEMBER 7, 2000, (http://www.cnn.com). Location: Bilbao, SPAIN Injured: Dead: 4 Abstract A rail transportation incident. A collision occurred between two cargo trains causing one to derail and fall into a nearby river. Both trains were carrying

#### aluminium coils at the time of the incident. Four people were killed in the incident. [freight train, derailment - consequence, fatality] Lessons

1320329 August 2000
Source : HAZARDOUS CARGO BULLETIN, NOVEMBER 2000. Location : New York, USA
Injured: 61 Dead: 0
Abstract
A rail transportation incident. Anhydrous ammonia leaked from a freight train injuring sixty-one people and forcing the evacuation of nearby residents. [injury]
Lessons
[None Reported]

1320222 August 2000 Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 2000. Location: Oregon, USA Injured: 0 **Dead** : 0 Abstract A road transportation incident. A truck carrying 11,000 litres of herbicide caught fire and spilled an unknown quantity of the product into a nearby river. Ecological damage occurred. [fire - consequence] Lessons [None Reported]

#### 1301821 August 2000

Source: CNN.COM, U.S. NEWS, AUGUST 19, 21, 2000, (http://www.cnn.com).

Location: New Mexico, USA

Injured: 5 Dead: 11

#### Abstract

An explosion and subsequent fire occurred on a 30-inch underground natural gas pipeline reportedly killing eleven people and injuring at least five others. An investigation into the rupture has revealed that a corroded section of the pipe was ejected in the explosion.

[fire - consequence, fatality, injury]

#### Lessons

#### 1320120 August 2000 Location: Kenya, AFRICA

Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 2000.

Injured : -**Dead**: 25

#### Abstract

A rail transportation incident. Six cars of an eight-car freight train containing liquefied petroleum gas (LPG) exploded when the train overturned. Twenty-five people were killed and several injured in the incident.

[explosion, fatality, injury]

#### Lessons

## 1301320 August 2000 Source: BBC NEWS, 20 AUGUST, 2000, (http://www.bbc.co.uk). Location: Athi River, AFRICA Injured: Dead: 17 Abstract A rail transportation incident. A train carrying liquefied petroleum gas (LPG) exploded killing seventeen people and injuring many others.

[explosion, fatality, injury] **Lessons** 

[None Reported]

The incident occurred when the train carrying eight coaches of gas overturned.

#### 1301117 August 2000

Source: CNN.COM, U.S. NEWS, AUGUST 17, 2000, (http://www.cnn.com).

Location: Oklahoma, USA

Injured: 2 Dead: 0

#### Abstract

A road transportation incident. A National Guard vehicle carrying rocket pods overturned spilling explosives on a roadway. Two guardsmen were injured in the incident. Nearby residents were evacuated as a precaution.

Fortunately no warheads were attached as they were training rockets.

[explosives, evacuation, injury]

#### Lessons

#### 1299415 August 2000

Source: CNN.COM, U.S. NEWS, AUGUST 15, 2000, (http://www.cnn.com).

Location: Malta, Montana, USA

Injured: 0 Dead: 0

#### Abstract

A rail transportation incident. A freight train including tankers containing a poisonous chemical derailed forcing the evacuation of nearby residents and the closure of a highway. Sparks from the derailed tankers caused small fires for several miles.

Three of the tankers contained carbon disulphide, a poisonous, highly flammable chemical used in the making of solvents and cellophane. Two other tankers contained titanium dioxide and posed no threat to the environment. Fortunately no leak occurred.

[derailment, fire - consequence]

#### Lessons

### 1315714 August 2000 Source: HAZARDOUS C. Location: Montana, USA Injured: 0 Dead: 0

Source: HAZARDOUS CARGO BULLETIN, OCTOBER 2000.

on: Montana, USA

#### Abstract

A rail transportation incident. Seven cars of a freight train, three containing carbon disulphide and two containing titanium dioxide, derailed. Fortunately no spillage occurred although a number of small fires were reported. Nearby residents were evacuated.

[derailment - consequence, fire - consequence, evacuation]

#### Lessons

#### 1292102 August 2000

Source: BBC NEWS, 2 AUGUST, 2000, (http://www.bbc.co.uk).

Location: Northern England, UK

Injured: 0 Dead: 0

#### Abstract

A rail transportation incident. A freight train carrying nuclear waste derailed. The train was carrying four containers of low-level waste when it came off the track.

Fortunately no one was injured and no structural damage to the containers occurred in the incident.

Rail services in the area were disrupted.

[derailment - consequence, radioactive]

#### Lessons

## Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 2000. Location:, GERMANY Injured: 1 Dead: 0 Abstract A road transportation incident. A road tanker containing 30m3 of diesel overturned when a tyre blew out causing a diesel spill, which then caught fire. Fortunately the driver managed to escape but received burns. [fire - consequence, injury] Lessons [None Reported]

# Source: BBC NEWS, 31 JULY, 2000, (www.bbc.co.uk). Location: Okwabude, AFRICA Injured: Dead: Abstract An explosion and fire occurred on an oil pipeline, it is not known whether anyone was killed. This is the sixth incident to have involved such vandalism to pipelines. [fire - consequence, deliberate acts] Lessons [None Reported]

#### 1292229 July 2000

Source: BBC NEWS, 1 AUGUST, 2000, (http://www.bbc.co.uk).

Location:, BRAZIL Injured: 0 Dead: 0

#### Abstract

Approximately 1,000 litres of toxic fuel additive leaked from a pipeline into a nearby watercourse.

The company was alerted when nearby residents complained of nausea and a strong chemical smell.

An investigation into the leak found a small hole in the pipe.

The company was fined up to \$560,000 2000).

This incident occurred just two weeks after the same company spilt approximately four million litres of crude oil into one of the country's main rivers.

[spill, environmental]

#### Lessons

1315626 July 2000 Source: HAZARDOUS CARGO BULLETIN, OCTOBER 2000. Location: New York, USA Injured: 0 **Dead**: 0 Abstract A road transportation incident. A road tanker trailer separated from it's tractor unit causing approximately 190 litres of gasoline to spill onto the highway. Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

#### 1304226 July 2000 Source: FIRE PREVENTION 336, SEPTEMBER 2000. Location: Frejus Tunnel, ITALY, FRANCE

Injured: 0 **Dead** : 0

Abstract

A road transportation incident. A tunnel linking Italy and France was closed for nine hours after a lorry caught fire one mile inside. The fire was quickly extinguished.

[fire - consequence]

Lessons

Source: BBC NEWS, 25, 26, 31 JULY, 2000, (www.bbc.co.uk).

**Location**: Paris, FRANCE **Injured**: 0 **Dead**: 113

## Abstract

An air transportation incident. Concorde carrying one hundred and nine people crashed into a hotel two minutes after take off. All passengers, crew and four people on the ground were killed as the jet exploded into a ball of flames.

Within minutes dozens of fire engines and ambulances were on the scene to tackle the fire are search for survivors.

An investigation is being carried out into the cause of the crash although it is theorised that a massive rupture to the fuel tank occurred.

[aircraft, explosion, fire - consequence, fatality]

## Lessons

## 1287225 July 2000 Location: Warri, NIGERIA

Source: BBC NEWS, 25 JULY, 2000, (http://www.bbc.co.uk).

Injured : -**Dead**: 40

Abstract

An explosion and fire occurred on a oil pipeline, the third in the space of a month. It is thought that forty people have been killed in the incident. It is reported that this is the sixth fire in two months.

[fire - consequence, fatality, deliberate acts, injury]

Lessons

## Source: HAZARDOUS CARGO BULLETIN, OCTOBER 2000. Location: Sydney, AUSTRALIA Injured: 0 Dead: 0 Abstract A rail transportation incident. A collision occurred between two freight trains during routine shunting. Approximately 20,000 litres of naphthalene was spilled. Nearby resident were evacuated. Fortunately no one was injured in the incident.

[evacuation]
Lessons
[None Reported]

1315920 July 2000
Source : HAZARDOUS CARGO BULLETIN, OCTOBER 2000.  Location : ,
Injured : - Dead : 2
Abstract
A marine transportation incident. An explosion and fire occurred on board a marine tanker containing 2,000 tonnes of diesel. Two people were killed and one missing in the incident.  [fire - consequence, fatality]  Lessons
[None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

Source: BBC NEWS, 20 JULY, 2000, (http://www.bbc.co.uk).

Location:, INDIA OFFSHORE

Injured: 0 **Dead** : 0

## Abstract

A marine transportation incident. A cargo ship ran aground, caught fire and sank off the coast of West Bengal.

Operations of a nearby port are likely to be affected but environmental damage has been ruled out.

The crew of the ship were safely taken ashore by coast guards.

[fire - consequence, ship ran aground, sinking]

Lessons

Source: BBC NEWS, 17 JULY, 2000, (http://www.bbc.co.uk).

Location: Ho Chi Minh City, VIETNAM

Injured: 10 Dead: 16+

## Abstract

A road transportation incident. A bus carrying chemicals exploded killing at least sixteen people and seriously burning ten others.

The cause of the explosion is not known but approximately twenty containers of unknown chemicals were on board at the time of the incident.

[fatality, explosion, burns, unidentified cause, injury]

## Lessons

## 1283916 July 2000 Location: Curitibia, BRAZIL Injured: 0

Source: BBC NEWS, 18 JULY, 2000, (http://www.bbc.co.uk).

**Dead** : 0

## Abstract

At least four million litres of crude oil leaked from an underwater pipeline at a refinery into a nearby river.

The incident occurred when the pipeline ruptured spilling the crude for up to two hours into the river.

More than thirty floating barriers have been set up to try to contain the spill and to vacuum the oil off the surface.

The company has been fined \$100m (2000).

[pipeline failure, environmental, ecological damage]

## Lessons

Source: BBC NEWS, 17 JULY, 2000, (http://www.bbc.co.uk).

Location : Ifie, Ijala, NIGERIA

Injured: - Dead: 30+

Abstract

A fire and explosion occurred on a pipeline killing more than thirty people. It is thought that vandals are the main cause of the incident. This incident occurred less than a week after a similar incident that killed over two hundred people just ten kilometres away in Warri. [fire - consequence, deliberate acts, fuel, injury]

Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JULY 21, 2000, (http://www.chemsafety.gov).

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Location : Montvale, USA

## Injured: 1 Dead: 0

## Abstract

A road transportation incident. A tank truck was in collision with a road vehicle causing the release of 1,500 gallons of gasoline to be spilled. The spill caused soil contamination. Gas fumes overcame one fire fighter.

A quick response prevented the gasoline from entering the sewer system.

[gas / vapour release, injury]

## Lessons

Source: BBC NEWS, 11 JULY, 2000, (http://www.bbc.co.uk)

Location: Warri, NIGERIA Injured: 100+ Dead: 100+

## Abstract

An explosion occurred on a pipeline carrying petrol killing and injuring at least one hundred people. Another one hundred are reported missing. The incident occurred when people were using buckets to collect petrol leaking from the pipeline after thieves had apparently punctured it. The area has been sealed off. It is feared that two hundred and fifty people may have been killed in the incident.

[deliberate acts, fatality, gasoline, injury]

## Lessons

## 1319907 July 2000 Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 2000. Location:, GERMANY Injured: 0 **Dead**: 0 Abstract A road transportation incident. A truck carrying 130 drums of di-n-butylamine collided with an articulated lorry causing sixty-four drums to fall, three of which fell into a 60m valley and six leaked onto the road. [collision, spill] Lessons [None Reported]

# Source: HAZARDOUS CARGO BULLETIN, OCTOBER 2000. Location: Texas, USA Injured: 0 Dead: 0 Abstract A river transportation incident. A tank barge containing petroleum distillate collided with a moored construction barge causing approximately 70m3 of the distillate to spill into the water. (Fiver barge, collision) Lessons [None Reported]

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JULY 3, 2000, (http://www.chemsafety.gov).

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Location: Philadelphia, USA

Injured: 1 Dead: 0

## Abstract

An explosion occurred on a pipeline carrying heated gasoline injuring a worker. The incident occurred as workers were trying to shut down the unit because of a leak.

The fire was eventually brought under control.

[fire - consequence, injury]

## essons

Source: BBC NEWS, 26 JUNE, 2000, (http://www.bbc.co.uk).

Location:, SOUTH AFRICA - OFFSHORE

Injured: 0 Dead: 0

## Abstract

A marine transportation incident. A bulk carrier developed a hole in her hull as she was being towed and eventually sank as a result. A large quantity of oil leaked from the sinking vessel causing an oil slick which threatening a colony of penguins.

[sinking, spill, ecological damage, material of construction failure]

## Lessons

Source: BBC NEWS, 22 JUNE, 2000, (http://www.bbc.co.uk).

Location:, NIGERIA

Injured: - Dead: 10+

## Abstract

An explosion and fire occurred on a pipeline. The explosion enveloped people as they siphoned petrol from the pipeline with buckets. It is thought that ten people were killed after the vandalised oil pipeline caught fire.

[fire - consequence, deliberate acts, fatality, gasoline]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JUNE 27, 2000, (http://www.chemsafety.gov).

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Location: New Waverly, USA

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. A freight train derailed causing at least twenty cars to derail. One car containing propylene glycol was damaged in the incident resulting in a slight spillage of the chemical.

Nearby residents were evacuated as a precaution.

An investigation into the incident is being carried out.

[derailment, evacuation]

## Lessons

## 1315412 June 2000 Source : HAZARDOUS CA Location : New York, USA

Source: HAZARDOUS CARGO BULLETIN, OCTOBER 2000.

ce: HAZARDOUS CARGO BULLETIN, OCTOBER cion: New York, USA

Dead: 0

Injured : 0
Abstract

A rail transportation incident. Twenty-nine of eighty-two cars of a freight train derailed. One containing methyl chloride was reported to have leaked. The other cars contained sulphuric acid and propane. Nearby residents were evacuated. Fortunately no one was injured in the incident. [derailment, evacuation]

Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JUNE 21, 2000, (http://www.chemsafety.gov).

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Location: Choropampa, PERU

Injured: 8 Dead: 0

## Abstract

A road transportation incident. A spillage of mercury occurred from a road tanker making a delivery. Forty-six people were tested for mercury poisoning, eight of them were sent to hospital.

Mercury poisoning can damage the kidneys and nervous system and cause birth defects.

The cause of the spill is being investigated.

## \_essons

## 12598June 2000 Source: CHEMICAL WEEK, JUNE 7, 2000 Location: Texas, USA Dead:0

Injured: 0

Abstract

A rail transportation incident. A rail car derailed and crashed into pipelines carrying crude oil, gasoline, methanol and natural gas. Damage to the pipelines occurred but no release was reported.

Repairs could take up to three weeks to complete.

[damage to equipment, derailment]

Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MAY 31, 2000, (http://www.chemsafety.gov)

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Location: Ontario, CANADA

Injured: 0 Dead: 0

## Abstract

A 42-inch pipeline ruptured releasing natural gas. The incident occurred during pressure testing. The gas was quickly turned off and there was no danger to the environment.

[pipeline failure, near miss]

## Lessons

Source: CHEMICAL & ENGINEERING NEWS, JUNE 5, 2000,; CNN.COM, U.S. NEWS, MAY 31, 2000, (http://www.cnn.com),; CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MAY 31, 2000, (http://www.chemsafety.gov)

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Location: Eunice, USA

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. Approximately 3,000 nearby residents were evacuated when a freight train derailed.

One of the derailed cars contained flammable and toxic toluene diisocyanate another contained acrylic acid.

Demolition experts set explosives on the pressurised tankers as handling them would be safer if the toxic substances inside were burned off.

Damage occurred to 1,200 feet of rail track and a 189 foot bridge.

No injuries occurred from the incident.

[derailment, fire - consequence, explosion, evacuation, damage to equipment, flammable chemical]

## Lessons

Source: BBC NEWS, 25 MAY, 2000, (http://:www.bbc.co.uk).

Location : Paris, FRANCE
Injured : 1 Dead : 1

## Abstract

An air transportation incident. An airliner carrying 150 people collided with a cargo plane on a runway killing the cargo plane's co-pilot and injuring the pilot. The incident occurred as the passenger plane was about to take off when it collided with the cargo plane which was waiting for clearance on a side runway. An investigation is underway into the cause of the collision.

[fatality, injury]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MAY 26, 2000, (http://www.chemsafety.gov)

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Location: Orlando, Florida, USA

Injured: 0 Dead: 0

## Abstract

Approximately 900 gallons of a chlorine based chemical spilled in a residential area. The surrounding area was evacuated.

The incident occurred when a leak occurred from a 3,000-gallon road tanker, which was delivering 1,900 gallons to a local swimming pool.

[evacuation, gas / vapour release, road transportation]

## Lessons

Source: HAZARDOUS CARGO BULLETIN, JULY 2000,; REUTERS.

Location: Cherkassy Region, UKRAINE

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. Six tank cars of a freight train derailed after heavy rains flooded the track, approximately 100 tonnes of ammonia solution spilt.

Nearby residents were evacuated as a precaution. No injuries occurred.

[derailment - consequence, rain, spill, evacuation]

## Lessons

Source: HAZARDOUS CARGO BULLETIN, JULY 2000,; LLOYDS LIST.

Location: New Iberia, Louisiana, USA

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. Ten cars of a cargo train derailed, three cars overturned as a result, one containing flammable butyl acrylate leaked. Nearby residents were evacuated as a precaution.

[derailment, evacuation]

## Lessons

Source: CNN.COM, U.S. NEWS, APRIL 26, 2000, (http://www.cnn.com)

Location: Danville, Kentucky, USA

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. A fire and explosion occurred on a freight train carrying toxic chemicals forcing the evacuation of nearby residents.

The car was carrying 148,000 pounds of sodium dithionite, a flammable product the can produce irritating, corrosive or toxic gasses. The chemical is also known as sodium hydrosulfate.

The car with the chemical still burning was moved approximately one mile south of the city.

No injuries were reported.

[fire - consequence, gas / vapour release]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 24 APRIL, 2000, (http://www.chemsafety.gov),

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Location : Seligman, USA

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. A freight train derailed causing six cars containing hazardous materials, vinyl acetate and ethanol, to overturn. Two of the overturned cars were reported to be leaking.

No one was injured in the incident.

[derailment, spill, materials - hazardous]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 24 APRIL, 2000, (http://www.chemsafety.gov),

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Location: Georgia, USA Dead: 0

## Injured: 0

## Abstract

A road transportation incident. An explosion occurred when a car collided with a road tanker carrying diesel fuel, which collided with a tractor-trailer carrying a farm chemical.

No injuries were reported.

[collision, unknown chemicals]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 18 APRIL, 2000, (http://www.chemsafety.gov),

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Location: Fayette County, USA

Injured: 0 Dead: 0

## Abstract

A road transportation incident. A road tanker carrying liquid propane overturned on a highway when it was involved in a collision with another vehicle. An unknown amount of propane leaked from the tanker as a result.

Nearby residents were evacuated as a precaution.

[spill, evacuation, near miss]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 17 APRIL, 2000, (http://www.chemsafety.gov),

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Location: Burns Habor, USA

Injured: 0 Dead: 0

## Abstract

A road transportation incident. A road tanker carrying 125,000 cubic feet of flammable liquid hydrogen caught fire when the tankers vent stack malfunctioned. The area within a one-mile radius was evacuated. No one was injured in the incident.

An investigation into the cause of the vent stack failure is underway.

[fire - consequence, mechanical equipment failure, evacuation]

## 1289711 April 2000 Location: Louisiana, USA

Source: HAZARDOUS CARGO BULLETIN, JULY 2000,; REUTERS.

Injured: 0 **Dead** : 0

Abstract

Approximately 2,200 litres of oil leaked from a pipeline into the Gulf of Mexico causing a 4 km oil slick. The pipeline was immediately shutdown and an investigation into the leak is being carried out.

[spill, environmental]

Lessons

Source: HAZARDOUS CARGO BULLETIN, JULY 2000,; LLOYDS LIST.

Location:, DENMARK OFFSHORE

Injured: 0 Dead: 0

## Abstract

A marine transportation incident. A marine tanker carrying 15,000 tonnes of gasoline ran aground on a sand bank. No damage or pollution occurred in the incident, although some cargo lightered.

[ship ran aground, transport effects]

## Lessons

## Source: HAZARDOUS CARGO BULLETIN, JULY 2000,; LLOYDS LIST. Location: Delaware, USA Injured: 0 Dead: 0 Abstract A river transportation incident. The steering of a river tanker carrying ammonium nitrate cargo broke causing it to ground. No pollution occurred. The tanker was refloated. [steering failure, transport effects] Lessons [None Reported]

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 9 APRIL, 2000, (http://www.chemsafety.gov),

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Location: Prince George's County, USA

Injured: 0 Dead: 0

## Abstract

Approximately 125,000 gallons of oil leaked from a power company's pipeline causing a massive oil spill. The spill occurred in a marshland and was contained in a nearby creek but did not enter the nearby river.

An investigation is being carried out into the cause of the leak.

[ecological damage, environmental]

## Lessons

Source: BBC NEWS, 5 APRIL, 2000, (www.bbc.co.uk),; CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 5 APRIL, 2000, (http://www.chemsafety.gov).

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Location: Lillestroem, NORWAY

Injured: 0 Dead: 0

## Abstract

A rail transportation incident. Two freight trains collided when it is thought that one of the trains brakes failed. Two cars of one of the trains contained approximately 90 tonnes of propane gas. The surrounding area was evacuated as a precaution due to a fire that broke out which threatened the cargo of propane.

Firemen used a remote-controlled water cannon to pump thousands of water per minute onto the tank cars to cool them without dousing the flames. [near miss, collision, brakes faulty, evacuation, fire - consequence]

## Lessons

1289403 April 2000
Source : HAZARDOUS CARGO BULLETIN, JULY 2000,; IRISH TIMES. Location : Bray, IRELAND
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A barge carrying 28,400 l diesel broke free from its moorings and drifted aground on sands.  [inadequate mooring, transport effects]
Lessons
[None Reported]

1289303 April 2000
Source : HAZARDOUS CARGO BULLETIN, JULY 2000,; LLOYDS LIST. Location : , UK OFFSHORE
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A Ro-ro lost four containers overboard in heavy seas, one contained p-cresol and another contained epichlorohydrin. [environmental]
Lessons
[None Reported]

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 30 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Choudrant, Los Angeles, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. A chemical tanker containing 21 tonnes of isobutyronitrile was involved in a collision between two other trucks. The chemical tanker subsequently overturned.

Nearby residents were evacuated and both sides of the highway were closed as a precaution due to isobutyronitrile being an extremely hazardous material. Fortunately no leak occurred and no one was seriously injured in the incident.

Isobutyronitrile is a gasoline additive that also is used to make pesticides and other chemicals.

Isobutyronitrile can get in to the body through the eyes or skin, by being inhaled or swallowed.

The report stated that trying mouth-to-mouth resuscitation could poison the would-be rescuer.

[evacuation, near miss]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 29 MARCH 2000, (http://www.chemsafety.gov).

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Location: Naples, Florida, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. Sulphuric acid was spilled during a routine delivery at a water treatment plant. Rain water from a storm the night before made it difficult to determine the exact amount of acid spilled. It is thought to be approximately 65 gallons.

Sulphuric acid reacts violently when mixed with water, severely irritates the eyes, respiratory tract and skin.

Sulphuric acid has several industrial purposes, including: pulp and paper manufacturing; copper, steel and metal fabrication; fertiliser, chemical, textile, explosive and paint manufacturing; soap and detergent production; water treatment and petroleum product refinement.

[unloading] Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 28 MARCH, 2000, (http://www.chemsafety.gov)

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Location: Orangeburg, USA

[derailment - consequence, wheel broken]

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. A rail tanker containing isobutylene derailed and overturned forcing the evacuation of the surrounding area.

The incident occurred when the rail tanker was being moved to a siding rail to allow another train to pass on the main line, when one of the wheels fell off. Isobutylene is a colourless liquid used in the manufacture of synthetic rubber and resins.

### Lessons

Source: CHEMICAL HAZARDS IN INDUSTRY, JUNE 2000,; CHEM. WEEKBL. 29 MAR 2000, (DUTCH WEBSITE: http://chemischweekblad.nl/).

Location:, GERMANY

Injured: 6 Dead: 0

# Abstract

A rail transportation incident. An unknown amount of vinylbenzene (styrene), leaked from a freight wagon that was coupled to a train waiting at a station. The following day a leak of ethyl acrylate occurred. Six people were affected by the release of styrene fumes including the driver of the train. All passengers were evacuated.

No injuries occurred from the spill of ethyl acrylate.

[gas / vapour release, people, evacuation, rail transport, injury]

# Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 23 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Kenedy, Texas, USA

Injured: 0 Dead: 0

# Abstract

An explosion occurred on a pipeline causing severe damage. Valves were shut off to stop the flow of natural gas and a nearby road was closed as precaution. The subsequent fire was extinguished in about an hour.

An investigation into the explosion is underway.

[fire - consequence, damage to equipment]

### essons

Source: BBC NEWS, 23 MARCH, 2000, (http://www.bbc.co.uk),; CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 22 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Abia State, NIGERIA

Injured: - Dead: 50

# Abstract

A fire occurred on a pipeline killing approximately 50 people who at the time is thought to have been siphoning gasoline from the pipeline. It was not immediately clear what started the fire but sabotage is thought to have been the cause.

[fire - consequence, deliberate acts]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 22 MARCH, 2000, (http://www.chemsafety.gov).

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Location: North Powder, Oregon, USA

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. Approximately 1000 gallons of fuel spilled from one or more tank cars when a freight train derailed. Clean-up operations are underway.

The incident caused damage to about a quarter-mile of track.

[derailment, damage to equipment]

### Lessons

Source: BBC NEWS, 23 MARCH, 2000, (http://www.bbc.co.uk),; CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 22 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Port Moresby, PAPUA NEW GUINEA

Injured: 0 Dead: 0

# Abstract

An air transportation incident. Two one tonne boxes containing sodium cyanide pellets where being transported by helicopter when they were accidentally dropped from a sling.

It is thought around 100 and 150 kilos of the cyanide has been dissolved by rain and spilled into a nearby river.

Approximately 70% of a one tonne pallet has been recovered, the remaining cyanide will be neutralised with ferrous sulphate.

An investigation into the incident is being carried out.

[spill, pollution]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 22 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Bello Horizonte, BRAZIL

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. A fire occurred when a 32-car train carrying thousands of gallons of diesel fuel derailed.

Several explosions occurred when the train derailed

[derailment, fire - consequence]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 21 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Hollywood, Florida, USA

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. Nearby businesses and roads were evacuated when four cars of a train derailed and overturned.

One car containing hydrogen peroxide poured thousands of gallons onto the surrounding area, another poured limestone and a petroleum compound spilled from a third car.

Cleanup operations are underway.

[evacuation, derailment]

## Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 22 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Igongwe, TANZANIA

Injured: 40+ Dead: 28+

# Abstract

A road transportation incident. A fuel tanker overturned and caught fire. The fire occurred when residents in the area rushed to the scene to extract fuel from the overturned tanker, but in the process tampered with the battery, which sparked off the fire.

[fire - consequence, fatality, sabotage, injury]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 14 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Florida, USA Injured: 0 Dead: 1

A road transportation incident. A road tanker containing aviation fuel overturned on a highway when trying to avoid slower vehicles. The driver was killed in the accident.

[fire - consequence, fatality]

### Lessons

Abstract

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 13 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Austin, Texas, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. An 18-wheeler carrying chemicals overturned on a highway. The truck was carrying three drums of sulphuric acid and two drums of a cleaning agent when the incident occurred.

One of the 330-gallon drums of sulphuric acid was punctured in the incident causing half of its contents to spill into a storm drain, which runs into a nearby creek.

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 15 MARCH, 2000, (http://www.chemsafety.gov).

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Location: Mexico City, MEXICO

Injured: 1 Dead: 0

# Abstract

Seven gas lines at a distribution centre caught fire and sparked off several explosions. Fire fighters manage to contain the blaze after three hours one fire fighter was injured.

Each gas pipeline had a 2,600-gallon capacity.

It is thought that the cause of the explosion was due to a high-pressure release from emergency blowout valves.

[explosion, fire - consequence, high pressure, injury]

### Lessons

Source: CNI NEWS, 13 MARCH, 2000, (http://www.cnionline.com). Location:, OFF SHORE - SWEDEN

Injured: 0 **Dead** : 0

# Abstract

A marine transportation incident. An investigation is being carried out into an alleged oil spill from a chemical tanker.

The slick 19 to 25 miles in length and 50 metres wide was observed coming from the chemical tanker.

# Lessons

Source: BBC NEWS, 8 MARCH, 2000, (http://www.bbc.co.uk)

Location: Basingstoke, M3, UK

Injured: 1 Dead: 1

# Abstract

A road transportation incident. A lorry carrying gas canisters was hit by another vehicle while on the hard shoulder after breaking down. Approximately three other vehicles were involved in the incident.

The collision caused 20 to 30 exploding gas canisters to be thrown up to 400 metres.

The blaze was so intense it damaged the road surface.

The driver of the propane lorry was taken to hospital.

[container, explosion, fire - consequence, fatality, injury]

# Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MARCH 6, 2000, (http://www.chemsafety.gov).

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Location : Hoover, USA

Injured: 4 Dead: 0

# Abstract

A road transportation incident. An 18-wheeler carrying approximately 25,000 pounds of military high-explosive rounds was involved in a collision. The highway was evacuated over two miles as a precaution.

All injuries occurred as a result of the collision and not the cargo.

Explosive experts worked with the bomb squad and the hazardous materials team to remove the rounds.

[evacuation, injury]

# Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MARCH 6, 2000,

(http://www.chemsafety.gov).

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Location: Millsboro, USA

Injured: 0 Dead: 0

# Abstract

Approximately 600,000 gallons of oil is thought to have leaked over a period of 8-12 years from a hole in an underground pipeline previously discovered. The problem emerged after contractors sank a well and began pumping oil from the ground.

So far approximately 40,000 gallons of oil had been pumped from the ground at a rate of approximately 3,000 gallons a day.

[diesel fuel, excavation, spill]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 25, 2000. (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. Approximately 20 pounds of trimethylamine was released when a relief valve on a truck opened.

A county warning siren sounded after being activated by the leak.

Triethylamines have a strong, pungent odour and can be smelt at a concentration as low as a half-part per billion.

[gas / vapour release, mechanical equipment failure]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 23, 2000. (http://www.chemsafety.gov).

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Location : Florida, USA

# Injured: 0 Dead: 0

A road transportation incident. A tractor-trailer collided with a gasoline tanker causing a spill of approximately 1,000 gallons of volatile fuel onto the road and surrounding area.

Hazardous materials teams used foam to soak up the fuel spill and used a 40 by 40 foot diked area to prevent the fuel from running into the surrounding fragile environment.

[collision]

Abstract

# Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 23, 2000. (http://www.chemsafety.gov).

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Location: Savannah, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. A truck carrying plastic containers containing 41,000 pounds of ferric chloride buckled under the weight. Three containers ruptured as a result and it is thought that they started to leak from the top. A hazardous response team used granulated absorbent material to soak up diesel fuel that spilled and a baby pool was used to catch diesel fuel still leaking.

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 29, 2000, (http://www.chemsafety.gov).

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Location: Vicksburg, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. A tanker truck carrying approximately 4,700 gallons of formaldehyde overturned forcing the evacuation of nearby residents. The incident occurred when a tire blew out causing the vehicle to veer sharply.

Approximately five gallons of the toxic chemical, which can cause asphyxiation and death, was spilled

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 20, 2000. (http://www.chemsafety.gov).

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Location: British Columbia, CANADA

Injured: 0 Dead: 0

# Abstract

A marine transportation and road transportation incident. A semi-trailer tanker aboard a cargo ferry ruptured a tank and spilled its contents of gasoline onto the deck and into the sea.

The dispersement of the gasoline was a priority as concentrated vapours become explosive.

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 16, 2000. (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. The driver of a truck discovered a leak of organic peroxide. As the driver went to open the doors to investigate he became contaminated with organic peroxide.

The driver was decontaminated in a special shower. Fortunately he was not injured.

[contamination, people]

### Lessons

Source: CNN.COM, U.S. NEWS, FEBRUARY 17, 2000, (http://www.cnn.com).

**Location**: Calafornia, USA **Injured**: 0 **Dead**: 3

# Abstract

An air transportation incident. A cargo plane carrying normal industrial freight crashed into a car auction yard and burst into flames. All three crewmembers were killed.

Just before the crash, the pilot reported a problem with the positioning/balance of the plane's load.

[aircraft, fire - consequence, explosion, fatality]

# Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 15, 2000. (http://www.chemsafety.gov).

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Location : Baxter, USA

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. A train consisting of propane tank cars derailed in the middle of a town. Residents with in a three quarter mile radius were evacuated.

Fortunately there were no reports of injuries or leaks.

[derailment - consequence, evacuation]

### \_essons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 14, 2000. (http://www.chemsafety.gov).

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Location: Nova Scotia, CANADA

Injured: 0 Dead: 0

# Abstract

A road transportation and marine transportation incident. A truck carrying approximately 26 tonnes of sodium hydrosulphide started to leak whilst on board a freighter ferry.

The leak was discovered when an employee of the freighter ferry detected fumes.

A small spill was later found in the top of one of nine containers of the chemical in the truck. The spill was quickly cleaned up and the all clear given. Sodium hydrosulphide is used in papermaking and normally presents minimal risk when properly packaged. However, its fumes are toxic and it can explode and burn in extreme temperatures.

### Lessons

# Source: BBC NEWS, 11 FEBUARY, 2000, (http://www.bbc.co.uk). Location: Cheshire, UK Injured: Dead: 3 Abstract A road transportation incident. An eight wheel mobile crane collided with an articulated lorry then ploughed through the central reservation and landed on top of an on coming car, which was then struck from behind by a lorry carrying oil drums. The driver of the crane, the lorry were killed. Oil drums were scattered over the motorway. The motorway was closed to allow rescue and recover vehicles to the scene. [collision, fatality] Lessons [None Reported]

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 6, 2000. (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. A road tanker carrying approximately 2,500 gallons of oil spilt an uncertain amount of the oil on a highway.

A hazardous material team arrived on the scene to carry out the cleanup. The extent of environmental damage is not known.

[spill]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, MARCH 6, 2000, (http://www.chemsafety.gov).

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Location: Hong Kong, CHINA

Injured: 0 Dead: 0

# Abstract

A marine transportation incident. Approximately 15 tonnes of styrene leaked into underground drains after a tanker overturned.

The chemical spilled into waters surrounding a bird-watching area.

[shipping incidents]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 8, 2000. (http://www.chemsafety.gov).

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Location: Texas, USA Injured: 0 Dead: 0

# Abstract

A road transportation incident. A tanker truck carrying furfural overturned causing the substance to spill into a drainage hole that empties into a nearby ditch, which drains into a ship channel. Approximately 9,000-gallons was spilt.

People were advised that fish in and around the area might be contaminated.

Clean-up efforts are underway.

Furfural is a colourless, oil, all-natural ethanol derivative used mainly in the manufacture of plastics. The substance is highly flammable, explosive and toxic. Furfural is lethal if ingested or inhaled. If a person comes in contact with the chemical it can also irritate the skin, eyes and throat.

[contamination]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 4, 2000. (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

# Abstract

A road transportation incident. A road tanker carrying a mixture of lead and chromium started to leak, forcing the evacuation of nearby residents and road closures.

The roads were closed four a couple of hours as a precaution as the chemicals are dangerous if inhaled.

# Lessons

# 1217830 January 2000

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, FEBRUARY 1, 2000. (http://www.chemsafety.gov).

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Location : Fuji, JAPAN

Injured: 1 Dead: 0

# Abstract

A road transportation incident. A tanker carrying 10 kilolitres of acrylic acid overturned on an expressway. The driver suffered minor injuries. Acrylic acid in highly corrosive and flammable, inhalation of the vaporised chemical in large amounts or contact with skin can cause inflammation. [injury]

### Lessons

# 1251930 January 2000 Source: HAZARDOUS CARGO BULLETIN, MAY 2000. Location: Cardenas, CUBA Injured: 0 **Dead** : 3 Abstract A marine transportation. Three crewmembers were killed when an explosion occurred on board a marine tanker whilst manoeuvring to load a cargo of crude oil. The vessel broke in two and one part sank. Slight pollution occurred. [fatality, sinking] Lessons [None Reported]

# 1217428 January 2000

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 28, 2000, (http://www.chemsafety.gov).

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**Location**: Lowell, USA **Injured**: 0 **Dead**: 0

# Abstract

A road transportation incident. A road tanker carrying 11,900 gallons of gasoline overturned causing a spillage. The tanker was punctured on the right side causing the fuel to empty into nearby catch basins feeding into a nearby river. The driver was uninjured in the incident.

Clean-up operations were carried out to contain the spill and foam was applied to prevent a fire.

Nearby towns were forced to draw water from alternate sources as a precaution.

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 27, 2000, (http://www.chemsafety.gov).

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Location: Winchester, USA

Injured: 0 Dead: 0

### Abstract

Approximately 11,500 and 21,000 barrels of oil spilt from a ruptured pipeline into a creek. Nearby residents were evacuated. A precautionary boom was placed by the mouth of the creek to contain any oil from spilling into the river.

It was not immediately known what caused the rupture.

[spill, evacuation]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 23, 2000, (http://www.chemsafety.gov).

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Location: Platte City, USA

Injured: - Dead: 10

### Abstract

A road transportation incident. A truck jack-knifed triggering a 24-vehicle pile-up, killing 10 people.

An unexpected covering of ice and snow had covered the highway.

One tractor-trailer involved in the crash, caught fire upon impact. It took over an hour to contain the blaze, which was fuelled by hydrochloric acid leaking from one of the other trucks involved.

[burns, fire - consequence, fatality, collision, spill, weather effects]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 21, 2000, (http://www.chemsafety.gov).

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Location : Flint, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. One of 55 33,000-gallon propane rail cars caught fire causing the evacuation of a 1 mile radius in fear of an explosion.

Fire crews managed to separate all the freight cars attached to the burning car.

Flames reaching about 4 to five feet high emanated from a valve on the burning car.

Fire officials explained that the fumes would create a greater explosive danger if they put the fire out.

[fire - consequence]

### Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 21, 2000, (http://www.chemsafety.gov).

Disclaimer: The Chemical Incident Reports Center (CIRC) is an information service provided by the U.S. Chemical Safety and Hazard Investigation Board (CSB). Users of this service should note that the contents of the CIRC are not intended to be a comprehensive listing of all incidents that have occurred; many incidents go unreported or are not entered into the database. Therefore, it is not appropriate to use the CIRC database to perfrom statistical analysis that extends conclusions beyond the content of the CIRC. Also, although the CSB never knowingly posts inaccurate information, the CSB is unable to independently verify all information that it receives from its various sources, much of which is based on initial reports. CIRC users should also note that the CSB receives more comprehensive reports about incidents that occur in the U.S.; comparisons made between U.S. incidents and those in other nations should take this fact into consideration.

Location:, USA

Abstract

Injured: 0 Dead: 0

A rail transportation incident. One of 55 33,000-gallon propane cars caught on fire early this morning, causing the local police to evacuate a 1-mile radius and close several schools near the rail yard for fear of an explosion.

It is not known what sparked the fire.

The fire department officials feared that the fire could spread to 54 other cars, each carrying up to 33,000 gallons of propane. Fortunately, crews managed to separate all of the freight cars attached to the burning car by 9:30 a.m.

Officials said they would not try to extinguish the fire until the experts arrive. Flames reaching about 4- to 5-feet high emanated from a valve on the burning car. Fire officials said the fumes would create a greater explosive danger if they put the fire out.

[fire - consequence, evacuation]

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Location:, USA

Injured: 0 Dead: 0

### Abstract

A road transportation incident. A tractor-trailer swerved on ice when attempting to avoid a pickup truck that lost control, spilling hazardous chemicals including phosphoric acid and liquid chlorine. The road was closed and no evacuations were reported.
[weather effects]

### Lessons

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Location: Guanabara Bay, BRAZIL

Injured: 0 Dead: 0

### Abstract

Approximately 1,300 tonnes of oil leaked from a pipeline into the sea. 26km of floating barriers were deployed to prevent the oil from reaching nearby beaches. [spill]

Lessons

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 15, 2000, (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

### injuica : o Deau

A road transportation incident. A tractor-trailer carrying hazardous materials turned over. Fortunately none of the 1,200 gallons of sodium hydroxide leaked, no one was injured and no one evacuated.

The accident occurred when the driver of the truck attempted to break, the break lines froze so the driver pulled off the road's shoulder but lost control of the vehicle.

Sodium hydroxide (caustic soda), is used for water treatment operations and is highly corrosive.

[near miss, loss of control]

### Loccone

Abstract

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 12, 2000, (http://www.chemsafety.gov).

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Location:, USA

Injured: 0 Dead: 0

### Abstract

An 8-inch gas pipeline ruptured creating a large crater on a highway forcing its closure. The release of gas from the pipeline rupture did not ignite. Several nearby homes were evacuated, there were no reports of any injuries.

[gas / vapour release, evacuation, near miss]

### Lessons

Source: BBC NEWS, 11 JANUARY, 2000, (http://www.bbc.co.uk).

Location:, NIGERIA Injured: 0 Dead: 7

### Abstract

A marine transportation incident. A fire occurred on an oil slick killing seven people and burning about twenty five vessels and other property. Barges carrying stolen oil were intercepted by police and then towed away to their station. One of the vessels was found to be leaking. The fire occurred when a local resident lit a match.

[fire - consequence, fatality]

### Lessons

### 130392000 Source: ALTAVISTA, 2 SEPTEMBER, 2000, (http://www.altavista.com). Location: Manila Bay, MANILA Injured: - Dead: Abstract

Abstract

A marine transportation incident. A cargo vessel and barge collided. The incident occurred as the 732-tonne barge containing gravel and sand was being towed by another tub boat. The barge sank as a result. Four crew-members are reported to be missing.

An investigation into the incident is being carried out.

[collision, sinking]

Lessons

### **122302000 Source :** THE ENGINEER, 27 OCTOBER 2000.

Location:, UK

. . . . . .

Injured: 0 Dead: 0

### Abstract

A marine transport incident. Twelve nuclear submarines were taken out of service as a precaution when cracks were found in the reactor cooler system of one submarine.

Checks are being carried out to determine whether this incident could occur on the other eleven submarines.

[reactors and reaction equipment, near miss, radioactive, marine transportation]

### Lessons

### 9269 24 December 1999

Source: BBC NEWS, 24 DECEMBER, 1999, (http://www.bbc.co.uk).

Location: Wales, UK
Injured: 0 Dead: 0

### Abstract

A marine transportation incident. An empty oil tanker ran aground on a beach in gale force winds. The 992 tonne oil tanker lost her anchor during force six gales, heavy sea and pouring rain. Fortunately the tanker was pulled off the beach a successfully re-floated.

[marine tanker, ship ran aground, weather effects, near miss]

### Lessons

### 9373 22 December 1999

Source: BBC NEWS, 23 DECEMBER, 1999, (http://www.bbc.co.uk).

Location: Hatfield Forest, UK

Injured: 0 **Dead** : 4

### Abstract

An air transportation incident. A cargo plane carrying chemicals on board crashed killing all crew members. It is thought that the plane's cargo included paint, benzene and other chemicals.

[explosion, fire - consequence, fatality]

### Lessons

### 8093 12 December 1999

Source: BBC NEWS, 20 DECEMBER, 1999, (http://www.bbc.co.uk).

Location:, BAY OF BISCAY

Injured: 0 **Dead** : 0

### Abstract

A marine transportation incident. A marine tanker containing more than 20,000 tonnes of diesel oil, split in two. More than 10 million litres of oil was spilled causing severe environmental damage. The sunken wreckage still contains approximately 23 million litres. So far approximately 100,000 birds have been killed. 'An ecological catastrophe'. [sinking]

Lessons

### 4677 04 December 1999

Source: BBC NEWS, DECEMBER 4, 1999. Location: Guatemala, SOUTH AMERICA

Injured: 80+ Dead: 15+

### Abstract

A road transportation incident. An explosion occurred at a chemical warehouse when two lorries collided.

A fire occurred from spilled petrol which then spread to the warehouse. It is thought that the explosion was caused by a spontaneous ignition of fertilisers stored in the warehouse.

The explosion was felt up to 5 km away, destroying cars and shattering windows in nearby buildings.

Hundreds of people including emergency services, helped to combat the flames in a bid to stop them spreading to a nearby refinery.

At least 15 people were killed and 80 injured.

[fire - consequence, collision, fatality, gasoline, injury]

### Lessons

### 1219020 November 1999 Source: HAZARDOUS CARGO BULLETIN, JANUARY 2000. Location: Milwaukee, USA Injured: 0 **Dead** : 0

Abstract

A rail transportation incident. A 144-car freight train derailed due to a worn wheel bearing. An uncertain amount of acid leaked from one car carrying 5.5 tonnes of product. A nearby residential area was evacuated.

[derailment - consequence, bearing failure, spill, evacuation]

Lessons

### 9685 19 November 1999

Source: CNN.COM, U.S. NEWS, NOVEMBER 19, 1999, (http://www.cnn.com).

Location: Northwest Iowa, USA

Injured: 1+ Dead: 2

### Abstract

A rail transportation incident. A freight train collided with an empty grain train, killing a conductor and the driver of a van that was parked by the tracks. Six of the freight cars derailed and four others overturned. A fire occurred from a diesel spill from the engine but was quickly extinguished.

The grain train was parked on the main tracks when the freight train collided with it at the junction with a side track.

An investigation is being carried out as to why the freight train didn't go on to the side track.

[collision, derailment - consequence, fire - consequence, fatality]

### Lessons

### 1222717 November 1999

Source: CHEMICAL HAZARDS IN INDUSRTY, FEBRUARY 2000,; CHEM. WEEK, 1 DECEMBER 1999, 161(45), 18.

Location: Texas, USA

Injured: 2 Dead: 0

### Abstract

An explosion occurred on a liquid propane gas line. Two people were injured.

The most likely cause of the explosion is thought to have been due to two passing trucks igniting a vapour cloud, which had formed from a leak in the pipeline.

[road transport, road transportation, LPG, hot surface, leak, vapour cloud explosion, injury]

### Lessons

### 3462 16 November 1999 Source: BBC NEWS, NOVEMBER 16, 1999. Location: Ecuador, SOUTH AMERICA Injured: 0 **Dead** : 0 Abstract A main oil pipeline was blown-up. The blast, caused by dynamite, put a section of the line out of service and caused tens of thousands of barrels of crude oil to spill. [deliberate acts] Lessons [None Reported]

### 1270311 November 1999

Source: CNN.COM, U.S. NEWS, NOVEMBER 12, 1999, (http://www.cnn.com).

Location: North Carolina, USA

Injured: 0 Dead: 0

### ...,.....

Abstract

A road transportation incident. A road tanker carrying 49,000 pounds of nitric acid overturned when the driver swerved to miss a deer. 3,000 gallons of nitric

acid spilled.

Nitric acid fumes can cause severe burns or death if inhaled. Nitric acid is used in chemical synthesis and in making dyes and explosives. Nearby residents were evacuated.

[loss of control, driver error]

### Lessons

### 1206707 November 1999

Source: BBC NEWS, NOVEMBER 8, 1999, (http://www.bbc.co.uk). Location:, UK

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A cargo ship carrying bananas and pineapples collided with a tower causing a 26m gash in its side and five tonnes of lubricating oil to spill into the sea. The vessel also held approximately 440 tonnes of heavy fuel oil and 70 tonnes of diesel. It was not thought that the ship was in danger of sinking.

[container ship, collision]

### Lessons

### 1206824 October 1999

Source: BBC NEWS, OCTOBER 25, 1999, (http://www.bbc.co.uk).

Location:, PAKISTAN
Injured: 35 Dead: 11

### Abstract

A gas explosion occurred whilst workers were digging up a gas pipeline, killing at least eleven people and injuring thirty five. The incident was brought under control by cutting the gas supply, but the fires took several hours to burn out.

Several houses were damaged in the blast and local people were evacuated.

[excavation, fatality, evacuation, fire - consequence, injury]

### Lessons

1207118 October 1999
Source : BBC NEWS, OCTOBER 18, 1999, (http://www.bbc.co.uk). Location : , THAILAND
Injured: - Dead: 2
Abstract
A marine transportation incident. An explosion occurred on an oil tanker killing two crewmembers. A nearby cargo ship was also destroyed in the ensuing fire. [fire - consequence, fatality]
Lessons [None Reported]
[ Tolio Topolioo]

## 1251812 October 1999 Source: HAZARDOUS CARGO BULLETIN, MAY 2000. Location: Alberta, CANADA Injured: 1 **Dead** : 0 Abstract A road transportation incident. A tractor-trailer ran out of control off a road and overturned. Approximately 6,700 litres of crude oil spilled as a result. [loss of control, injury] Lessons [None Reported]

### 1195205 October 1999

Source: BBC NEWS, OCTOBER 5, 1999, (http://www.bbc.co.uk).

Location: Ladbroke Grove, Paddington, UK

Injured: 150+ Dead: 31

### Abstract

A rail transportation incident. At least 30 people were killed and over 150 were injured when two passenger trains collided. The force of the collision caused carriages to derail and one train burst into flames.

An investigation is underway, but it is thought that one of the trains ran through a red light.

[collision, fire - consequence, fatality, derailment - consequence, injury]

### Lessons

11953October	1999					
Source : BBC N Location : Kent	IEWS, OCTOBE , UK	R 2, 1999, (http://www.l	obc.co.uk).			
Injured: 0	Dead: 0					
Abstract						
[pollution]	ortation incident.	A large spillage of dies	sel oil polluted a lake, a	stream and drainage s	systems. The oil leaked from	om an oil tanker.
<b>Lessons</b> [None Reported]	1					
[None Reported]	J					
Search results	from IChemE's	Accident Database. In	formation from she@	icheme.org.uk		

1186921 September 1999	
Source: CNN.COM, U.S. NEWS, SEPTEMBER 21, 1999, (http://www.cnn.com). Location:, AFRICA	
Injured: 0 Dead: 0	
Abstract	
A bomb attack carried out on a pipeline stemmed the flow of crude oil. The pipeline had just begun exporting crude oil. Slight damage occurred. [damage to equipment]  Lessons	
[None Reported]	
· · ·	

## Source: CNN.COM, U.S. NEWS, SEPTEMBER 20, 1999, (http://www.cnn.com). Location: Maryland, USA Injured: 37 Dead: 0 Abstract A rail transportation incident. A passenger train collided with a freight train in a rail yard, injuring 37 people. The collision damage the locomotive and the rear of the freight car. All cars remained upright. [damage to equipment, injury] Lessons [None Reported]

# Source: BBC NEWS, SEPTEMBER 20, 1999, (http://www.bbc.co.uk). Location:, UK Injured: 13 Dead: 0 Abstract A road transportation incident. Thirteen people were injured in a head on collision involving a minibus and a road tanker. The tanker was carrying low hazard liquid fertiliser. No spillage occurred. Cause is not known. [injury] Lessons [None Reported]

Source: CNN.COM, U.S. NEWS, SEPTEMBER 20, 1999, (http://www.cnn.com).

Location:, GULF OF MEXICO

Injured: 0 **Dead** : 0

### Abstract

A marine transportation incident. A fire occurred onboard a cruise ship which was carrying 1,700 passengers.

The fire started in the engine room, which was quickly put out, but had damaged the engines. The star-board motor was temporarily restarted, but failed again, stranding the ship 100 miles off the coast.

[fire - consequence, damage to equipment, passenger ship]

### Lessons

## Source: BBC NEWS, SEPTEMBER 19, 1999, (http://www.bbc.co.uk). Location:, PAKISTAN Injured: 70+ Dead: 20+ Abstract A rail transportation incident. At least 20 people were killed and 70 injured when an express train and unmanned railway engine collided head-on. It is thought that the unmanned engine was out of service and may have rolled two miles because of defective breaks. [collision, fatality, injury] Lessons [None Reported]

Source: BBC NEWS, SEPTEMBER 15, 1999, (http://www.bbc.co.uk).

Location : Aberdeen, Scotland, UK

Injured: 2+ Dead: 0

### Abstract

A rail transportation incident. A train derailed when a mechanical digger being used on road works was left on the tracks, where it was hit by a passenger train carrying approximately 100 people. No one was seriously injured. Possible cause: vandalism. [derailment - consequence, collision, bulldozer/jcb/digger, injury]

Lessons

Source: CNN.COM, U.S. NEWS, SEPTEMBER 8, 1999, (http://www.cnn.com).

Location:, USA

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. 2,000 gallons of oil leaked into a Bay from a dredging vessel. The oil leaked from a ruptured fuel tank after rough seas apparently threw part of the dredging apparatus against the vessel. Part of the equipment punctured through the hull, opening a 6 inch to 8 inch wide hole in the tank.

A small amount of oil washed ashore were work crews collected a bag full of oil coated rocks and plants, and 14 birds were also recovered, thick with oil. [heavy seas, spill, ecological damage]

### Lessons

Source: CHEMICAL HAZARDS IN INDUSRTY, FEBRUARY 2000,; HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

Location: Humboldt Bay, USA

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. Approximately 9000 litres of oil spilled into a bay when a fuel tank onboard a dredger ruptured.

The spillage occurred during heavy seas, which apparently caused part of the dredging equipment to smash into the hull of the vessel.

### Lessons

### 1210127 August 1999

Source: CHEMICAL HAZARDS IN INDUSTRY, DECEMBER 1999,; SAFETY ONLINE, 30 AUG 1999, (http://www.safetyon-line.com/),; HAZARDOUS

CARGO BULLETIN, NOVEMBER 1999.

Location: Ontario, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. Six cars of a rail tanker containing flammable liquid derailed. This led to the evacuation of hundreds of people.

One of the cars rolled past a steel stopper at the end of a storage line, spilling a large amount of recovered alcohol into a car park. A temporary dyke of sand was created to stop the flow of liquid. Some material entered a storm drain. The incident is under investigation.

[derailment - consequence]

### Lessons

### 1175024 August 1999

Source: YAHOO NEWS UK & IRELAND, SEPTEMBER 3, 1999, (http://www.yahoo.co.uk).

Location: , ENGLISH CHANNEL

Injured: 20+ Dead: 0

### Abstract

A marine transportation incident. A cargo vessel collided with a cruise liner with more than 2,000 people on board.

Fortunately, the cruise liner was able to reach a nearby port safely despite severe damage to its bow.

The 52,000 tonne container ship, caught fire after the collision. More than 40 of the ships 3,092 containers held hazardous materials two of which carrying cyanide, these were stowed in the centre of the vessel and there was no danger of them being lost overboard. Some of the containers fell into the sea during the impact.

Coast guards reported no sign of trouble before the collision and that no radio message had been taken from either vessel.

[container ship, passenger ship, collision, fire - consequence, near miss, spill, damage to equipment, cyanide product]

### Lessons

Source: HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

Location: Evansville, Indiana, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. Eleven cars of a freight train derailed causing one car containing phosphoric acid to overturn. No leak occurred. The tank car was later lifted onto the flat.

[derailment, near miss]

### Lessons

Source: CNN.COM, U.S. NEWS, AUGUST 9, 1999, (http://www.cnn.com).

### Abstract

A marine transportation incident. An oil tanker collided with a tug boat in a thick haze.

The incident occurred in low visibility. Oil leaked from the tanker and caught fire engulfing a nearby cargo ship. Ten of the tanker's crew died.

It is thought that the thick haze is caused by farmers, plantations and timber firms clearing forest areas at the start of the dry season.

[collision, weather effects, human causes, fire - consequence, fatality]

### Lessons

Source: CNN.COM, U.S. NEWS, AUGUST 8, 1999, (http://www.cnn.com),; HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

Location:, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. A chemical tanker of a freight train derailed spilling flammable liquid for about eight hours before clean-up crews contained the leak. All but six cars that jumped the tracks were empty. The cars that derailed contained talc, liquefied petroleum gas, petroleum distillates and plastic pellets. The leaking car carried approximately 18,000 gallons of petroleum distillates, it was not immediately known how much had been spilled. A small grass fire started after the derailment but was quickly extinguished.

The cause of the derailment was being investigated.

[derailment - consequence, fire - consequence, spill, kerosene]

### Lessons

Distillates are petroleum liquids, such as kerosene, that are produced during the oil distillation process.

### **1175603 August 1999 Source :** BBC NEWS, A

Source: BBC NEWS, AUGUST 5, 1999, (http://www.bbc.co.uk).

Location:, AUSTRALIA
Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A marine tanker spilled approximately 80,000 litres of light crude oil into a harbour, releasing a cloud of acrid fumes over a city. Emergency crews fought to contain the spill, the bulk of the oil was contained behind booms.

An number of birds have been found coated with oil, and dead fish have been washed up on the shore.

It is thought the cause of the spill was due to an open valve while the ship was discharging.

[gas / vapour release, ecological damage, unloading, operation inadequate]

### Lessons

Source: BBC NEWS, AUGUST 2, 1999,

(http://www.bbc.co.uk),; HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

Location: Gaisan, WEST BENGAL

Injured: 1000+Dead: 286+

### Abstract

A rail transportation incident. An express train collided with a mail train head on killing at least 250 people and injuring at least 1000.

Explosions were heard and initially a bomb attack was suspected, but investigations found that both trains ended up on the same track after a signal failure.

One of the trains was carrying explosives in a military compartment which may have caused the trains to catch fire after the crash.

The engine of the express train was blasted into the air by the impact of the explosion.

[collision, derailment - consequence, rail incidents, explosion, fire - consequence, fatality, explosive, injury]

### Lessons

### 1175524 July 1999

Source: CNN.COM, U.S. NEWS, JULY 25, 1999, (http://www.cnn.com).

Location: Palm Springs, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. Eleven cars of a train derailed onto their sides forcing the evacuation of the area.

The train carrying 122 cars, including one containing chromium trioxide, a highly combustible substance when mixed with water and toxic if inhales.

Fortunately, the car remained on the tracks.

No one was injured. The cause is under investigation.

[derailment - consequence, near miss]

### Lessons

### 1175424 July 1999

Source: CNN.COM, U.S. NEWS, JULY 25, 1999, (http://www.cnn.com).

Location:, USA

Injured: 16 Dead: 0

### Abstract

A rail transportation incident. A passenger train derailed as it approached a station. Three cars came off the tracks when the train collided into another train it was attempting to couple up to. Sixteen people were injured in the incident. The derailed cars included two passenger cars and a café car.

The cause of the incident is not known.

[derailment - consequence, collision, injury]

### Lessons

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: lowa, USA Injured: 0 Dead: 0 Abstract A rail transportation incident. Two of twenty six cars derailed from a freight train spilling dentured alcohol. Half of a nearby town was evacuated as fire crews and a specialist team worked to contain the spill. [derailment, evacuation] Lessons

1179310 July 1999
Source : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location : ,
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A fire occurred aboard a container ship. The fire started in a hypochlorite box and then spread to 100 other boxes. The crew had to abandon ship.  [fire - consequence, evacuation]  Lessons
[None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

1179206 July 1999
Source : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.  Location : , SWEDEN
Injured: 0 Dead: 0
Abstract  A marine transportation incident. A passenger/ro-ro ferry spilt approximately 3,000 l fuel at port during bunkering. Fire crews contained the spill with booms. [spill]
Lessons
[None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 1178005 July 1999 Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: California, USA Injured: 0 **Dead** : 0 Abstract A rail transportation incident. Two freight trains collided head on at low speed. Over 37,000 I of diesel was spilled when more than a dozen engines and cars derailed. [derailment - consequence, collision] Lessons [None Reported]

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: Texas, USA Injured: 20 Dead: 0 Abstract A road transportation and rail transportation incident. A road tanker carrying oilfield waste was hit by a train on a crossing causing two engines and seven

freight cars to derail. Twenty people were injured. [collision, derailment - consequence, injury]

Lessons
[None Reported]

### 1261302 July 1999

Source: ENVIRONMENTAL TIMES, VOLUME 6, ISSUE 3, SPRING 2000.

Location: Cornwall, UK Injured: 1

**Dead**: 0

### Abstract

A road transportation incident. A road tanker overturned spilling approximately 5,000 litres of red diesel fuel into a nearby stream.

The driver of the tanker was seriously injured in the incident and an investigation is being carried out into the caused of the incident.

The company of the vehicle was fined £250 and costs of £255 (2000).

[injury]

### Lessons

All vehicles for transporting fuel must be properly maintained at all times to guard against pollution of the environment.

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location:, SINGAPORE Injured: 0 Dead: 0 Abstract A marine transportation incident. A bulk carrier sank after colliding with a tanker in ballast. Damage occurred to the tanker. Bunkers leaked potash fertiliser from the bulk carrier. None toxic. [sinking, collision, damage to equipment, spill]

[sinking, o

## 1179030 June 1999 Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: Washington, USA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. A bulk carrier spilt 750 I fuel oil while loading from a bulk barge. Skimmers and booms failed to stop the slick from moving upriver. [spill, pollution] Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# Source: HAZAROUS CARGO BULLETIN, SEPTEMBER 1999. Location: Massachusetts, USA Injured: 0 Dead: 0 Abstract A rail transportation incident. Thousands of gallons of latex spilled into a river when several cars of a train derailed. The cause of the incident is thought to have been due to hot weather buckling the rails. [derailment - consequence] Lessons [None Reported]

1177827 June 1999	
Source : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location : , PAKISTAN	
Injured: 0 Dead: 0	
Abstract	
A rail transportation incident. Eight tank cars containing oil derailed. At least two cars spilled oil. The cause is not known.  [derailment - consequence]  Lessons	
[None Reported]	

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location:, GALAPAGOS ISLANDS Injured: 0 Dead: 0 Abstract A marine transportation incident. A cargo ship ran aground while docking at a port. Some diesel fuel was spilt. Divers checked for leaks before lightering fuel to barges. [Ship ran aground, spill] Lessons [None Reported]

1179920 June 1999
Source : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location : , NIGERIA
Injured: 0 Dead: 15
Abstract
An explosion occurred on an oil pipeline killing 15 people. Approximately 100 m3 unspecified fuel was lost.  [fuel, fatality, product loss]
Lessons [None Reported]
[Notice Reported]

1179815 June 1999
Source : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.  Location : Dagestan, RUSSIA
Injured: 0 Dead: 0
Abstract
A crude export line was bombed causing oil to leak. A fire ensued. [fire - consequence, pipeline, crude oil, spill, leak]
Lessons [Name Perpetted]
[None Reported]

## 1178514 June 1999 Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location:, CANADA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. A marine tanker was found to have a leak in its hull whilst being docked at a refinery. Temporary repairs were carried out before setting sale for its destination. Lessons [None Reported]

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: Bashkortostan, RUSSIA Injured: 0 Dead: 0 Abstract A rupture occurred on a main oil line. More than 400 tonnes of oil spilled into a near-by river. A response team was brought in to deal with the spill. [material transfer, pipeline, crude oil] Lessons [None Reported]

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location: Washington, USA Injured: 0 Dead: 3 Abstract A leak occurred on a pipeline releasing vapours over a nearby creek. The vapours ignited causing a fireball which killed three people. Approximately 1,100 m3 of gasoline was spilt into the creek. [gas / vapour release, explosion, fire - consequence, fatality, spill] Lessons [None Reported]

### 1271810 June 1999

Source: CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JUNE 27, 2000. (http://www.chemsafety.gov).

Disclaimer: The Chemical Incident Reports Center (CIRC) is an information service provided by the U.S. Chemical Safety and Hazard Investigation Board (CSB). Users of this service should note that the contents of the CIRC are not intended to be a comprehensive listing of all incidents that have occurred; many incidents go unreported or are not entered into the database. Therefore, it is not appropriate to use the CIRC database to perfrom statistical analysis that extends conclusions beyond the content of the CIRC. Also, although the CSB never knowingly posts inaccurate information, the CSB is unable to independently verify all information that it receives from its various sources, much of which is based on initial reports. CIRC users should also note that the CSB receives more comprehensive reports about incidents that occur in the U.S.; comparisons made between U.S. incidents and those in other nations should take this fact into consideration,; CNN.COM, U.S. NEWS, JUNE 2, 2000, (http://www.cnn.com).

Location: Bellingham, USA

Injured: 0 Dead: 3

### Abstract

Approximately 277,000 gallons of fuel spilled from a ruptured pipeline killing three people. Nearby residents were evacuated and other parts of the area were asked to conserve water after a pump station was damaged in the fire and explosion.

The pipeline was later tested. During the first test the pipeline ruptured and spilled 10,000 gallons of water.

Further testing was carried out and all defects were found and repaired.

It is thought that the company will apparently be fined an estimated \$3.05 million (2000), the largest fine ever sought against a pipeline operator.

[fire - consequence, evacuation, fatality, material of construction failure]

### Lessons

### 1177708 June 1999 Location: Pambla, AUSTRALIA Injured: 1 **Dead** : 0

Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.

Abstract

A road transportation incident. A fire occurred when a road tanker overturned spilling 38,000 I of diesel and gasoline into a river. Fire crews extinguished the blaze and booms were used on the river.

[fire - consequence]

Lessons

### 11247June 1999 Source: BBC NEWS, 28 JUNE, 1999,

(http://www.bbc.co.uk).

Location:, NIGERIA

Injured: 0 **Dead**: 15

### Abstract

Fifteen people were burned to death by a blazing fuel from a ruptured oil pipeline. The fire broke out after the pipeline was deliberately punctured to enable people to drain off fuel.

More than one hundred thousand litres of oil spilled out.

[fatality, burns, deliberate acts]

### Lessons

### 11784June 1999

Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.

Location:, NETHERLANDS

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A lighter carrying 3,150 tonnes of crude oil ran aground. The vessel was re-floated and was found to have sustained severe damage to the bottom plates, no spillage occurred.

[ship ran aground, damage to equipment]

### Lessons

Source: BBC NEWS, MAY 29, 1999,; BBC NEWS, MAY 31, 1999, (http://www.bbc.co.uk).

Location:, AUSTRIA **Dead**: 5 Injured: 50

Abstract

A road transportation incident. A fire broke out in a busy motorway tunnel. The accident occurred when a lorry caught fire after colliding with a car at the northern entrance. This was followed by a series of explosions which spread the fire to other vehicles.

The tunnel then filled with smoke, hampering the rescue effort and causing confusion both inside the tunnel and outside.

Up to sixty vehicles were involved in the accident.

[fatality, fire - consequence, collsion]

### Lessons

The crash prompted immediate calls for parallel escape routes to be built.

Source : BBC NEWS, MAY 24, 1999,

(http://www.bbc.co.uk).
Location: Yeman, MIDDLE EAST

Injured: 0 Dead: 0

Abstract

An explosion and fire occurred on an oil pipeline. The pipeline carries one hundred and seventy thousand barrels of oil a day.

The explosion occurred along a section which runs through territory of a fiercely independent tribe.

[fire - consequence]

Lessons

Source: CNN.COM, U.S. NEWS, MAY 24, 1999, (http://www.cnn.com).; BBC NEWS, MAY 24, 1999, (http://www.bbc.co.uk).

Location: Khuzestan, IRAN

**Dead** : 0

### Injured: 70

### Abstract

An explosion and fire occurred on a gas pipeline injuring 70 workers, 30 seriously, but causing no major damage. The blast occurred whilst workers were repairing the pipeline. The injured workers suffered burns.

It is thought that the cause of the explosion was due to a gas leak.

[fire - consequence, repair, injury]

### Lessons

Source: BBC NEWS, MAY 16, 1999, (http://www.bbc.co.uk).

Location: Pakistan, SOUTH ASIA

Injured: 50+ Dead: 40+

### Abstract

A road transportation incident. At least 40 people were burnt to death when a petrol tanker caught fire after overturning on a highway. Hundreds of villagers gathered around the vehicle to collect the leaking fuel, before it caught fire, engulfing people in the flames. More than 50 victims were taken to hospital with serious burns.

[road tanker, fire - consequence, gasoline]

### Lessons

## Source: HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999. Location:, NETHERLANDS Injured: 0 Dead: 0 Abstract A marine transportation incident. A lighter carrying 2,050 tonnes of kerosene ran aground. The vessel was refloated and was found to be leaking from its cargo tanks. [spill, ship ran aground] Lessons [None Reported]

### 1147312 April 1999

Source: CNN.COM, U.S. NEWS, APRIL 12, 1999,

(http://www.cnn.com). Location: Wuppertal, GERMANY

Injured: 52 Dead: 2

### Abstract

A rail transportation incident. An elevated passenger train derailed and plunged into a river killing 2 people and injuring 52. The train apparently hit a platform left by track workers.

The train fell approximately 30 feet into the water, rescue officials pulled victims from water about 2 feet deep.

[derailment - consequence, fatality, injury]

### Lessons

### 1052324 March 1999

Source: YAHOO NEWS, MAR 24, 1999, (http://www.yahoo.com).

Location: Central Iowa, USA

Injured: 1 Dead: 1

### Abstract

A road transportation incident. A fatal collision between two semi-trucks disrupted traffic on the westbound lanes of an interstate in Central lowa for nearly 12 -hours.

The driver of one semi was killed when his truck slammed into the rear of another semi. The second truck began to burn when oil in the chocolate it was carrying caught fire. The accident closed down a ten-mile stretch of the interstate until the road was re-opened the next day.

[fire - consequence, fatality]

### Lessons

### 1053624 March 1999

Source: BBC NEWS, MAR 23, 1999, (http://www.bbc.co.uk).

Location : France, Italy, EUROPE

Injured: 30+ Dead: 30+

### Abstract

A road transportation incident. A fire broke out on board a food truck carrying flour and margarine whilst being driven through a tunnel linking France and Italy. At least 30 people are reported to have been killed.

Thick smoke trapped about 30 people inside the tunnel, they sought refuge in an emergency tunnel and were later evacuated.

The driver of the truck was unhurt.

[fire - consequence, fatality, evacuation]

### Lessons

### 1054223 March 1999

Source: CNN.COM, U.S. NEWS, MAR 23, 1999, (http://www.cnn.com).

**Location**: Illinois, USA **Injured**: 3 **Dead**: 0

### Abstract

A rail transportation incident. A train hauling auto parts collided with a freight train at an intersection, flinging boxcars off the tracks. Fortunately the crew on the trains suffered only minor injuries.

Police began to evacuate the nearby town but stopped after it was determined that no hazardous materials had been spilled and that there was no danger of an explosion from spilled diesel.

However, there was concern that fuel spilled into the nearby creek would reach the nearby river, a source of drinking water for 80,000 people in the area.

A supply of sand was used to dam the creek and contain the spilled oil.

Apparently both trains were moving considerably slower than the 50 miles per hour limit allowed at the intersection at the time of the incident. Investigations are under way as to the cause of the incident.

[collision, derailment - consequence, evacuation, near miss, injury]

### Lessons

Source: YAHOO NEWS, MAR 20, 1999, (http://www.yahoo.co.uk).

Location: Offshore, SCOTLAND

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A marine tanker carrying flammable chemical fluids caught fire off the northern coast of Scotland, rousing fears of an ecological disaster.

Some 200 residents of two tiny villages were evacuated as the vessel caught fire and drifted just off the rocky coastline.

The tanker was carrying 1,750 tonnes of potentially explosive vinyl acetate which is used in the manufacturing of paints and adhesives, 76 tonnes of bunker fuel and 20 tonnes of fuel oil.

The engine room was sealed and power shut down when the fire was first reported, causing the 102 metre vessel to drift in high winds and stormy seas before being stopped by its anchor less than half a mile from the coastline. The ships captain stayed on board for three more hours, whilst the rest of the crew were airlifted to safety, to set up tow lines, drop anchor and flood the compartment separating the fire from the explosive cargo.

The vessel was eventually towed to a safe haven and the fire was successfully put out.

[evacuation, fire - consequence, near miss]

### Lessons

Source: BBC NEWS, MAR 17, 1999,

(http://www.bbc.co.uk).

Location : Chicago, USA Injured : 120+ Dead : 14+

### Abstract

A rail transportation incident. A passenger train derailed when it collided with a road truck on a crossing.

Several carriages derailed and burst into flames after the train crashed into the tractor trailer, which was carrying a heavy load of steel.

More than 200 passengers were on the train.

Investigations are being made into whether the gates and lights at the crossing were working at the time of the incident.

[derailment - consequence, collision, road transport, fire - consequence, explosion, fatality]

### Lessons

Source: CNN.COM, U.S. NEWS, SEPTEMBER 13, 1999, (http://www.cnn.com),; CNN.COM, U.S. NEWS, SEPTEMBER 14, 1999, (http://www.cnn.com).

Location: Bourbonnias, USA

Injured: 11 Dead: 122

### Abstract

A rail transportation and road transportation incident. A collision between a passenger train and a road truck occurred on a railroad crossing, killing 11 passengers and injuring 122. The crash derailed several cars behind the locomotives. Many of the dead were in a sleeping car which was totally destroyed by a diesel fire. It is not yet known the exact cause of the incident.

The crash caused more than £14 million (1999) in damage.

[derailment - consequence, fire - consequence, damage to equipment, fatality, injury]

### Lessons

### 1054004 February 1999

Source: CNN.COM, U.S. NEWS, MAR 12, 1999, (http://www.cnn.com).

**Location**: Oregon, USA **Injured**: 0 **Dead**: 0

### Abstract

A marine transportation incident. A 640 foot cargo ship carrying 400,000 gallons of fuel dragged anchor while waiting out a storm to pick up a load of woodchips. The cargo ship subsequently ran aground.

After constant battering by the pounding surf the ship began to leak.

Plans to pull the whole ship off the beach were scrapped, instead it was decided to burn the fuel oil to prevent anymore spillage.

Attempts to burn off the fuel were partially successful, but disaster struck when the ship broke in half, spilling 70,000 gallons.

[ship ran aground, pollution, weather effects]

### Lessons

### 1051703 February 1999

Source: BBC NEWS, FEB 3, 1999,

(http://www.bbc.co.uk).

Location: Scilly Isles, OFFSHORE, UK

Injured: 0 **Dead**: 0

Abstract

A marine transportation incident. Eleven crewmembers were lifted off an oil rig supply vessel which caught fire 180 miles south of the Scilly Isles. The fire started in the engine room and is believed to have been put out by the ship's carbon dioxide system.

[offshore, fire - consequence]

### Lessons

### 1263122 January 1999

Source: ENVIRONMENTAL TIMES, VOLUME 6, ISSUE 3, SPRING 2000.

Location:, UK

Injured: 0 Dead: 0

### Abstract

A road transportation incident. A lorry carrying a skip loaded with car batteries was stopped by police when clear liquid had been seen escaping from the back of the vehicle.

It was found that the liquid was battery acid, which was leaking from the skip.

A sample of the liquid pouring from the skip showed it to be highly acidic, with a pH value of less than 1. The company was fined £7,000 and costs of £1,1865 (2000).

[spill, human causes, corrosion]

### Lessons

# Source : LOSS PREVENTION BULLETIN 145, 24. Location : River Plate, ARGENTINA Injured : 0 Dead : 0 Abstract A river transportation incident. An oil spill occurred when two ships collided. One of the ships, an oil tanker, was carrying approximately 30,000 tonnes of crude oil the other was carrying cargo. [collision] Lessons [None Reported]

### 1082313 January 1999 Source : ICHEME Location:, GERMANY Injured: 0 Dead: 4 Abstract An air transportation incident. A military refuelling plane carrying 18,000 litres of fuel burst into flames upon crashing in a wooded area near a Dutch boarder, killing all four crew members. It took more than 100 fire fighters approximately three hours to extinguish the burning plane. [fire - consequence, explosion, aviation fuel, fatality] Lessons [None Reported]

### 1080718 December 1998 Source: 1998 ABC NEWS AND STARWAVE. Location:, HUNGARY Injured: 1 **Dead**: 10 Abstract A rail transportation incident. A train derailed after colliding with a grain truck which had gone through red lights of a railroad crossing. [derailment - consequence, collision, human causes] Lessons [None Reported]

### 1044909 December 1998

Source: 1998 REUTERS LIMITED.

Location:, INDIA

Injured: 2+ Dead: 50

### Abstract

A road transportation incident. Fifty people died when an overcrowded bus hit an oil tanker. The petrol from the tanker caught fire, causing an explosion. Two of the six people who managed to escape from the bus by jumping through the rear door were injured.

The oil tanker driver sustained burn injuries.

[road tanker, fire - consequence, fatality, burns, collision, gasoline, injury]

### Lessons

### 10787December 1998

Source: BBC ONLINE NETWORK, (http://www.bbc.co.uk).

Location:, USA

Injured: 0 Dead: 0

### Abstract

A power failure caused severe disruption at the height of rush hour, stalling numerous overland and subway trains. The power failure also caused traffic chaos and led to the suspension of flights into the international airport.

The problem was eventually traced back to a power station where a construction crew interrupted a main electricity line.

Workers adjusted several 115-kilovolt lines turned power on without proper grounding (earthing), this caused a chain reaction, shutting down other power stations, pulling the plug on most of the city and its southern suburbs.

[electrical equipment failure, road transportation, rail transportation, air transportation, plant / property / equipment, operation inadequate, electrical, lack of earthing]

### Lessons

Source: 1998 CABLE NEWS NETWORK.

Location:, INDIA

Injured: 260 Dead: 192+

### Abstract

A rail transportation incident. A passenger train derailed when it collided with a mail train minutes after it had jumped the tracks.

A total of 1,700 passengers were aboard both trains. In all 16 cars were damaged in the incident.

[derailment - consequence, collision, damage to equipment]

### Lessons

Source: BBC ONLINE NETWORK, 1998, (http://www.bbc.co.uk).

Location:, HONG KONG Injured: 0 **Dead**: 0

### Abstract

A marine transportation incident. Two oil tankers collided causing a major oil slick.

There are fears the spillage will pose a serious threat to marine life in the area, including the endangered white dolphin.

The diesel oil poured into an area near the mouth of a river. Both the tankers were carrying thousands of tonnes of oil. Two tanks on one vessel were badly damaged, each with a capacity of 1,000 tonnes of oil.

The oil formed a slick reported to be about 10km long and five metres to 50 metres wide.

[collision, spill, environmental, damage to equipment]

### Lessons

Source: BBC ONLINE NETWORK 1998.

Location:, OFFSHORE CHINA

Injured: 0 Dead: 0

### Abstract

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There are fears the spillage will pose a serious threat to marine life in the area, including the endangered white dolphin.

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The oil formed a slick reported to be about 10km long and five metres to 50 metres wide.

[collision, damage to equipment, pollution]

### Lessons

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Location:, INDIA

Injured: 260 Dead: 192+

### Abstract

A rail transportation incident. A passenger train derailed when it collided with a mail train minutes after it had jumped the tracks.

A total of 1,700 passengers were aboard both trains. In all 16 cars were damaged in the incident.

[derailment - consequence, collision, fatality, damage to equipment]

### Lessons

## Source: BBC NEWS, OCT 19, 1998, (http://www.bbc.co.uk). Location:, AFRICA Injured: Dead: 100+ Abstract A fire and explosion occurred on a ruptured pipeline. Local people were scooping up the leaking fuel from the pipeline when there was an explosion. It is thought that ignition was caused by a spark from either a cigarette or a motorbike engine. Many of the victims had become saturated by fuel. [burns, fatality, fracture, transportation] Lessons [None Reported]

### 1043806 October 1998

Source: CNN.COM, U.S. NEWS, 1998, (http://www.cnn.com).

Location : Pennsylvania, USA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. Approximately 200 people were evacuated when a train carrying hazardous chemicals derailed at the edge of a nearby national forest.

Toxic sulphuric and caustic sodium hydroxide leaked from two of the four tankers which overturned.

[evacuation, sulphuric hydroxide, derailment, spill]

### Lessons

If inhaled, sulphuric acid can cause respiratory problems or skin, eye and ear irritation. In greater concentrations, exposure could be deadly.

### 10443October 1998 Source: CNN.COM, U.S. NEWS, 1998, (http://www.cnn.com).

Location:, Egypt

Injured: 104 Dead: 47

### Abstract

A rail transportation incident. A train derailed as it pulled into the siding of a station and crashed through a barricade and into the nearby town square, killing 47 and injuring 104 people.

An investigation into the cause incident found a faulty brake system.

[fatality, derailment, brakes faulty, injury]

### Lessons

### 1043323 September 1998 Source: BBC NEWS, 23 SEP, 1998, (http://www.bbc.co.uk). Location:, UK Injured: 8 **Dead**: 0 Abstract

A road transportation incident. Eight people were treated at hospital in blood spill scare after more than 50 gallons of cows' blood leaked from a tanker onto a motorway.

Tests on the blood revealed no BSE contamination.

The remains of the tanker's cargo was transferred to another tanker and transported to an incinerator to be destroyed.

The cause of the incident is thought to have been valve failure.

[waste, road tanker]

### Lessons

# Source: YAHOO NEWS, THE ASSOCIATED PRESS, 18 SEP, 1998. Location: New York, USA Injured: 0 Dead: 0 Abstract A rail transportation incident. Double stacked cars of a 125-car freight train struck an overpass and derailed, knocking out a rail line shortly before tens of thousands of commuters headed for their trains. One or two of the cars apparently were filled too high with empty containers when they struck the overpass. [derailment] Lossons [None Reported]

### 10207August 1998

Source: REUTERS LIMITED, 1998.

Location: Cambridge, Massachusetts, USA

Injured: 1 Dead: 0

### Abstract

A rail transportation incindent. A rail car carrying 66,000 gallons of hydrochloric acid began leaking, releasing a vapour cloud of deadly fumes causing injury to one. A diluted form of highly corrosive acid, with a concentration of 28 percent, began leaking on to the rail bed and caused a small vapour cloud to form. One man working in the rail yard was taken to a local hospital. 100 to 150 people from two nearby light manufacturing buildings were evacuated and part of a six-lane highway was closed as hazardous materials units tried to patch the hole. An almost windless morning and heavy rains helped toward the quick shrinking of the vapour cloud.

[gas / vapour release, evacuation, injury]

### Lessons

10399July 1998 Source: BBC NEWS, INTERNET, 1998,

(http://www.bbc.co.uk).

Location: Lake Issyk-kul, KYRGYZSTAN

Injured: 0 **Dead**: 0

Abstract

A road transportation incident. Several litres of nitric acid leaked from a tanker when travelling towards a nearby lake. Nitric acid is easily soluble in water and the amount is fairly small, so environmental damage is unlikely.

[near miss, spill]

Lessons

# Source: ENVIRONMENTAL TIMES, VOLUME 6, ISSUE 3, SPRING 2000. Location:, UK Injured: 0 Dead: 0 Abstract Approximately 213,000 litres of fuel was lost over a period of eight months from an underground pipeline resulting in groundwater pollution. Two companies involved were fined, one £125,000 and the other £125,000, both companies split costs of £25,000 (2000). [human causes] Lessons [None Reported]

### 1044806 June 1998

Source: CNN.COM, U.S. NEWS, 1998,

(http://www.cnn.com).

Location:, GERMANY

Injured: - Dead: 102

### Abstract

A rail transportation incident. A high speed train crash killed 102 people. Evidence suggests that a wheel that might have broken from material fatigue could have caused the carriage directly behind the locomotive to derail. Parts of a broken wheel were found some six kilometres (four miles) ahead of the bridge. The train is believed to have derailed at a switch 300 metres (yards) before the bridge.

The locomotive uncoupled from the train, which then hurtled into a road bridge as the cars behind jack-knifed into one another. The road bridge collapsed on several cars, crushing the passengers inside.

[metal fatigue, wheel broken, derailment - consequence]

### Lessons

### 1078603 June 1998 Source : ICHEME Location : , GERMANY Injured : - Dead : 102 Abstract A rail transportation incident. A high speed train crash killed 102 p

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The locomotive uncoupled from the train, which then hurtled into a road bridge as the cars behind jack-knifed into one another. The road bridge collapsed on several cars, crushing the passengers inside.

[derailment - consequence, wheel broken, fatality, material of construction failure]

### Lessons

### 1265005 May 1998 Source: ENGINEERS AUSTRALIA, JANUARY 2000. Location:, AUSTRALIA Injured: Dead: 4 Abstract A marine transportation incident. A fire occurred onboard a ship when diesel fuel leaked from a burst flexible hose onto a hot engine component in the main machinery space. Four people were killed in the incident.

[fire - consequence, hose failure, hot surface, fatality]

Lessons
[None Reported]

### 10398May 1998

Source: BBC NEWS, INTERNET, 1998,

(http://www.bbc.co.uk).

Location: Lake Issyk-kul, KYRGYZSTAN

Injured: 70+ Dead: -

### Abstract

A road transportation incident. More than 70 people were taken to hospital with suspected cyanide poisoning, after nearly 2,000 kg of the chemical spilled into a river.

An emergency committee was set up to cope with the disaster as several hundred other people complained of feeling unwell. Around four thousand people were evacuated from the nearby village.

The sodium cyanide was being transported in cylinders to a gold mine when a truck carrying it crashed spilling its cargo.

The cyanide leaked into the river, which feeds the country's largest lake.

Sodium cyanide is used extensively in Central Asia as a separating agent in gold mines.

[evacuation, road incidents]

### Lessons

Source: NATIONAL TRANSPORTATION SAFETY BOARD, 1999, (http://www.ntsb.gov),; ENVIRONMENTAL PREVENTION BULLETIN, 068.

Location: Sandy Springs, Georgia, USA

Injured: 0 Dead: 0

### Abstract

A pipeline rupture caused approximately 30,000 of gasoline of which 17,000 gallons were recovered.

The incident occurred on a 40-inch diameter steel pipeline, which ran through a landfill site.

An employee at the site detected the odour of gasoline flowing up through the ground in the vicinity of the site and immediately reported the leak to the pipeline owner. The pipeline was subsequently shutdown.

An investigation into the leak found that the pipeline had buckled and cracked.

It is thought that the stress damage was due to soil settlement underneath the pipe.

Clean-up costs exceeded \$3.2 (1998).

[material of construction failure, spill, design or procedure error]

### Lessons

### 10397February 1998

Source: BBC NEWS, INTERNET, 1998,

(http://www.bbc.co.uk).

Location: Esmeraldas, ECUADOR

Injured: 70 Dead: 11

### Abstract

An oil pipeline explosion. The explosion followed an oil leak and sent a ball of flames through a nearby community, destroying many houses and spilling oil into a nearby river.

Many people threw themselves into the river as a huge fireball made its way down the pipeline. Around 70 people were injured, some with severe burns.

It took more than five hours to bring the blaze under control. Rescue efforts were hampered by water shortages.

About 500 people were evacuated to a military base nearby and were not allowed to return to their homes until the pipeline was declared safe.

[evacuation, transportation, damage to equipment, fatality, injury]

### Lessons

# Source: CHEMICAL HAZARDS IN INDUSTRY, JUNE, 1999, ISSN 0265-5271,; ENDS REPORT, FEB 1999, (289), 53. Location:, Injured: 0 Dead: 0 Abstract A company was fined £70,000 (1998) for an oil leak from a pipeline at its nuclear power station. Polluting matter was spilt into controlled waters. Oil had seeped into a shingle aquifer used to provide drinking water. Four boreholes were closed as a precaution. Over 80,000 litres of the total spillage of 190,000 has been recovered. [spill, pollution] Lessons [None Reported]

### 9061 16 January 1998

Source: CNN.COM, U.S. NEWS, (http://www.cnn.com).

Location: Nova Scotia, CANADA

Injured: 4 Dead: 15+

Abstract

A transportation incident. A freighter ship, a bulk carrier, sank due to rough seas. A garbled mayday from the ship was picked up about 5 am by a coast guard station nearby. A helicopter was sent out and rescued four crewmembers.

[sinking, weather effects, fatality]

Lessons

### 1039507 January 1998

Source: BBC NEWS, INTERNET, 1998,

(http://www.bbc.co.uk).

Location: Off Coast, UNITED ARAB EMIRATES

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. Approximately 4,000 tonnes of fuel oil is thought to have leaked from a marine barge which sank off the north coast in high winds.

Mangrove swamps in the area were threatened by the oil spill. The trees were grown by a marine research centre to provide a habitat for shrimps and small fish.

[marine transport, environmental]

### Lessons

### 10396January 1998

Source: BBC NEWS, INTERNET, 1998,

(http://www.bbc.co.uk).

Location: Off coast, NIGERIA

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. Boats and helicopters were mobilised to help clean-up a 40,000 oil spill of the south-eastern coast of Nigeria.

The 40,000 barrel spill is thought to have been the largest spill in Nigeria for several years. Helicopters, fixed-wing aircraft and boats were mobilised to help monitor and clean-up the oil.

Fish suffocate when oil gets into their gills, and some protected birds may suffer because they rely on the fish for their food.

[environmental]

### Lessons

9057 January 1998 Source: CNN.COM, U.S. NEWS, (http://www.cnn.com). Location: Shaanxi Province, CHINA Injured: 50+ Dead: 100+ Abstract A liquefied nitrogen pipeline exploded in a fertiliser plant. About 60 workers were on night shift during the incident. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 104151998

Source: LOSS PREVENTION BULLETIN, 140, 23.; CNN.COM, U.S. NEWS, 15 FEBRUARY 1998.

Location:,

Injured: 150 Dead: 0

### Abstract

A rail transportation incident. More than 150 people suffered burns, 120 critically, after huge flames swept through a crowd of people following the collision of two petroleum tanker trains.

Most of the people were soaked in petrol because, prior to the explosion, they were carrying buckets laden with petrol to and from their houses. Some witnesses suggested the source of ignition was a cigarette from one of the crowd.

The cause of the collision of the two trains is not immediately clear.

[fire - consequence, gasoline]

### Lessons

### 114881998 Source: BBC NEWS, JULY 6, 1999, (http://www.bbc.co.uk). Location:, UK Injured: 0 **Dead**: 0

### Abstract

A rail transportation incident. A train carrying more than 1,000 tonnes of coal derailed. Fourteen wagons left the track, blocking the main east coast railway line and causing major disruption to passenger services for four days. No one was injured.

A fault in the track is thought to have been the main reason for the accident.

[derailment - consequence, rail incidents]

### Lessons

# 1137129 December 1997 Source: LLOYDS LIST, 31 DEC, 1997. Location:, USA Injured: 0 **Dead** : 0 Abstract A fire occurred whilst drillers obtaining soil samples ruptured a pipeline carrying natural gas. Nearby business were evacuated and the road was closed off. [exploration, sampling, fire - consequence, evacuation, transportation] Lessons [None Reported]

# 1040128 December 1997

Source: LOSS PREVENTION BULLETIN, 139, 23.; THE WESTERN MAIL, 29 DECEMBER 1997.; CEEFAX, 28 DECEMBER 1997, 9 JANUARY. THE

CHEMICAL ENGINEER, 15 JANUARY 1998.

Location:, UK

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. Around 1000 people were evacuated from their homes following a derailment of a freight train wagon carrying sixty tonnes liquid vinyl chloride monomer (VCM). The wagon was the last of nine being taken to the docks, when it derailed while going over manually operated points and turned on its side.

Although the wagon survived the impact intact and there was no leak, forty-eight fire fighters and twenty one employees were required to provide the necessary support during the operation to pump out the wagon.

The residents within a 300 m radius were evacuated as a precaution, during the decanting procedure in case of leakage, which was due to the flammable nature of VCM could have easily ignited.

The cause of the incident was due to human error.

[evacuation, human causes, derailment - consequence, spill]

## Lessons

# 1075327 December 1997 Source: CHEMICAL HAZARDS IN INDUSTRY, FEBRUARY 1998. Location:, UK Injured: 0 **Dead** : 0 Abstract A rail transportation incident. A tank wagon containing vinyl chloride monomer (VCM) a liquefied gas derailed at low speed. Although the wagon came off the rails and turned on its side there was no leak of gas. [derailment] Lessons [None Reported]

1139913 Dece	mber 1997
Source : LOSS Location : , TA	S CONTROL NEWSLETTER, 1997. AIWAN
	<b>Dead</b> : 3
Abstract	
An explosion a [storage tanks, Lessons	nd fire destroyed an LPG tank and nearby gas oil and fuel oil pipelines. Cigarettes and a bottle of wine were found at the site.  fire - consequence, fatality]
[None Reported	d]
[storage tanks,	fire - consequence, fatality]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 1040609 December 1997

Source: LOSS PREVENTION BULLETIN, 139, 22-23. THE CHEMICAL ENGINEER, 15 JANUARY 1998. CEEFAX, 9 DECEMBER.; CNN.COM, U.S. NEWS,

9 DECEMBER 1997.

Location:, GERMANY Injured: 100 Dead: 0

injureu . 100 i

# Abstract

A rail transportation incident. A freight train and passenger train collided injuring some one hundred people, two critically.

Three tanker cars loaded with diesel exploded during the collision. Fire fighters took two hours to extinguish the flames, and prevented the fire from spreading to the remaining nineteen tanker cars on the freight train. The cause of the collision has not yet been identified.

[fire - consequence, explosion, injury]

# Lessons

# 1139002 December 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, CANADA

Injured: 0 **Dead** : 0

Abstract

A fire occurred when natural gas leaked from a 36 inch pipeline. Shutoff valves isolated the affected section and the gas fire burnt itself out.

The fire also ignited a small secondary stubble fire in a nearby field.

The cause of the line break is thought to have occurred due to corrosion.

[fire - consequence, transportation]

Lessons

# 1139128 November 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, INDIA Injured: 0 **Dead** : 0

# Abstract

An explosion occurred on a crude oil pipeline, which led to a spill and subsequent ignition.

It is thought the incident occurred due to a terrorist assault on the pipeline. Explosions occurred at three different locations, some 120 km apart. Three refineries were affected by the incident.

[terrorism, transportation]

# Lessons

# 9065 20 November 1997 Source: COPYRIGHT 1996, THE DAILY IOWAN. Location:, USA

Injured: 0 **Dead** : 0

# Abstract

A rail transportation incident. A railroad train derailed due to striking a truck on a crossing spilling almost 100 tonnes of . All three locomotives and eight of the train's 53 car jumped the tracks.

Warning lights on the crossing were working at the time of the derailment.

[derailment - consequence, collision]

# Lessons

# 1138910 November 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, USA Injured: 0 **Dead** : 0 Abstract A 24 inch natural gas pipeline was punctured by a maintenance work crew. The damaged section was closed down and repairs initiated. Flow was curtailed for a day. [damage to equipment, human causes, transportation, gas / vapour release] Lessons [None Reported]

# 1138715 October 1997 Source : LOSS CONTROL NEWSLETTER Location:, SINGAPORE Injured: 0 Dead:0Abstract A marine transportation incident. Two marine tankers collided spilling 29,000 tonne of fuel oil into the sea. 51 anti-pollution craft were involved in cleanup. [collision, pollution] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8837 01 October 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location:, ENGLISH CHANNEL Injured: 0 **Dead** : 0 Abstract A marine transportation incident. 800-900 tonnes of palm oil leaked from a tank following a collision with a cargo ship in fog. [spill] Lessons [None Reported]

1139329 September 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, USA Injured: 0 **Dead** : 0 Abstract A crack occurred in a flange on an undersea pipeline, which led to a spillage of 30 tonnes of crude oil. The line was shutdown when the leak was detected. The spillage was contained. [environmental, transportation] Lessons [None Reported]

8835 26 September 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, NOV. REUTER. Location : , MALAYSIA
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A bulk carrier sank following a collision with an OBO carrier.  [sinking]
Lessons [None Reported]
[Notice Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8833 18 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location:, JAPAN Injured: 0 **Dead**: 0 Abstract A marine transportation incident. A collision between a laden ship and an oil/chemical tanker occurred, there was no cargo spill and no injuries. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8832 17 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. REUTER. Location:, NORWAY Injured: 0 **Dead**: 0 Abstract A marine transportation incident. A ro-ro ship with 27 people on board grounded and took on water, cargo of water sensitive ferrosilicon was made secure. [ship ran aground] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8825 15 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. UPI. Location: New York, USA Injured: 0 **Dead** : 0 Abstract A rail transportation incident. Forty cars of a 95 car train, including a tank car carrying sulphuric acid derailed, the tank car leaked from the top dome. [derailment, spill, rail tanker] Lessons [None Reported]

# 8823 14 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV, REUTER. Location: Maryland, USA Injured: 0 **Dead** : 0 Abstract An air transportation incident. A fighter plane carrying 5,000kg of fuel broke up and crashed while performing at an air show. The explosion destroyed several buildings. The pilot ejected. No fatalities. Lessons [None Reported]

8830 14 September 1997	
Source : HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location : , BELGIUM	
Injured: 0 Dead: 0	
Abstract	
A marine transportation incident. Engine trouble occurred on a laden LPG tanker causing it to be grounded in a waterway.  [ship ran aground]  Lessons	
[None Reported]	
	_
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

8841 14 September 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, NOV. REUTER. Location : , TAIWAN
Injured: 0 Dead: 0
Abstract
An explosion occurred on a gas pipeline which was accidentally ruptured by workers. The leaking gas ignited by sparks from passing motorcycles. [human causes, transportation]  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8826 08 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location:, USA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. A utility tug towing a barge struck a brightly lit oil platform in clear weather, minor damage occurred. [collision, damage to equipment] Lessons [None Reported]

# 8822 08 September 1997

Source: HAZARDOUS CARGO BULLETIN, 1997, NOV, REUTER.

Location:, FRANCE

Injured: 16 **Dead**: 10

# Abstract

A road transportation and rail transportation incident. A road tanker burst into flames after being struck by a passenger train at a railway crossing. 10 people were killed and 16 injured, a fire then spread to nearby buildings.

[fire - consequence, fatality, injury]

# Lessons

8839 01 September 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location: Siberia, RUSSIA Injured: 0 Dead:0Abstract A leak on a pipeline caused over 700 tonnes of oil to leak into two rivers, three rows of booms were used. Polluted area covering 11 hectares. [pollution, transportation] Lessons [None Reported]

# 10810September 1997

Source: BBC NEWS 1998, (http://www.bbc.co.uk).

Location:, UK

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. A railway maintenance company is facing a charge of negligence following an accident in which a quarter of a mile of track was destroyed and lines were disrupted for several days.

The accident occurred in September 1997, when the maintenance company was rectifying track that had become waterlogged through drainage problems.

A 21 wagon freight train was partly derailed and eight wagons hit a bridge, showering bricks onto a road.

The company was accused of having failed to maintain a safe method of repairing the track and of failing to ensure that rail passengers were not exposed to the risk of injury.

[derailment - consequence, human causes]

## Lessons

8838 30 August 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. LLOYDS LIST. Location:, NIGERIA Injured: 0 Dead:0Abstract A fire occurred on a spilling several million litres of gasoline. Fire fighters battled blaze for three days, the spill was possibly due to vandalism. [fire - consequence, transportation] Lessons [None Reported]

# 1261909 August 1997

Source: ENVIRONMENTAL TIMES, VOLUME 6, ISSUE 3, SPRING 2000.

**Location**: Portsmouth, UK **Injured**: 0 **Dead**: 0

# Abstract

A 16-inch subterranean pipeline was being cleared ready for decommissioning when a large quantity of oil was noticed to be floating on the surface of a creek.

The incident occurred when using a method, which would force any residual oil out at low pressure, allowing the pipe to then be flushed with seawater.

No booms or pollution prevention measures had been deployed.

The company was fined £7,500 and costs of £5,438.

[pollution, design or procedure error]

# Lessons

8933 03 August 1997

Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST.

Location:, MALACCA STRAITS

Injured: 0 Dead: 0

Abstract

A marine transportation incident. A marine tanker collided with a bulk carrier causing a No.2 port side tank the be holed and 150 tonnes of fuel oil spilt, consequential widespread pollution occurred.

[collision]

Lessons

8932 02 August 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. REUTER. Location:, JAPAN Injured: 0 **Dead** : 0 Abstract An air transportation incident. An aircraft carrier spilled 35,000 litres of oil due to fuel being discharged instead of ballast water, oil booms were set up to contain spill. Lessons [None Reported]

# 8931 01 August 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location:, INDIA Injured: 0 Dead: 0 Abstract A marine transportation incident. An anchored cargo ship laden with 4,200 tonnes of sulphur took on water in high winds causing the engines to fail and the ship to sink. All crew rescued. [weather effects, sinking] Lessons [None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. REUTER.
Location:, INDIAN OCEAN
Injured: 0 Dead: 0

Abstract
A marine transportation incident. A bulk carrier laden with iron ore was in collision with a sea mount, sever keel damage occurred, fortunately there was no pollution.
[damage to equipment]
Lessons
[None Reported]

# 8920 31 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location: New Jersey, USA Injured: 0 Dead: 0 Abstract

An air transportation incident. A cargo plane carrying hazardous materials crash landed at an airport, the aircraft was apparently an fire before landing. All crew escaped.

[fire - consequence, chemicals unknown]

Lessons

8929 26 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location:, OFF SINGAPORE Injured: 0 Dead:0Abstract A marine transportation incident. A container ship sustained serious damage when in collision with a laden tanker, no pollution occurred. [damage to equipment] Lessons [None Reported]

8928 25 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location:, CANADA Injured: 0 **Dead**: 0 Abstract A marine transportation incident. An anchored chemiship awaiting pilot was struck by a bulk carrier damaging the bow, fortunately no pollution occurred. [damage to equipment, collision, near miss] Lessons [None Reported]

9069 22 July 1997 Source : ICHEME Location: Indianapolis, USA Injured: 1 Dead: 1 Abstract A gas pipeline exploded and touched off a fire, destroying six houses and damaging 50 others in an affluent subdivision. Construction workers using a backhoe apparently punctured the gas 20 inch main and left 10 to 15 minutes before the explosion. One person suffered burns. [damage by backhoe, fatality] Lessons [None Reported]

8919 19 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. CHEM WEEK. Location:, USA Injured: 0 **Dead** : 0 Abstract A rail transportation incident. Demolition experts blew up two tank cars of chloroprene following derailment of a train due to a buckled track, 6000 residents were evacuated prior to a controlled blast. [evacuation] Lessons [None Reported]

8924 18 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location:, VENEZUELA Injured: 0 **Dead** : 0 Abstract A marine transportation. A supply vessel towing an oil barge struck and fractured piles, 40 bbls of oil spilt. Cleanup crews contained the spill. [collision] Lessons [None Reported]

8923 16 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location:, IRAN Injured: 0 Dead: 4 Abstract A marine transportation incident. An explosion and fire occurred in the engine room of a chemship with 9,000 tonnes of naphtha onboard. [fire - consequence, fatality] Lessons [None Reported]

Source : HAZARDOUS CARGO BULLETIN, 1997, SEP.
Location : , UNITED ARAB EMIRATES

Injured : 0 Dead : 0

Abstract

A marine transportation incident. A barge carrying 5,000 tonnes of diesel hit breakwater after towrope snapped, 2,500 tonnes spilled.

Lessons

[None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. REUTER.

Location:, BRAZIL

Injured: 0 Dead: 1

Abstract

Air transportation incident. An explosion occurred aboard a passenger plane ripping a 2m gash in the fuselage through which a passenger was killed.

Unidentified chemicals thought to be the cause.

[fatality, chemical causes, unknown chemicals]

Lessons

[None Reported]

8921 09 July 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, SEP. LLOYDS LIST. Location : , CHILE
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A marine tanker carrying 27,000 tonnes of gasoline grounded. Two tugs were used to pull the vessel clear averted, possible ecological disaster. [ship ran aground]
Lessons
[None Reported]

## 1136406 July 1997 Source: LLOYDS LIST, 2 JUL, 1997. Location:, COLOMBIA Injured: 0 **Dead** : 0 Abstract A spillage of crude oil occurred due to an attack on a pipeline, which caused it to rupture. The crude oil field which serves the pipeline was shut down until repairs were carried out. [terrorism, transportation] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

## 8916 05 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, SEP. REUTER. Location:, GERMANY Injured: 3 **Dead** : 6 Abstract A rail transportation. A poorly secured pipe, 1.2m diameter, 15m long, weighing 6 tonnes broke loose from a freight train slicing open a passing passenger train. [fatality, human causes, injury] Lessons [None Reported]

## 8900 02 July 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG,; LOSS PREVENTION BULLETIN, 136, 24. Location: Valencia, SPAIN Injured: 0 Dead: 18 Abstract A marine transportation incident. A fire occurred onboard a tanker whilst under construction in a shipyard. A welding spark allegedly ignited diesel fuel being pumped aboard. [fire - consequence, fatality]

Lessons
[None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. REUTER.
Location:, JAPAN
Injured: 0 Dead: 0

Abstract

A marine transportation incident. A double hull tanker with 257,000 tonnes of crude oil, grounded in calm seas. The vessel was refloated but 1,300 tonnes of oil escaped through a damaged bottom plating.
[spill, ship ran aground]
Lessons
[None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG.

Location: Kansas, USA

Injured: 1 Dead: 1

Abstract

A rail transportation incident. A train carrying hazardous materials unable to stop at a crossing, crashed into another train, a fire then occurred. 1,000 evacuated.

[fire - consequence, collision, evacuation, fatality, chemicals unknown]

Lessons

[None Reported]

# Source: ENVIROLINK. Location:, JAPAN Injured: 0 Dead: 0 Abstract A marine transportation incident. A super tanker carrying 76 million gallons of light crude oil spilled 390,000 gallons in to the nearby bay. The tanker strayed from an established shipping lane while trying to avoid other vessels and became caught in strong tides. The tanker scraped a reef just inside the bay, gashing its hull. The spill covered one-sixth of the 15 mile wide and 35mile long bay. Some 300 coast guard and navy ships, along with dozens of private fishing boats were mobilised for the clean up. The spill struck during the harvest time of short necked clams and sea bass. [ecological damage, leak, navigation error] Lessons Benzene and other chemical compound in crude is harmful to marine life.

### 8960 July 1997

Source: CNN INTERACTIVE, US NEWS STORY PAGE, JULY, 1997, ASSOCIATED PRESS, INTERNET, (http://www.cnn.com).

Location: Indiana, USA

Injured: 0 Dead: 1

### Abstract

A gas pipeline exploded causing a fire which destroyed four houses killing one person.

Construction workers apparently punctured the gas main, they left the area ten to fifteen minutes before the explosion which caused flames to burn out of control for more than half an hour.

[transportation, human causes, fatality]

### Lessons

8898 27 June 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. REUTER. Location: Texas, USA Injured: 0 **Dead** : 2 Abstract A marine transportation incident. Two crew were found dead in a partially filled tank on a chemical ship, protective clothing inadequate. [safety procedures inadequate, fatality] Lessons [None Reported]

## Source: LLOYDS LIST, 7 JUNE, 1997. Location:, RUSSIA Injured: 5 Dead: 0 Abstract A fire on the crude oil pipeline was started during repair and maintenance work and was probably caused by the failure or misuse of welding equipment. The oil leaking from the damaged pipe was channelled into a special reservoir dug into the ground. The fire was extinguished in 2 days.

[fire - consequence, design or procedure error, transportation, injury] **Lessons** 

### 8808 25 June 1997

Source: CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.

Location:, USA

Injured: 1 **Dead** : 0

### Abstract

A road transportation incident. A tank truck hauling 6400 gal of toluene crashed into a utility pole in a small town. An estimated 200 gal of the cargo spilled, but because the material is highly flammable and live utility lines had been downed in the incident about 300 residents were evacuated. There was no fire and residents were allowed to return to their homes the next day. The driver was treated at a local hospital. [collision, evacuation]

### Lessons

# Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. REUTER. Location:, INDIA Injured: 0 Dead: 24 Abstract A marine transportation incident. A bulker with 12,700 tonnes of sulphur and 200 tones of fuel/diesel oil on board sank in rough seas, nine of the crew were rescued. [weather effects, sinking] Lessons [None Reported]

8896 18 June 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. Location : Calcutta, INDIA
Injured: 0 Dead: 0
Abstract
A river transportation incident. A cargo ship carrying 5,700 tones of steel, collided with a tug and sank causing a spill of fuel oil which polluted river banks.  [pollution, sinking]  Lessons
[None Reported]

### 1136117 June 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, BELARUS Injured: 0 **Dead**: 0 Abstract

Pollution occurred over 70 hectares of marshland when 500 tonnes of crude oil spilled due to the rupture of a nearby pipeline. The damaged section has been blocked off and work is being carried out to pump out the spillage of oil.

[material of construction failure, transportation]

Lessons

## 8894 13 June 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location:, SOUTH AFRICA Injured: 0 Dead: 0 Abstract A marine transportation incident. A cargo ship carrying 4,000 tonnes of fishmeal, lost power and sank in very heavy seas, 20 crew members were rescued. [sinking, weather effects] Lessons [None Reported]

8893 12 June 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.
Location : Lobito, ANGOLA
Injured : 0 Dead : 0

Abstract
A ation incident. A fire occurred in the holds of a cargo ship involving maize and sorghum this was due to ignition of fumes of chemicals used earlier and poor ventilation.

(fire - consequence)
Lessons
[None Reported]

### 8888 07 June 1997

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG.

Location: West Virginia, USA

Injured: 2 Dead: 1

### Abstract

A rail transportation incident. A freight train carrying hazardous chemicals rammed into a coal train, two engines and 13 cars derailed and burst into flames, one person was killed and two injured.

[fatality, fire - consequence, derailment, collision, chemicals unknown, injury]

### Lessons

### 8809 07 June 1997

Source: CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.

Location:,

Injured: 2 Dead: 1

### Abstract

A rail transportation incident. A transportation freight train carrying hazardous chemicals crashed into a coal train. The freight train burst into flames as its two engines and 13 of its cars derailed. Homes within a half-mile radius of the crash site were evacuated for 24 hours. One freight crew member was killed and two were injured but there were no injuries on the coal carrier.

Tank cars carrying bleach, sulphuric acid and ammonium nitrate were initially reported to be on fire at the scene. The sulphuric acid was transferred and a car partially loaded with hydrogen peroxide was removed.

A tank car carrying acetaldehyde continued burning through to the next day.

[fire - consequence, collision, derailment - consequence, evacuation, fatality, injury]

### Lessons

### 8892 06 June 1997 Location: Lagos, NIGERIA

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.

Injured: 0 Dead: 4

Abstract

A marine transportation incident. Two explosions occurred in the ballast of a chemical tanker at anchorage during welding caused by naphtha vapours. Considerable damage to the tanker occurred.

[damage to equipment, fatality]

Lessons

### 8891 04 June 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. TRADE WINDS. Location:, TURKEY Injured: 0 Dead: 4 Abstract A marine transportation incident. An explosion occurred in a tank on a marine tanker the cause was due to welding operations during repairs on a "gas free ship" at anchorage. [hot surface, fatality] Lessons [None Reported]

8903 June 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location:, BELARUS Injured: 0 **Dead**: 0 Abstract 500 tonnes of oil spilt from a pipeline, all of the oil was recovered and 8 meter length of line replaced. Agricultural land to be recultivated. [spill, transportation] Lessons [None Reported]

## 1135827 May 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, RUSSIA Injured: 0 Dead:0Abstract A spillage of 386 tonnes of crude oil occurred following the rupture of a pipeline. 17 tonnes spilt into the Black Sea. Clean up operations involved removing 500 tonnes of contaminated earth. About 700 persons involved in the clean up operations. [pollution] Lessons [None Reported]

# Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location:, RUSSIA Injured: 0 Dead: 0 Abstract 386 tonnes of oil was spilt when a pipeline burst over adjacent land and a main road, 13 tonnes escaped into the sea. 318 tonnes was collected in clean-up operations. [spill, transportation] Lessons [None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.
Location:, VENEZUELA
Injured: 0 Dead: 0

Abstract

A marine transportation incident. A tanker in ballast allegedly illegally discharged 8,500 t of dirty ballast water into a lake.
[environmental, human causes]

Lessons
[None Reported]

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.
Location:, OFF SHINGAPORE
Injured: 3 Dead: 2

Abstract
A marine transportation incident. An explosion and fire occurred in the engine room of a tanker laden with crude oil.

[fire - consequence, fatality]
Lessons
[None Reported]

## 8863 23 May 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location: California, USA Injured: 0 Dead: 0 Abstract

Abstract

A rail transportation incident. A freight train carrying LPG residue and phosphoric acid derailed. Nineteen cars left the tracks, no spill occurred. Resident were evacuated and gas and electricity supplies were cut off.

[derailment, evacuation]

Lessons

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.
Location: , JAPAN
Injured: 0 Dead: 0

Abstract
A marine transportation incident. An liquefied natural gas (LNG) carrier collided with a fishing vessel causing damage to the port side and bulwark.
[collision, damage to equipment]
Lessons
[None Reported]

8869 20 May 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. FAIR PLAY. Location : , THAILAND
Injured: 0 Dead: 0
Abstract
A marine transportation incident. A tanker laden with crude oil grounded in a channel.  [ship ran aground]
Lessons [News Benerical]
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8882 16 May 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. OGJ. Location : Lousiana, USA
Injured: 0 Dead: 0
Abstract Stract
A pipeline carrying oil from wells ruptured causing a spillage of 700 tones.  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

3868 14 May 1997
Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.  .ocation:, SOUTH KOREA
njured: 0 Dead: 0
Abstract
marine transportation incident. A container ship collided with a 2,850 gt cargo ship and then sank with 48 containers on board. sinking] essons
None Reported]

8880 12 May 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. OGJ. Location : Texas, USA
Injured: 0 Dead: 0
Abstract
Approximately 715 tonnes of oil spilt over 10 acres from a ruptured pipeline, earthen trenches were built and vacuum trucks were used in the clean-up. [transportation, spill]  Lessons
[None Reported]

### 8867 09 May 1997

Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST.

Location:, SOUTH CHINA SEA

Injured: 0 **Dead**: 0

### Abstract

A marine transportation incident. A fire occurred when a coastal tanker carrying gasoline collided with a cargo ship and sank shortly afterwards. Eight crew rescued.

[fire - consequence, collision, sinking]

### Lessons

### 8861 08 May 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location: Karachi, PAKISTAN Injured: 0 Dead: 10 Abstract

An air transportation incident. An explosion occurred when a plane jettisoned two laden fuel tanks over a populated area, the plane had engine trouble. [fatality, mechanical equipment failure]

### Lessons

8866 07 May 1997
Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. FAIR PLAY. Location : , JAPAN
Injured: 0 Dead: 0
Abstract  A marine transportation incident. A tanker carrying 630,000 litres of gasoline collided with 1,000m3 LPG carrier, 50,000 litres of gasoline spilt.  [spill, collision]
Lessons [None Reported]
[rone repense]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 8887 07 May 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. LLOYDS LIST. Location:, CANADA Injured: 0 **Dead** : 0 Abstract A rail transportation incident. A fuel tank of a locomotive punctured by part of a swing bridge mechanism while crossing the bridge, 12,000 I of diesel oil spilt into the river. [spill, collision] Lessons [None Reported]

8860 06 May 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, AUG. THE DAY. Location: Connecticut, USA Injured: 0 Dead:0Abstract A road transportation incident. A road tanker overturned after swerving to avoid a car causing 10,000 litres of heating oil to onto the road, two truckloads of sand was used to contain the oil. Lessons [None Reported]

## 11665May 1997

Source: TANKER CASUALTY REPORT NO. 21, TANKER CASUALTY DATA EXCHANGE SCHEME, INTERNATIONAL CHAMBER OF SHIPPING, LONDON.

Location:.

Abstract

Injured: 0 Dead: 0

A marine transportation incident. An explosion occurred on a ship at sea whilst it was transferring dirty ballast. No one was injured.

The ship was proceeding in ballast after having discharged a cargo of crude oil. Four holds contained dirty ballast, two holds clean ballast and the remaining empty holds had been cleaned. Dirty ballast was being discharged from a hold which was three-quarters full when an explosion occurred which blew the open hatch covers overboard and caused slight damage to the hatch conning. There was a force 6 wind blowing with rough seas and the ship rolling at the time of explosion (0702 hours).

No definite cause for the explosion was apparent. The possibility of a spark generated by steel to steel friction was discounted. It was concluded that a charged mist and charged water slugs may have formed which on discharge could have caused a spark.

The accepted approach regarding gas concentrations in tanks was that an overrich atmosphere was safe because it was not within the flammable range. Overrich atmospheres are, however, difficult to maintain with any reliability in tanks. Accurate gas measurements now indicate that this assumption may be erroneous and consequently the atmosphere in the tank at the time of the explosion was probably within the flammable range and therefore adequate to propagate an explosion.

[material transfer]

## Lessons

- 1. The operational procedures for the discharge of ballast and tank cleaning were changed following the accident. The assumption that an overrich atmosphere is safe is not now accepted and tanks are now kept gas free during operations. This is achieved by ventilating with fans throughout the discharging and cleaning operations. Measurements are taken at regular intervals to ensure that the atmosphere is below the lower explosive limit.
- 2. Following the accident, a recommendation was issued by the International Chamber of Shipping to the effect that OBO type ships should be operated in such a manner as to avoid slack tanks, thus obviating the possibility of ignition by compression or by static electricity.

8990 May 1997	
Source : CHEMICAL HAZARDS IN INDUSTRY, 1997, OCT.	
Location:, FRANCE	
Injured: 0 Dead: 0 Abstract	
Abstract  A marine transportation incident. One hundred and twenty tonnes of fuel oil leaked into a dock when a tanker hit the quay while trying to dock.  [collision]  Lessons	
[None Reported]	
Search results from IChemE's Accident Database Information from she@icheme org.uk	

# 8943 30 April 1997 Source : CHEMICAL HA

Source: CHEMICAL HAZARDS IN INDUSTRY, 1997, JULY.

Location : Cherbourg, FRANCE

Injured: 12 Dead: 2

Abstract

Alastras 4

A marine transportation incident. A navy ship carrying explosives blew up and sank. About a dozen people were injured in the blast on board the 450 tonne support ship which had been carrying grenades. The explosion was heard up to 19 miles away.

[sinking, fatality, injury]

Lessons

8873 10 April 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. OGJ. Location:, TAIWAN Injured: 0 **Dead** : 0 Abstract A rupture occurred in a pipeline resulting in the spillage of 500 bbl of oil. Serious pollution occurred to crop land, freshwater and fishing. [ecological damage, transportation] Lessons [None Reported]

9067 02 April 1997 Source : ICHEME Location:, FRANCE/GERMANY Injured: 0 **Dead** : 0 Abstract A train derailed carrying highly radioactive spent nuclear fuel. Three railcars loaded each carrying one shipping cask, which contained six spent fuel elements. The accident happened while the train was changing tracks at low speed. Lessons [None Reported]

9003 01 April						
Source : CHEN Location : ,	MICAL HAZARE	OS IN INDUSTRY, 1997,	SEP.			
	<b>Dead</b> : 0					
Abstract						
[collision]	rtation incident.	Two road transport truck	ks collided, spilling 200	litres of caustic soda from	three drums. Twelve p	people were treated for burns.
Lessons	_					
[None Reported	<u>d]</u>					
Coursh 1	from IOL	lo Applicant Database 1	oformation for a 1 1	Richama are esta		
Search results	irom icneme	's Accident Database. In	normation from sne@	<i>y</i> icneme.org.uk		

# 2202 23 March 1997 Source: LOSS CONTROL NEWSLETTER, FEB, 1997. Location:, UK Injured: 0 **Dead** : 0 Abstract A pipeline was ruptured by a mechanical digger involved in road surfacing operations. It took about 6 hours to contain the leak. [drilling/digging/ploughing vehicles, spill, natural gas] Lessons [None Reported]

# Source: LOSS CONTROL NEWSLETTER, FEB, 1997. Location: CHINA Injured: 0 Dead: 0 Abstract A road transportation incident. 1540 lbs of cyanide may have entered a near-by river after a truck carrying 200 drums plunged into it. Nearly 0.5 million people were warned against drinking the water. [spill, loss of control, cyanide product] Lessons [None Reported]

# Source: LOSS CONTROL NEWSLETTER, 1997. Location: , USA Injured: 0 Dead: 0 Abstract A marine transportation incident. A marine barge capsized after it hit a bridge in fast moving currents. Nitrogen was pumped into the barge to lessen the risk of fire. The volatile cargo of benzene and gasoline was removed and the barge righted. [vessel overturned, collision] Lessons [None Reported]

# 2715 16 February 1997 Source: ILLOYDS LIST 18-21 FEB 1997 LOSS CO

Source: LLOYDS LIST, 18-21 FEB, 1997, LOSS CONTROL NEWSLETTER, JAN, 1997.

Location:, RUSSIA

Injured: 0 Dead: 0

# Abstract

A spill occurred of about 1,500 tonnes of crude oil of which 400 tonnes went into the Volga after pipeline ruptured while under repair. A 60 ft section of the pipeline was replaced.

[transportation, pollution, material of construction failure]

# Lessons

# Source: LOSS CONTROL NEWSLETTER, 1997. Location:, USA Injured: 0 Dead: 0 Abstract A break in a 26 inch natural gas pipeline sent a huge fire ball visible 30 miles away. There was also an apparently unrelated break in the pipe 220 miles away. The ruptures were caused by stress on the pipeline created by land movement. [fire - consequence, earth movement, transportation] Lessons [None Reported]

# Source: LOSS CONTROL NEWSLETTER, 1997. Location:, RUSSIA Injured: 0 Dead: 0 Abstract An explosion of natural gas sent flames 30 metres into the air. The fire took 5 hours to extinguish. A similar fire occurred on the same stretch of pipeline six days earlier. Investigations suggest both incidents were caused by faulty pipeline construction. [fire - consequence, transportation, human causes]

[fire - cons

# 8945 28 January 1997

Source: CHEMICAL HAZARDS IN INDUSTRY, 1997, JUL.

Location:, NETHERLANDS

Injured: 3 Dead: 1

# Abstract

An explosion occurred in a pipeline. The pipe which was used for transporting titanium tetrachloride, was undergoing maintenance work when the accident occurred, the pipe was being pumped with water following aeration with nitrogen. Extensive damage was caused and the installation will be out of action for a considerable period.

[transportation, damage to equipment, fatality]

# Lessons

# 8452 18 January 1997 Source: OBSERVER, 1997, JAN, 19,; GUARDIAN, 1997, JAN, 20. Location: English Channel, Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Two marine tankers in collision in fog, 32 miles from Dover. One marine tanker holed and leaked gasoline into sea. 3000 tonnes of gasoline leaked into sea. [spill] Lessons [None Reported]

9068 15 Janu		
Source : ICHE	ME	
Location:,	<b>D</b> 0	
Injured: 0	Dead: 0	
A rail transport [derailment - co Lessons	onsequence]	A railcar carrying a nuclear fuel cask derailed during a track change in front of a nuclear power plant.
Inone Reporte	aj	
[derailment - co	onsequence]	A railcar carrying a nuclear fuel cask derailed during a track change in front of a nuclear power plant.
Sparch results	s from IChem	F's Accident Database Information from she@icheme org.uk

# 8971 09 January 1997

Source: HAZARDOUS CARGO BULLETIN, 1997, MAR.

**Location**: Lahore, PAKISTAN **Injured**: 100+ **Dead**: 20

# Abstract

A road transportation incident. A leak of poisonous gas occurred, the gas believed to be chlorine, leaked from drums loaded inside two containers which were being carried on a lorry that slid into a ditch. It is believed that the safety valves on the drums had not been tightened properly and loosened as the truck slid into the ditch.

The leak lasted for several hours until the area was flooded the area to dissipate the gas. 1,000 people were evacuated into nearby schools. Police in gas masks eventually removed the containers.

[evacuation, fatality, injury]

# Lessons

# 1133508 January 1997 Source: LOSS CONTROL NEWSLETTER, 1997. Location:, PAKISTAN Injured: 200 Dead: 20 Abstract

A road transportation incident. Chlorine gas leaked from drums loaded inside two containers on a lorry which slid into a ditch. It is believed that the safety valves on the drums had not been tightened properly and loosened as the truck slid into the ditch.

[gas / vapour release, design or procedure error, fatality]

Lessons

# Source: LOSS CONTROL NEWSLETTER, 1997. Location:, JAPAN Injured: 0 Dead: 1 Abstract A marine transportation incident. Much of the cargo of 19,000 tonnes of fuel oil leaked from marine tanker when it broke in two in stormy weather. The 10 km wide spill has affected up to 450 km of coastline. The ship is believed to have sunk after colliding with semi-submerged object. [collision, sinking, fatality, pollution, heavy seas] Lessons [None Reported]

# 8851 January 1997 Source: HAZARDOUS CARGO BULLETIN, 1997, NOV. Location: Zambia, AFRICA Injured: 0 Dead: 0 Abstract A rupture occurred on a crude oil pipeline causing pollution. A recent evidence of further leakage results from split oil filtering down from the pipeline trench and through to the ground water. The pipeline was in a poor state of repair due to the lack of maintenance. [human causes, spill] Lessons [None Reported]

# 7756 1997 Source: LOSS PREVENTION BULLETIN, 136, 24. Location: West Virginia, USA Injured: 0 **Dead** : 0 Abstract A rail transportation incident. Hundreds were evacuated when a train packed with bleach, sulphuric acid and other chemicals smashed into the back of a coal train. [evacuation] Lessons [None Reported]

# 8655 05 December 1996 Source: LLOYDS LIST, 1996, DEC, 14. Location: Florida, USA Injured: 2 **Dead** : 0 Abstract A rail transportation incident. 1,200 gallons of fuel spillage when youths operated a switching device which caused the derailment of a rail tanker. \$1 million (1996) damage done. [derailment - consequence, damage to equipment] Lessons [None Reported]

# 8849 December 1996

Source: HAZARDOUS CARGO BULLETIN, 1997, NOV.

Location: Kondinin, WESTERN AUSTRALIA

Injured: 0 Dead: 1

# Abstract

A road transportation incident. Correct packing procedures helped reduce the impact of the rollover of a semi-trailer. The trailer was carrying four 205 litter drums of nitric acid and four cases containing six 500ml bottles of hydrofluoric acid. The severity of the incident was minimised due to the fact that the load had been secured as required and all the dangerous goods were found to be in approved packaging.

There was some spillage of nitric acid but the cases containing hydrofluoric acid were not damaged during the incident. However, the death of the driver contributed to delays in identifying the type of products involved and the extent of the spill. In addition, a number of other factors delayed the response of emergency services.

- 1. The incident occurred at night in an isolated and remote location.
- 2. The truck was not required to display placards because of the small quantity of dangerous goods on board.
- Shipping documents could not be recovered due to damage sustained to the driver's cab.

[fatality]

## Lessons

## 8718 18 November 1996

Source: LOSS PREVENTION BULLETIN, 136, 7-12.

Location: English Channel,

Injured: 33 Dead: 0

# Abstract

A rail transportation incident. A heavy goods vehicle shuttle travelling from France to the United Kingdom stopped in the south running tunnel about 19 km from the French portal with a fire on board. Large quantities of smoke emitted from the fire rapidly engulfed the amenities coach at the front of the train. There were thirty one passengers and two crew members in the coach who all suffered from smoke inhalation which made their evacuation to the safety of the service tunnel extremely difficult.

Some of the passengers and the driver were evacuated on to a rescue train which had been stopped in the north running tunnel adjacent to the incident train. The remaining passengers and crew, after medical treatment, were evacuated via the service tunnel transport system to local hospitals in France.

While passengers were receiving medical attention, fire fighting crews began a difficult fire fighting operation involving over 450 personnel from both the French and UK emergency services. The fire was eventually extinguished some seven hours later. Parts of the train and a section of the tunnel were extensively damaged and operations through the tunnel were suspended for a considerable period.

[fire - consequence]

## Lessons

The incident illustrated graphically a number of points, such as:

- 1. The effects of smoke in the confines of a tunnel can quickly induce severe anxiety and panic for anyone exposed to the incident.
- Toxic fumes can build up rapidly and the acute effect can disable passengers and staff exposed in a very short period of time.
- It is vital to locate the exact position of a train stopped in a tunnel to facilitate rapid rescue.
- Early fire detection is essential in order to halt further traffic and initiate emergency plans.
- An efficient evacuation procedure is necessary and staff should be trained in its use.
- 6. In the event of a fire, smoke is rapidly moved through the tunnel by the piston effect and this must be considered in the development of the emergency plan.
- Effective communication systems are necessary to direct the rescue operations and to allay the fears of the passengers.

8695 17 November 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Yosu, SOUTH KOREA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. A marine crude tanker with 250,000 tonnes crude oil on board struck dolphin causing spillage of 300 tonnes from punctured side tank. [collision] Lessons [None Reported]

# 8668 30 October 1996

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: Off Corpus Christi, USA

Injured: 0 **Dead** : 0

# Abstract

A marine transportation incident. An oil marine tanker containing ballast struck an unmanned gas platform 15 miles east of Port Aranas. Damage to legs of platform.

[damage to equipment, offshore, collision]

# Lessons

8640 10 September 1996
Source : BBC NEWS, (http://www.bbc.co.uk).
Location:, UK
Injured: 1 Dead: 0 Abstract
Abstract  A road transportation incident. Liquid nitrogen spillage onto M25 motorway when road tanker overturned.
Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 8637 29 August 1996 Source: LLOYDS LIST, 1996, SEP,4. Location: Quebec, CANADA Injured: 0 **Dead**: 0 Abstract A rail transportation incident. 36 wagons of a freight train were derailed causing hydrogen peroxide to leak and forcing the evacuation of 30 families. [derailment] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8638 29 Augu		
Source : LLOY Location : Ture	purce : LLOYDS LIST, 1996, SEP, 12.  pocation : Turov, BELARUS	
Injured: 0	<b>Dead</b> : 0	
Abstract		
Transportation. <b>Lessons</b>	Up to 400 tonnes of oil leaked from pipeline following rupture.	
[None Reported	1]	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk	

# 8635 24 August 1996

Source: LLOYD LIST, 1996, AUG, 28,; NATIONAL TRANSPORTATION SAFETY BOARD, 1998, (http://www.ntsb.gov).

Location: Lively, Texas, USA

Injured: 0 Dead: 2

# Abstract

A transportation incident. An 8-inch diameter steel LPG pipeline transporting liquid butane ruptured sending a butane vapour cloud into a nearby residential area forcing an evacuation.

Two residents were killed when the entered the vapour cloud in a vehicle sparking off an explosion.

Loss of product occurred worth approximately \$217,000, (1996).

It is thought the incident occurred due to corrosion.

[explosion, evacuation, fire - consequence, fatality, product loss]

# Lessons

8629 10 August 1996	
Source: LLOYDS LIST, 1996, AUG, 13.	
Location : Ontario, CANADA  Injured : 0 Dead : 0	
Abstract	
A rail transportation incident. Two hundred people evacuated when a rail tanker of sulphuric acid was derailed and ruptured. Spill. [derailment, evacuation] Lessons	
[None Reported]	
• • •	

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 9064 03 August 1996 Source: COPYRIGHT 1994-1996, SAN DIEGO DAILY TRANSCRIPT. Location: California, USA Injured: 3 Dead: 0 Abstract

# A rail transportation incident. A train derailment caused two loaded tank cars to career onto their sides, causing a major spill of non-flammable alcohol and fatty acids. Three boxcars were also involved causing damage to the track.

[damage to equipment]

Lessons

# 1153414 July 1996 Source: ICHEME

Location: . UK

Injured: 1 Dead: 0

# Abstract

A pipeline connecting 3rd and 4th stage suction drums on a cracked gas compressor on an ethylene plant was being modified as part of a series of wider plant modifications, using contractors. After new pipework had been prepared and positioned a welder struck an arc to complete welding, when there was a detonation. The source of the fuel for the explosion was gasoline from residual pockets of hydrocarbons which had evaporated fron the cracked gas system and migrated into the line under modification. The total mass of fuel estimated to have been in the line was 48 grams, the welder was only slightly injured, and others working in the vicinity were unharmed.

Investigation showed that there had been failure to observe fully the permit to work and hot work systems in the factory; and that there had also been a failure to ensure that the part of the plant on which welding was to take place had been effectively isolated and purged. [permit to work system inadequate, injury]

## Lessons

The following lessons were learnt:

- 1. This incident classically illustrates the risks associated with hot work on plant and vessels in which flammable substances might be found, and emphasises the need for rigourous observance of adequate operational precautions.
- 2. Although there were clear operational failures in this case, investigation of the incident led to analysis and modification of the company peremit to work systems, with the objective of increasing the protection afforded by them.

# 8614 12 July 1996

Source: LLOYDS LIST, 1996, JUL, 15. LOSS CONTROL NEWSLETTER, ISSUE 3, 1996.

Location: Sormenovo, RUSSIA

Injured: 0 Dead: 2

Abstract

An explosion occurred at a gas pipeline formed a crater more than 2 metres deep and 8 metres across.

The explosion occurred after a bulldozer hit the pipeline [drilling/digging/ploughing vehicles, excavation, fatality]

Lessons

8622 05 July 1996
Source : BBC NEWS, (http://www.bbc.co.uk). Location : , UK
Injured: 0 Dead: 0
Abstract
A road transportation incident. Road tanker overturned causing a spillage of 1000 gallons of concentrated hydrochloric acid occurred.  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 8606 27 June 1996

Source: LLOYDS LIST, 1996, JUL, 3, JUL, 9.

Location: South Carolina, USA

Dead:0Injured: 0

Abstract

Transportation. Pipeline spillage of 420,000 gallons of diesel fuel, some into a river. Pipeline was operating at reduced rate after inspection by an smart pig leak detection system. Later it was estimated that at least 1 million of No. 2 diesel spilled from the pipeline. 900,000 gallons were recovered by skimmers and vacuum trucks.

Lessons

8625 22 June	1996
Source : LLO\ Location : , NI	/DS LIST, 1996, AUG, 3. GERIA
Injured: 0	<b>Dead</b> : 0
Abstract	
Transportation Lessons	. A leak occurred on a southern swamp pipeline causing a spillage of 600,000 to 800,000 barrels of oil.
[None Reporte	d]
Search results	s from IChemE's Accident Database. Information from she@icheme.org.uk

# Source: LLCYDS LIST, 1996, JUN, 5, JUN, 6. Location:, INDIA Injured: 0 Dead: 0 Abstract A river transportation incident. Spillage of several tonnes of petroleum products into water at jetty when oil barge overflowed her pipeline during loading operations. 358,000 litres of diesel spilt. Lessons [None Reported]

# Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Magdeburg, GERMANY Injured: 0 Dead: 0 Abstract A rail transportation incident. An explosion caused two wagons carrying vinyl chloride to catch fire leaving a toxic cloud over the area. [fire - consequence, gas / vapour release] Lessons [None Reported]

8601 June 199	96
	DS LIST, 1996, JUN, 24. Peninsula, RUSSIA
Injured: 0	Dead: 0
Abstract	
[environmental]	A spillage from a leak from a pipeline covered 30,000 sq. m. of lake and swamp with 400 tonnes of kerosene.
Lessons [None Reported	п
[	,
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

# 8462 31 May 1996

Source: EUROPEAN CHEMICAL NEWS, 1996, JUN, 17, NOV, 4,; WASTE ENVIRONMENT TODAY, VOL. 19, PAGE 506, 1996, JUN, 12.

Location: Magdeburg, GERMANY

Injured: 0 Dead: 0

# Abstract

A rail transportation incident. Derailment and explosion of four of 18 rail tankers, each carrying 50 tonnes of vinyl chloride which were consumed in the fire. Schools nearby were closed for a week. Pollution of ground water over 46,000 km2 area with dioxins and other contaminants was reported.

[fire - consequence, contamination]

### Lessons

# 1036025 May 1996 Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Louisiana, USA Injured: 0 Dead: 0 Abstract

Transportation. 310,000 gallons of gasoline were lost in marshland following the rupture in a pipeline from the refinery. The rupture occurred under a small tributary of a nearby river and led to the isolation of sections of local highway to avert the potential for ignition.

[material of construction failure, pollution]

Lessons

8600 20 May 1996	
Source: LLOYDS LIST, 1996, JUN, 22. Location: Shenzen, CHINA	
Injured: 19 Dead: 1	
Abstract	
A gas pipeline explosion shook 20 floor building. Fatality.  Lessons	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

8458 19 May 1996	
Source : EUROPEAN CHEMICAL NEWS, 1996, JUN, 3. Location : Alabama, USA	
Injured: 0 Dead: 0	
Abstract	_
A rail transportation incident. A fire started around midnight in a rail tanker car containing sodium hydrosulphite.  [fire - consequence]  Lessons	_
[None Reported]	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

# 1035015 May 1996 Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Honolulu, USA Injured: 0 **Dead** : 0 Abstract Transportation. Up to 400 bbl of heavy fuel oil leaked into the bay from a pipeline leading from a refinery to a Power Plant. Preventative measures included closing the Arizona Memorial, stopping vessel traffic and using three local response vessels and seven US Navy skimmers in the spill area. [pollution] Lessons [None Reported]

8594 14 May 19	
Source : LLOYE Location : Shun	DS LIST, 1996, MAY, 14. nerlya, RUSSIA
Injured : - [	<b>Dead</b> : 0
Abstract	
[injury]	ion incident. A train crash caused spillage of phenol. Many injured in clean up operations.
Lessons	
[None Reported]	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

8593 14 May	
Source : LLOY Location : Hav	DS LIST, 1996, MAY, 23. vaii, USA
Injured: 0	<b>Dead</b> : 0
Abstract	
Transportation. <b>Lessons</b>	A pipeline spillage of 8,400 gallons of heavy fuel oil near power plant leaked into the harbour.
[None Reported	aj
Search results	r from IChemE's Accident Database. Information from she@icheme.org.uk

1034815 April 1996
Source : LOSS CONTROL NEWSLETTER, ISSUE 2, 1996.  Location : Permovayskoye, RUSSIA
Injured: 0 Dead: 0
Abstract
Transportation. The explosion destroyed a 450 metre section of the pipe. It is thought that it will be very difficult to repair and may take more than one month. [pipeline]
Lessons [Name Perpetted]
[None Reported]

# 1033315 April 1996 Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Winnipeg, CANADA Injured: 0 **Dead** : 0 Abstract Transportation. A rupture in a 34 inch pipeline sent a fireball over 100 ft high. The cause has been attributed to faulty welding on the pipe. [weld failure, fire - consequence] Lessons [None Reported]

# 1034911 April 1996 Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Texas, USA Injured: 0 **Dead**: 0 Abstract Transportation. A 30 inch, 550 million scfm natural gas pipeline and compression station were shutdown due to an explosion. Operation is expected to resume at 80% rate in the short term until compression can be restored. [compressor] Lessons [None Reported]

1034510 April	1996
Source : LOSS Location : Ros	CONTROL NEWSLETTER, ISSUE 2, 1996. tov, RUSSIA
Injured: 0	Dead: 0
Abstract	
Transportation. [spill, pollution] Lessons	Approximately 500 tonne of crude oil leaked from the 700 mm pipeline into the nearby river.
[None Reported	
<u> </u>	·
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

# Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Tyumen, RUSSIA Injured: 0 Dead: 0 Abstract Transportation. The fire followed a natural gas leak when the 1,200 mm pipeline ruptured. Several dozen metres of pipeline had to be replaced. [fire - consequence, pipeline failure] Lessons [None Reported]

8587 23 Marc	
Source : LLO	'DS LIST, 1996, MAR, 25. shkortostan Region, RUSSIA
Injured: 0	Dead: 0
Abstract	
	About 600 tonnes of oil spillage after a pipeline leaked.
[None Reporte	d]
Search results	s from IChemE's Accident Database Information from she@icheme.org.uk

8589 23 March	า 1996	
Source : LLOY Location : Nort		
Injured: 0	Dead: 0	
Abstract		
[evacuation]	ation incident.	60 people were evacuated following a derailment of 13 rail tankers, some containing ethylene oxide.
Lessons [None Reported	1]	
Sparch recults	from ICham	E's Accident Database. Information from she@icheme.org.uk
ocaron results	TOTAL POLICE	L a Accident Batabase. Information from snewtoneme.org.uk

8584 20 Marc	h 1996
Source : LLOY	DS LIST, 1996, MAR, 21. nburg region, RUSSIA
	<b>Dead:</b> 0
Abstract	
	A break in a major pipeline caused spillage of 500 tonnes of oil onto the ground.
[None Reported	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

8583 19 March	n 1996
Source : LLOY Location : Galv	DS LIST, 1996, MAR, 21. reston, USA
Injured: 0	<b>Dead</b> : 0
Abstract	
	tation incident. A river barge caused an oil spillage in waters.
[None Reported	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

# 8694 18 March 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Lagos, NIGERIA Injured: 0 **Dead** : 0 Abstract Transportation. An explosion and fire occurred on a petroleum pipeline for 4 hours was caused by sabotage. [fire - consequence] Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# Source: LLCYDS LIST, 1996, MAR, 16. Location: Paese, ITALY Injured: 11 Dead: 1 Abstract A road transportation incident. Two road tankers carrying butane burst into flames. A gas leak was spotted as 5 tankers were unloading into storage tanks. Schools and houses within 1 km radius evacuated. Fatality. [evacuation, fire - consequence] Lessons [None Reported]

# 8705 11 March 1996 Location: Bintulu, MALAYSIA

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Injured: 0 **Dead** : 0

# Abstract

A marine transportation incident. Spillage of crude oil occurred following a hose line burst during loading. The accident occurred while the oil marine tanker was making fast to the terminal.

# Lessons

# 1036211 March 1996 Source: LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. Location: Bintulu, MALASYIA Injured: 0 **Dead** : 0 Abstract A road transportation incident. A spillage of crude oil occurred following a hose line burst while a road tanker was on its way to the terminal. [mechanical equipment failure] Lessons [None Reported]

8579 10 March 1996		
Source: LLOYDS LIST, 1996, MAR, 12.  Location: Dagestan, RUSSIA		
Injured: 0	<b>Dead</b> : 0	
Abstract		
	. Explosion in section of 1020 mm natural gas pipeline.	
[None Reporte	d]	
[None Reporte	<b>√</b> 1	
Search result	s from IChemE's Accident Database. Information from she@icheme.org.uk	

1034607 Marc	
Source : LOSS Location : Tyu	S CONTROL NEWSLETTER, ISSUE 2, 1996. Imen, RUSSIA
Injured: 0	Dead: 0
Abstract	
Transportation. [environmental	. A total of some 12,400 tonne of crude oil leaked from the ruptured pipeline. Pollution had reached areas up to 7.5 km away.
Lessons	
[None Reporte	d]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

# 8710 05 March 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Wisconsin, USA Injured: 0 **Dead** : 0 Abstract

A rail transportation incident. A train of 32 cars including 15 carrying propane derailed. Two rail tankers ruptured and caught fire causing a feed mill and other

[fire - consequence, derailment]

buildings to catch fire.

Lessons

8575 28 February 1996		
Source : LLOY Location : Ten	DS LIST, 1996, MAR, 6. nessee, USA	
Injured : 1	Dead: 2	
Abstract		
A rail transporta [derailment] Lessons	ation incident. 54,000 gallon of sulphuric acid spillage from 4 rail tankers derailed. Fatality.	
[None Reported		
<u> </u>	•	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk	

8692 27 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Komi Republic, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. 60 cum (cubic metres) of crude oil spillage due to faulty seal. [seal failure] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8691 26 February 1996		
Source : SEDG Location : Che	SWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Iyabinsk, RUSSIA	
Injured: 0	<b>Dead</b> : 0	
Abstract		
Transportation. <b>Lessons</b>	An explosion blew away a large piece of the 1200 mm pipeline.	
[None Reported	ıj	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk	

8689 26 Februa	
Source : SEDGV Location : Ibada	VICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. n, NIGERIA
Injured: 0	Dead: 0
Abstract	
	eline is attributed to sabotage.
[None Reported]	
[None Reported]	
Search results f	rom IChemE's Accident Database. Information from she@icheme.org.uk

8693 25 Febr	uary 1996
Source : SEDO	GWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. GERIA
Injured: 0	<b>Dead</b> : 0
Abstract	
Transportation Lessons	. A gasoline pipeline blew up at km 64 caused by sabotage.
[None Reporte	d]
Search results	s from IChemE's Accident Database. Information from she@icheme.org.uk

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.
Location: Antioquia, COLOMBIA
Injured: 0 Dead: 0

Abstract
Transportation. Explosion on pipeline caused by sabotage was the third on this pipeline this year. 6500 bbl of crude oil spillage.

Lessons
[None Reported]

## 1041123 February 1996

Source: LOSS PREVENTION BULLETIN, 139, 24.; HEALTH, SAFETY AND ENVIRONMENT BULLETIN, 264, DECEMBER 1997.

Location:, UK

Injured: 1 Dead: 0

## Abstract

A rail transportation incident. An engineering train rammed scaffolding, injuring three workers.

The incident occurred when two tower scaffolds were erected on the railway lines to allow repairs to the station footbridge.

The line was closed to passenger services during the weekend and the scaffolding should have been removed to allow engineering trains to pass through. The first engineering train passed through the station without incident. But a second train started out after a shift change and its guide was not told about the repairs. As the station was sited on a curve, the guide was unable to see the scaffolding in time despite braking, the train hit the scaffolding at 30 mph. Two workers scrambled to safety onto the footbridge, a third man fell onto the tracks and suffered a broken leg and severe lacerations to his head and had to be airlifted to hospital.

[rail transport, maintenance, human causes, fall, injury]

### Lessons

8288 22 February 1996		
	GWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1996. kivskyy, Chernigov, UKRAINE	
Injured: 0	<b>Dead</b> : 0	
Abstract		
[fire - conseque	A pipeline rupture resulted in a fire.  snce]	
Lessons [None Reported		
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk	

8690 22 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Chechnya, Dagestan, RUSSIA Injured: 0 **Dead**: 0 Abstract Transportation. A fire occurred following an explosion on part of a natural gas pipeline. There was a second on the 2nd March. Lessons [None Reported]

8686 21 February 1996
Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location : Perm, RUSSIA
Injured: 0 Dead: 0
Abstract
An explosion and fire on a pipeline occurred after a leak of gas. [fire - consequence] Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8461 19 February 1996

Source: ENDS REPORT, 1996, MAR,; THE CHEMICAL ENGINEER, 7 MARCH, 1996.

Location: Billingham; Cleveland, UK

Injured: 11

Dead:0

### Abstract

A road transportation incident. A road tanker collided with a diesel tanker, caused by loss of control. Substances involved: nitrobenzene, diesel. Both vehicles caught fire.

Clean up costs estimated at £200,000 (1996).

[fire - consequence, collision, loss of control, spill]

### Lessons

Although harmful to aquatic life, nitrobenzene is biodegradable.

# 8711 19 February 1996 Source: THE CHEMICAL ENGINEER, 1996, MAR, 7. Location:, UK Injured: 11 Dead: 0 Abstract A road transportation incident. Approximately 1 tonne of nitrobenzene was spilled following a road tanker crash which occurred when a tanker crossed the central reservation and collided with a tanker carrying diesel. Both tanker cabs caught fire. Some pollution of a river occurred. [collision, fire - consequence]

8685 18 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Remedious, COLOMBIA Injured: 0 **Dead**: 0 Abstract An explosion tore through a section of the 150,000 barrel per day crude oil pipeline caused by sabotage. Lessons [None Reported]

### 8572 16 February 1996

Source: THE GUARDIAN, 1996, FEB, 17,; THE OBSERVER, 1996, FEB, 18,; HAZARDOUS CARGO BULLETIN, SEPTEMBER 1997, VOL 18, NO.9,; BBC

NEWS, FEBRUARY 11, 1998, (http://www.bbc.co.uk).

Location : Wales, UK

Injured: 0 Dead: 0

### Abstract

Pilot error caused the grounding of an oil tanker carrying 130,000 tonnes of light crude oil at the entrance to a harbour. Although the main engine was stopped, put astern and both anchors dropped, the vessel continued to run ahead finally coming to rest aground. The starboard cargo ballast tanks were ruptured by the first grounding resulting in heavy trim by the head and starboard list. A quantity of oil was lost from the damaged cargo tanks.

It was decided to manoeuvre the vessel into deeper water using tugs where the vessel could be anchored and lightered to be allowed to enter the harbour and discharged the remainder of the cargo. This was achieved without further loss of cargo but a forecast of gale force winds led to the decision to turn into the wind and re-anchor. While preparations for lightering were still in progress the weather worsened and control was lost and the vessel grounded again. Four days later the vessel was brought under control and taken in to the harbour where the remainder of the cargo was discharged. Although there was no loss of life or serious injury, a total of 71,800 tonnes of crude oil was lost, of which only 2,500 tonnes escaped during the initial grounding. [spill, environmental, ship ran aground]

### Lessons

8709 10 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: North Ontario, CANADA Injured: 0 **Dead**: 0 Abstract A rail transportation incident. Six rail tankers carrying liquid sulphur careered into a river. Due to freezing conditions most of the sulphur solidified. Lessons [None Reported]

## 8684 07 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Arauquita, COLOMBIA Injured: 0 **Dead** : 0 Abstract Transportation. The explosion in the 220,000 bpd pipeline, the tenth this year, caused a 6500 bbl spillage of crude oil into the surrounding area. Sabotage is the most likely cause. Lessons [None Reported]

### 179 07 February 1996 Source: LLOYDS LIST, 1996, FEB, 23. Location: Tennessee, USA Injured: 0 **Dead** : 0 Abstract

Rail transportation. 500 evacuated for a second time on the 13 Feb after a flash fire from a midweek chemical spill. Rail tanker split open and 8000 gallons of carbon disulphide spillage. People within 1/2 mile evacuated for two nights.

[fire - consequence, evacuation]

Lessons

### 8687 06 February 1996

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: Lugansk, UKRAINE

Injured: 0 Dead: 0

### Abstract

Transportation. Explosion in a section of the north gas pipeline, led to the combustion of the gas. An 8 km section of the pipeline was isolated and the 100 metres high flame engulfed several houses, destroying four and seriously damaging seven. The fire was put out within hours.

[fire - consequence, damage to equipment]

### Lessons

8683 05 Febru	ary 1996
	WICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. ansk, UKRAINE
Injured : 1	Dead: 0
Abstract	
Transportation. Lessons	Explosion in natural gas pipeline sending flames 100 metres high.
[None Reported	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

8707 02 February 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: California, USA Injured: 0 **Dead** : 2 Abstract A rail transportation incident. A freight train carrying hazardous chemicals derailed and caught fire. Fatality [fire - consequence, derailment, chemicals unknown] Lessons [None Reported]

8578 01 Februar	y 1996
Source : LLOYDS Location : , TRINI	LIST, 1996, MAR, 11.  DAD AND TOBAGO
Injured: 0 De	<b>ad</b> : 0
Abstract	
Transportation. O Lessons	il spillage halted in 30 inch concrete covered pipeline in harbour.
[None Reported]	
Search results fro	om IChemE's Accident Database. Information from she@icheme.org.uk

# Source : LLCYDS LIST, 1996, FEB, 3. Location : Los Angeles, USA Injured : 0 Dead : 0 Abstract Rail transportation. Freight train carrying hazardous chemicals derailed and caught fire and sent up large toxic cloud causing the evacuation of 1/2 square mile area. [derailment, gas / vapour release, fire - consequence, chemicals unknown] Lossons [None Reported]

33 February 1996
Source : LLOYDS LIST, 1996, FEB, 2.
Location : Southern Urals, RUSSIA  Injured : 0 Dead : 0
Abstract
Explosion in 50 inch natural gas pipeline.  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

2272 30 January 1996
Source: LLOYDS LIST, 1996, FEB, 19.
Location: Nikolayev Region, UKRAINE
Injured: 0 Dead: 0
Abstract Rail transportation. Nine rail tank wagons carrying fuel oil derailed, seven overturned and leaked. [derailment, spill]
Lessons
[None Reported]
Search results from IChemE's Accident Database Information from she@icheme orguk

8682 21 January 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Tyumen, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. Fire damaged 60 metres of the 1,200 mm pipeline causing a stoppage at a gas pumping facility. [fire - consequence, damage to equipment] Lessons [None Reported]

8415 20 Janu	
Source : LLOY Location : Rive	DS LIST, 1996, JAN, 22.  er Giaga, RUSSIA
Injured: 0	<b>Dead</b> : 0
Abstract	
	Safety valve broken by thieves in pipeline sending 300 tonnes of oil into frozen river.
[None Reported	
	•
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

### 8706 19 January 1996

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location:, USA

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A tug towing a barge suffered an engine room explosion causing the crew to abandon ship. The barge subsequently ran aground and was holed in two places causing spillage of over 700,000 gallons of heating oil (diesel). A 10 mile stretch of coastline was threatened and extensive damage occurred to wildlife.

[ship ran aground, pollution]

### Lessons

### 9072 19 January 1996

Source : ICHEME

Location:, RHODE ISLAND

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A barge ran aground after the tug boat pushing it caught fire during a sever winter storm. 828,000 gallons of the barge's cargo of heating oil spilled. The spill affected the southern shore and salt waster ponds and far beyond.

The main concern at this point is damage to the fragile tidal ponds and marshes which are important breeding ground for shell fish and winter flounder. They are also important habitats for endangered birds. Reports indicated that despite efforts to protect the ponds, oil seeped in and contaminated them.

The successful re-floating of the barge happened a week later. The barge was then towed out to sea where divers could examine the full extent of the damage to the barge.

[ship ran aground, weather effects, fire - consequence, ecological damage]

### Lessons

## 8681 19 January 1996 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996. Location: Krasnodar, RUSSIA Dead:0Injured: 0 Abstract Transportation. Damage to the pipeline is believed to have occurred during an illegal attempt to siphon off the oil. The pipeline has now been repaired. Spillage of 350 - 400 tonnes of oil. [sabotage] Lessons [None Reported]

## 8586 19 January 1996 Source: LLOYDS LIST, 1996, MAR, 24. Location: Nebraska Sound, USA Injured: 0 Dead: 0 Abstract A marine transportation incident. An explosion occurred in a tug engine room which caused the barge under tow to be cast adrift in 15 ft waves. The barge

8339 14 January 1996
Source : LLOYDS LIST, 1996, JAN, 15. Location : Perth, AUSTRALIA
Injured: 1 Dead: 2
Abstract
A rail transportation incident. Two freight trains in collision caused fire ball when diesel ignited. Fatality.  [fire - consequence]  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk
pearun resums from igneme's Accident Database, information from Snewlicheme.org.uk

## 8570 11 January 1996 Source: LLOYDS LIST, 1996, JAN, 13. Location: Saratov, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. An oil pipeline ruptured causing 650 ft by 160 ft wide spillage only 4 miles from a river. The break was caused by construction of a by-pass route onto the main pipeline. Lessons [None Reported]

### 8677 09 January 1996 Source : SEDGWICK LO

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: North Central, COLOMBIA

Injured: 0 Dead: 0

Abstract

Transportation. Rebels detonated two explosive devices on the pipeline carrying crude oil. Some 6,000 bbl of oil spillage, polluting agricultural land and some lagoons.

[explosion, pollution, sabotage]

Lessons

8679 08 January 1996	
Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.  Location : California, USA	
Injured: 0 Dead: 0	
Abstract	
A workman severed a gas pipe causing the transmission pipeline to crack resulting in gas release.  [gas / vapour release, operator error]  Lessons	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

8571 06 January 1996
Source : BBC NEWS, (http://www.bbc.co.uk).
Location:, UK Injured: 0 Dead: 0
Injured : 0 Dead : 0 Abstract
A road transportation incident. Chemical spill on motorway.  [unknown chemicals]  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8626 1996	
Source: LLOYDS LIST, 1996, AUG, 5.  Location: , KAZAKHSTAN	
njured: 0 Dead: 2	
Abstract	
A gas pipeline explosion. Fatality.  Lessons	
None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

3818 1996	
Source: CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.	
.ocation:, UK	
njured: 0 Dead: 0	
Abstract	
A marine transportation incident. More than 70,000 metric ton of crude oil spilled in the sea and polluted 35 miles of coastline. The tanker ran aground three imes in a rescue attempt. ship ran aground, pollution]	
essons	
None Reported]	

### 8680 26 December 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: Bashkortostan, RUSSIA

Injured: 0 **Dead** : 0

### Abstract

Transportation. Following a spillage in a pipeline, estimated to be between 468 - 2400 tonnes, oil has polluted a river. The oil was set on fire in an effort to clear up the spillage. The damaged pipeline which runs underneath the river is to be raised to the surface for inspection and repair when the precise location of the leak is found.

[pollution, fire - consequence]

### Lessons

8338 24 December 1995 Source: LLOYDS LIST, 1996, JAN, 13, JAN, 26. Location: Komi Region, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. Pipeline ruptured causing spillage of 2,800 barrels of crude oil. The rupture was attributed to corrosion. Oil polluted river. [pollution] Lessons [None Reported]

### 8151 21 December 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location: Mississippi River, New Orleans, USA

Injured: 0 Dead: 0

### Abstract

A river transportation incident. 38,000 gallons of crude oil spillage following the collision of a single hulled tanker river barge with a steel dolphin, causing a 1.2 metre gash. River closed to traffic for 4 days.

### Lessons

8278 21 December 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location: Sullom Voe, UK Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Crude oil spillage occurred of 2 - 5 tonnes. Leak appeared to come from crack in port wing tank of marine oil tanker. Lessons [None Reported]

8248 20 December 1995
Source : OIL AND GAS JOURNAL.
Location : Denver, USA
Injured: 0 Dead: 0 Abstract
Transportation. Pipeline rupture caused release of gas that caught fire and forced the evacuation of 150 persons.
[fire - consequence]
Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

## 8233 01 December 1995 Source: LLOYDS LIST, 1995, DEC, 4. Location: Venice, ITALY Injured: 0 **Dead** : 0 Abstract Transportation. An 11 km long underwater pipeline ruptured and caused a spillage of about 1 tonne of gasoline into lagoon causing moderate amount of pollution. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

## 8480 22 November 1995 Source: ENDS REPORT 263, 1996, DEC. Location: North Yorkshire, UK Injured: 0 **Dead** : 0 Abstract A road transportation incident. A road tanker delivered 7 tonnes of 96% sulphuric acid which was unloaded into a tank of dioctyl phthalate. No violent reaction occurred but clean up operations were difficult. [unloading, near miss, design or procedure error] Lessons [None Reported]

### 8235 22 November 1995 Source : LLOYDS LIST, 1995, DEC, 7. Location : Tyumen Region, RUSSIA

Injured: 0 Dead: 0

Abstract

Transportation. A gas explosion and subsequent fire occurred at a pipeline causing damage of Roubles 4.3 billion. Accident caused by the erosion of a 500 mm pipe. A total of 240 metres of pipeline and an engine room were wrecked.

[fire - consequence, damage to equipment]

Lessons

8252 18 November 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location: Arauca, COLOMBIA Injured: 0 **Dead**: 0 Abstract Transportation. Pumping stopped on pipeline to allow repair after sabotage attempt. Spillage 10,000 bbl of oil. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

## 8215 16 November 1995 Source: LLOYDS LIST, 1995, NOV, 18. Location: Langbank Area, Saskatchewan, CANADA Injured: 0 **Dead**: 0 Abstract Transportation. World's longest 34 inch pipeline ruptured for the second time in five months causing the spillage of 7,500 barrels of crude oil. Lessons [None Reported]

# Source : LLCYDS LIST, 1995, DEC, 4. Location : Vladimir region, RUSSIA Injured : 0 Dead : 0 Abstract A gas fire occurred as a section of pipeline was ruptured. Fire put out in 3 hours. Accident caused by soil shifting in the area. [fire - consequence, earth movement] Lessons [None Reported]

8213 12 November 1995 Source: LLOYDS LIST, 1995, NOV, 13, NOV, 15. Location: Vladikavkaz, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. An explosion damaged a gas pipeline, halting gas supplies. Supplies were rerouted. Sabotage suspected. [damage to equipment] Lessons [None Reported]

### 8270 01 November 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

Location: Yekaterinburg, RUSSIA

Injured: 0 Dead: 0

### Abstract

Transportation. An explosion occurred when gas pressure built up to 30 atmospheres when valves at the station were shut off. The cause of the explosion was originally attributed to sabotage but later suggested that it was caused by corrosion of the pipeline.

### Lessons

## 8251 26 October 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location: Ventspils, LATVIA Injured: 0 **Dead** : 0 Abstract Transportation. A spillage of more than 50 tonnes of crude oil from a pipeline when there was an illegal attempt to tap into the line. [sabotage] Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8276 25 October 1995 Source : SEDGWICK LOSS CON

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

Location: Bogalusa, Louisiana, USA

Injured: 400 Dead: 0

Abstract

A rail transportation incident. The release of nitrogen tetroxide was caused by a ruptured rail tanker. 3000 evacuated.

[evacuation, nitrogen peroxide]

Lessons

### 8207 24 October 1995

Source: HAZARDOUS CARGO BULLETIN, 1995, DEC,; EUROPEAN CHEMICAL NEWS, 1995, OCT, 30.

Location: Ludwigshaven, GERMANY

Injured: 3 Dead: 1

### Abstract

A river transportation incident. Explosion and fire occurred on inland waterways river tanker during discharge of 930 tonnes of methanol at plant. Fatality. [fire - consequence, unloading]

### Lessons

## 8206 21 October 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, DEC. Location: Off Suva, FIJI Injured: 0 **Dead** : 3 Abstract A marine transportation incident. Chief officer and 2 ratings were overcome by fumes and killed after entering No. 3 deep tank during deballasting on cargo ship. Fatality. [entry into confined space] Lessons [None Reported]

### 8205 19 October 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, DEC. Location: Cul de Sac, ST. LUCIA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Leaking pipe onboard 150,000 dwt marine oil tanker caused 11,000 litres of crude oil to flow to sea and harbour. Small beach pollution. Lessons [None Reported]

### 8204 17 October 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, DEC. Location: Mina Al Ahmadi, KUWAIT Injured: 0 **Dead** : 0 Abstract A marine transportation incident. One of 2 strings of flexible hoses parted during loading of 350,000 dwt marine oil tanker at single buoy mooring. Spillage of 800 tonnes of oil. Lessons [None Reported]

## Source : LLCYDS LIST, 1995, OCT, 16. Location : Stenungsund, SWEDEN Injured : 0 Dead : 0 Abstract A marine transportation incident. A marine gas carrier overflowed into port when shore tank was overfilled and the overflow poured over the tanker deck. Only small amounts of water sludge with oil escaped. Spill. [unloading] Lessons [None Reported]

## 8192 10 October 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, NOV. Location: Bugrysh, Udmurtia, RUSSIA Injured: 0 Dead: 0 Abstract

A rail transportation incident. A fire occurred after rail tanker with propane derailed and overturned. Fire over area of 1000 sq. metres.

[rail incidents, derailment, fire - consequence]

Lessons

### 8185 09 October 1995 Source : ICHEME Location:, UK Injured: 1 **Dead**: 0 Abstract A road transportation incident. A vehicle carrying a load of 45-gallon drums containing M.E.K. was involved in a near collision. The incident occurred when the vehicle made an emergency stop and three drums rolled forward onto the cab of the vehicle. One of the drums was punctured in falling and the subsequent spill ignited. The cause of the ignition is not known but it is thought that ignition may have been due to the vehicle's exhaust pipe or by a spark resulting from short-circuiting of the vehicle's battery. The tractor unit of the vehicle was completely burnt out in the fire. The driver suffered minor burns. The remainder of the drums were not involved in the fire. [fire - consequence] Lessons [None Reported]

8184 04 October 1995			
Source : LLOY Location : Tob	'DS LIST, 1995, OCT, 5. polsk area, RUSSIA		
Injured: 0	<b>Dead</b> : 0		
Abstract			
	Crude oil pipeline closed after spillage over 600 sq. metres.		
[None Reported	d]		
	•		
Search results	s from IChemE's Accident Database. Information from she@icheme.org.uk		

8208 04 October 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, DEC. Location: Tobolsk Area, Siberia, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. Major crude oil pipeline closed after being damaged. Crude oil spillage spread to an area of 600 sq. metres. [damage to equipment] Lessons [None Reported]

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: Map La Phut, THAILAND

Injured: 0 Dead: 2

Abstract

A marine transportation incident. An explosion and fire occurred on board a chemical marine tanker during unloading of methanol. Fatality.

[fire - consequence]

Lessons

[None Reported]

1795 30 Septer	mber 1995
Source : LLOYD	DS LIST, 1996, JAN, 13.
Injured: 0	<b>Dead</b> : 0
[fire - consequer	ortation incident involving a chemical tanker. An explosion and fire occurred on board while unloading methanol cargo. Constructive total loss.
Lessons	
[None Reported]	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

8203 30 September 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, DEC. Location: Map Ta Phut, THAILAND Injured: 0 Dead: 2 Abstract A marine transportation incident. An explosion and fire occurred on a marine chemical tanker during unloading of methanol at a pier. Fatality. Lessons [None Reported]

8275 26 September 1995			
Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location : , HONG KONG			
Injured: 0 Dead: 0			
Abstract			
A marine transportation incident. Marine tanker rammed a jetty causing 20 tonne of crude oil spillage. No major pollution as leak was stopped and dispused.  [collision]  Lessons	persant		
[None Reported]			
[reduce responsed]			
Search results from IChemE's Accident Database. Information from she@icheme.org.uk			

### 8274 21 September 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

Location: Pusan, SOUTH KOREA

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A 14 year old marine oil tanker carrying a full load of crude oil had been refloated after going onto rocks. The tanker was refloated but sank again while on tow causing pollution.

[sinking]

### Lessons

## 8193 10 September 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, NOV. Location: Brisbane, Queensland, AUSTRALIA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Hose coupling on marine tanker failed during discharge at wharf during unloading. Small spillage of oil due to prompt shut down of pump. [coupling failure] Lessons [None Reported]

8182 September 1995
Source: LLOYDS LIST, 1995, SEP, 16,; HAZARDOUS CARGO BULLETIN, 1995, NOV.
Location: Saldanka Bay, SOUTH AFRICA
Injured: 0 Dead: 0
Abstract
A marine transportation incident. 25,000 litres of crude oil spillage into harbour during unloading of marine oil tanker probably due to a burst pipe.
Lessons
[None Reported]

### 8175 25 August 1995

Source: HAZARDOUS CARGO BULLETIN, 1995, OCT.

Location: Off Vostorchnyy, RUSSIA

Injured: 1 Dead: 1

Abstract

A marine transportation incident. An explosion occurred in a marine product tanker at anchor. 400 tonnes of gasoline and diesel onboard burned for 13 hours. Vessel broke in two and sank. Fatality.

[sinking, fire - consequence]

Lessons

### 8174 23 August 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, OCT. Location: Rotterdam, NETHERLANDS

Injured: 1 Dead: 1

Abstract

A marine transportation incident. A marine tanker barge loading at terminal was struck by ro-ro ferry and sank. 10 tonnes of naphtha spillage to canal from damaged hull. Small LPG spillage. Fatality.

[collision]

Lessons

### 1968 21 August 1995

Source : ASSOCIATED PRESS

Location: Bellingham, Washington, USA

Injured: 5 Dead: 0

### Abstract

A road transportation incident. A road tanker carrying liquefied oxygen overturned on State Highway and started leaking. Evacuation of people within half mile carried out. Release of material left to evaporate.

[gas / vapour release]

### Lessons

8273 20 August 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location: Huangpu, SINGAPORE Injured: 0 **Dead**: 0 Abstract A marine transportation incident. Spillage of crude oil resulting from collision of marine tanker closed port for two days. Lessons [None Reported]

### 8171 20 August 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 3, 1995.

Location: Huangpu, Guangzhou, CHINA

Injured: 0 **Dead** : 0

### Abstract

A marine transportation incident. A 30,000 tonne marine oil tanker carrying crude oil rammed into a dock, causing an oil spillage which subsequently caught fire. The port discharges up to 200,000 tonnes of fuel oil per month.

[fire - consequence, collision]

### Lessons

### 1731 17 August 1995 Location: Corpus Christi, Texas, USA

Source: HAZARDOUS CARGO BULLETIN, 1995, SEP.

Injured: 0 **Dead** : 0

Abstract

Marine transportation. Lightning struck marine tanker barge loaded with 630 tonnes of toluene at refinery. The fire burnt out on No.3 tank but not on No's 1 or 3. [fire - consequence, damage to equipment]

Lessons

### 8708 10 August 1995 Source : SEDGWICK L

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1996.

Location: Tashkent, UZBEKISTAN

Injured: 0 Dead: 0

Abstract

A rail transportation incident. A train crashed causing spillage of 500 tonnes of crude oil. The incident started a forest fire and resulted in pollution of a river, lake and irrigation network.

[fire - consequence]

Lessons

## Source: LLCYDS LIST, 1995, AUG, 11, AUG 16. Location: Conchan, La Chira, PERU Injured: 0 Dead: 0 Abstract Marine transportation. Hose on marine tanker broke during unloading of oil causing spillage of 18,000 gallons to sea. 13 km of shore line affected. [pollution] Lessons [None Reported]

### 1828 24 July 1995

Source: HAZARDOUS CARGO BULLETIN, 1995, SEP.

Location:, SOUTH KOREA

Injured: 0 Dead: 1

### Abstract

Marine transportation. A marine oil tanker was driven onto rocks by Typhoon Faye, causing a spillage of several hundred tonnes of crude oil. An oil slick 20 miles long was reported. The tanker was discharging a full cargo when the typhoon warning led to the vessel leaving port. Fatality. [marine tanker, pollution]

### Lessons

### 8272 19 July 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

Location: Nizhny Novgorod, RUSSIA

Injured: 0 Dead: 6

...,....

Abstract

A rail transportation incident. Collision of two trains caused 12 wagons to be derailed. Explosion of three rail tankers loaded with butadiene occurred and set light to others. Fatality.

[fire - consequence]

Lessons

## Source: HAZARDOUS CARGO BULLETIN, 1995, SEP. Location: Nizhny Novgrorod, RUSSIA Injured: 0 Dead: 6 Abstract A rail transportation incident. Collision between two trains caused 12 wagons to derail. Explosion of one of three rail tankers containing butadiene and ignited other rail wagons. Fatality. [derailment - consequence] Lessons [None Reported]

Source: SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1995.
Location: Songkhla, THAILAND

Injured: 0 Dead: 1

Abstract

Marine transportation. 2 million litres of benzene were destroyed in an explosion in engine room and fire when marine tanker was offloading at this storage facility. Fatality.

[fire - consequence]
Lessons

[None Reported]

7614 01 July 1995
Source : HAZARDOUS CARGO BULLETIN, 1995, SEP.
Location: Koje Island, Korea Straight, SOUTH KOREA
Injured : 0 Dead : 0 Abstract
Abstract A marine transportation incident. Gas carrier with 871 cum (cubic metres) of LPG sank.  Lessons
[None Reported]
Search results from IChemE's Accident Database Information from she@icheme.org.uk

### 1589 26 June 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1995. Location: Volga, RUSSIA Injured: 0 Dead: 1 Abstract A rail transportation incident. Loading of 3 rail tankers with butane and propane when there was an explosion. The blaze spread to 18 other rail tankers. Fatality. Lessons [None Reported]

259 22 June 1995
Source : HAZARDOUS CARGO BULLETIN, 1995, SEP. Location : Astara, IRAN
Injured: 200 Dead: 3
Abstract
A marine transportation incident. Release of chlorine from container at sea port. Fatality.  [leak]
Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 2721 16 June 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, AUG. Location: Saskatchewan, CANADA Injured: 0 **Dead** : 0 Abstract Transportation. Rupture of 860 mm diameter Line 3 of 4 pipeline caused spillage of 2,600 tonnes of crude oil to a farm field. Flow shut off within 4 minutes. Lessons [None Reported]

## Source: SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1995. Location: Volgograd, RUSSIA Injured: 10 Dead: 0 Abstract A rail transportation incident. A rail tanker containing liquefied propane caught fire. Explosion spread and set light to other tankers. [fire - consequence] Lessons [None Reported]

### 2660 14 June 1995

Source: HAZARDOUS CARGO BULLETIN, 1995, AUG.

Location: Off Mexican Pacific Coast, MEXICO

Injured: 0 Dead: 2

### Abstract

Marine transportation. Engine room explosion and fire on loaded 30,800 dwt marine chemical tanker caused abandonment of ship. 35 crew saved, no cargo spillage. Fatality.

[fire - consequence, marine tanker]

### Lessons

8399 12 June 1995 Source : ICHEME Location:

Injured: 0 Dead: 0

### Abstract

Natural gas pipeline system overpressure. A pilot diaphragm in a metering station supplying the plant with natural gas failed. Due to several other compounding issues, the pilot failure caused the stand-by let-down station to go wide open, and resulted in a serious overpressure of the plant's natural gas distribution system. The incident was caused by failure of a diaphragm on the second stage PCV pilot which sent natural gas to the pilot vent line; the pressure equalising across the diaphragm simulated a low sensing pressure and caused the second stage PCV to go wide open, creating overpressure in system. There was no regularly scheduled programme of servicing and testing on meter station valves and instrumentation. Servicing was sporadic and minimal. The pilot diaphragms were not replaced according to manufacturer's recommendations, based on minimum expected life. Near miss.

[overpressurisation, operation inadequate]

### Lessons

For utility supplies entering petrochemical plants:

- 1. Don't assume that they are adequately protected. Analyse the risks and assess the safeguards associated with these interfaces.
- 2. Ensure there is ongoing maintenance of equipment and instrumentation whose reliability impacts on your plant.

## 2907 01 June 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, SEP. Location: Junction 2 of M621, near Leeds, UK Injured: 0 **Dead**: 0 Abstract A road transportation incident. A road tanker overturned causing small spillage of aniline. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8162 23 May 1995
Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUES 2, 1995.
Location: Surgut, Tyumen, RUSSIA
Injured: 0 Dead: 0
Abstract

Transportation. A 700 mm diameter oil pipeline ruptured and a fire occurred. The fire shutdown 2 power transmission lines.

[fire - consequence, plant shutdown]

Lessons

Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995.

Location : , GEORGIA

Injured : 0 Dead : 0

Abstract

Transportation. A gas pipeline damaged by an explosion was repaired and recommissioned within a week. Fire brought under control in 2 hours. [fire - consequence, damage to equipment]

Lossons

[None Reported]

### 8164 18 May 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995.

Location: Usinsk, Komi Republic, RUSSIA

Injured: 0 Dead: 0

### Abstract

Major pollution occurred in this marsh area following failure of a corroded pipeline in 1994. During May 1995, clean up operations, an attempt to burn off excess oil, resulted in an uncontrolled fire, which spread over 10 hectares of the 25 hectares spillage area. Significant environmental impact is anticipated when the Spring thaw arrives.

[pipeline failure, fire - consequence, corrosion, spill]

### Lessons

## Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUES 2, 1995. Location: Port Harcourt, Rivers State, NIGERIA Injured: 0 Dead: 0 Abstract Transportation. Gas supply interrupted by explosion on pipeline which carries liquefied petroleum gas (LPG). It was reported that the fatalities were saboteurs who were killed by the unexpected force of the explosion. [sabotage] Lessons [None Reported]

8271 07 May 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995. Location: Amur region, RUSSIA Injured: 1 Dead: 2 Abstract A rail transportation incident. Derailment of 27 rail cars. Explosion of 3 rail tankers containing propane. Fatality. Lessons [None Reported]

### 8116 30 April 1995 Location: Near Chita, Siberia, RUSSIA

Source: HAZARDOUS CARGO BULLETIN, 1995, JUN.

Injured: 0 **Dead** : 3

Abstract

A rail transportation incident. A freight train collided with mechanical road digger near a station. 10 of 35 rail tanker wagons with crude oil derailed and caught fire. Fatality.

[derailment, fire - consequence, collision]

Lessons

### 8159 27 April 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995.

Location: Ukhta, Komi, RUSSIA

Injured: 0 **Dead** : 0

### Abstract

Transportation. Possible sabotage caused a major explosion on a 55 inch diameter pipeline and a crater 5 metres deep and 15 metres across. The associated fire resulted in flames over 100 metres high and illuminated the local town for 2 hours at night. Automatic shutdown valves were reported to have functioned correctly and isolated a 40 km section of the line.

[fire - consequence]

### Lessons

# Source: LLOYDS LIST, 1995, APR, 27 Location: Megion Region, Western Siberia, RUSSIA Injured: 0 Dead: 0 Abstract Transportation. A tractor ploughed into a pipeline causing its rupture and the spillage of 250 cum (cubic metres) of crude oil into the nearby river. Lessons [None Reported]

## 8096 21 April 1995 Source: THE GUARDIAN, 1995, APR 28,; THE TIMES, 1995, APR 28,; NEWSGRID 4-27 Location: Ukhta, RUSSIA Injured: 0 Dead:0Abstract Transportation. Rupture in a gas pipeline caused a huge fire ball. Cause attributed to the worn out state of the pipeline. [fire - consequence] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8117 20 April 1995

Source: HAZARDOUS CARGO BULLETIN, 1995, JUN.

Location: Corpus Christi, Texas, USA

Injured: 0 **Dead** : 0

Abstract

A marine transportation incident. A marine barge loaded with vinyl chloride monomer (VCM) collided with a barge loaded with cumene. Small spillage of

cumene. Locals evacuated.

[collision, evacuation]

Lessons

### 8095 20 April 1995 Source: DAILY TELEGRAPH, 1995, APR, 21. Location: Watford, Northants, UK Injured: 31 **Dead** : 0 Abstract

A road transportation incident. Fifteen gallons of benzyl mercaptan leaked from a road tanker carrying drums containing the chemical. Thirty one people were taken to hospital for treatment and residents living within 10 miles of the release were advised to keep indoors. [drums]

Lessons [None Reported]

### 8094 20 April 1995

Source: CHEMICAL HAZARDS IN INDUSTRY, 1995, JUN.

Location : Corpus Christi, Texas, USA

Injured: 20 Dead: 0

### \_\_\_\_\_

### Abstract

A marine transportation incident. Two marine barge tankers were in collision when loaded with vinyl chloride and cumene. Traces of vapour release were detected four miles from the incident and 2700 people evacuated.

[collision, gas / vapour release, evacuation]

### Lessons

### 8111 12 April 1995

Source: LLOYDS LIST, 1995, APR, 14,; HAZARDOUS CARGO BULLETIN, 1995, JUN.

Location: Dragos Voda, ROMANIA

Injured: 0 **Dead** : 0

Abstract

A rail transportation incident. A passenger train in collision with derailed freight train with rail tankers of gasoline. Fire burnt out two carriages.

[derailment, fire - consequence]

Lessons

### 2482 11 April 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1995.

Location: Edgeworthstown, County Longford, IRELAND

Injured: 0 Dead: 0

### Abstract

A road transportation incident. A road tanker containing 20,000 litres of LPG came off the road at a bend into the village and ended in the front garden of a house. Gas leaked from the tanker and about an hour later ignited and destroyed the house.

[explosion, fire - consequence, damage to equipment]

### Lessons

8368 06 April 1995
Source : ICHEME Location : ,
Injured: 0 Dead: 0
Abstract
MTBE (methyl tert butyl ether) spill from hired barge. A marine transportation incident. A tank barge, loaded with a cargo of MTBE was being pushed on a waterway when the crew of the tugboat detected a strong smell of MTBE. A water dip on all cargo tanks led to the discovery of a hole in the barge. It was found that the barge was holed prior to loading of MTBE, at which time MTBE began being released. The cause was the lack of a thorough check of the barge prior to loading.  [spill, inspection inadequate]
Lessons
There is difficulty in detecting hydrocarbon (e.g., MTBE) spills on the water for hydrocarbons that are miscible with water.

8519 25 Marc	
Source : LLOY Location : Tex	OS LIST, 1995, MAR, 28.
	<b>Dead:</b> 0
Abstract	
	Pipeline ruptured causing spillage of 100 barrels of crude oil.
[None Reported	]
Sparch results	s from IChamE's Accident Database. Information from she@ichame.org.uk

### 8560 23 March 1995 Source: THE GUARDIAN, 1995, MAR, 13,; HAZARDOUS CARGO BULLETIN, 1995, MAY.

Location:, INDIA

Injured: 0 **Dead:** 110

Abstract

A road transportation incident. An accident occurred on a highway when fire engulfed a road tanker, bus and tractor trailer carrying wedding guests.

Substance involved: benzene.

[fire - consequence, fatality]

Lessons

8518 22 March	
Source : LLOY Location : , Trii	DS LIST, 1995, MAR, 25. nidad
Injured: 0	<b>Dead</b> : 0
Abstract Transportation. [excavation dan Lessons	A rupture in the main 30 inch gas pipeline caused by a tractor clearing land resulted in the evacuation of people.  nage]
[None Reported	1
LI TOTTO I ROPOTICO	u
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

### 8156 19 March 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995.

Location: Chipola, Louisiana, USA

Injured: 0 Dead: 0

### Abstract

Transportation. 36 inch gas pipeline ruptured. Leak caught fire and damaged a reported 300 feet section near the Mississippi border. No impact on deliveries as the gas had been re-routed to two parallel lines. Fire lasted 2.5 hours.

[fire - consequence, damage to equipment]

### Lessons

## 8102 17 March 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, MAY. Location: Siberia, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. Leak from a pipeline supplying a refinery caused spillage of 1000 tonnes of crude oil over area of 19,500 sq. m. and onto a frozen river. 27 mile section shut down. Lessons [None Reported]

8097 12 March 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, MAY. Location: River Danube, AUSTRIA Injured: 0 **Dead** : 0 Abstract A river transportation incident. Marine river tanker ran aground on rocks and 30 tonnes of heating oil leaked. Barriers set up to contain spillage but thin film spread for 20 km. [ship ran aground] Lessons [None Reported]

### 8100 07 March 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, MAY. Location: Udmurt Republic, RUSSIA Injured: 0 **Dead** : 0 Abstract Transportation. Natural gas pipeline ruptured causing massive explosion and fire. 4 sq. km. area burnt out. Soil subsidence due to melting snow suspected as cause. [fire - consequence] Lessons [None Reported]

## 8136 06 March 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location: Castle Rock, Washington, USA Injured: 0 **Dead** : 0 Abstract A 26 inch pipeline ruptured. The fire ball was seen 8 miles away. [fire - consequence] Lessons [None Reported]

8135 03 Marc	h 1995
	GWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.  daban Region, GEORGIA
Injured : 0	<b>Dead</b> : 0
Abstract	
A main gas sup [sabotage, gas <b>Lessons</b>	pply pipeline was blown up. / vapour release]
[None Reported	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk

8158 22 February 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995. Location: El Carmen, Norte de Santander, COLOMBIA Injured: 0 **Dead**: 0 Abstract Transportation. Another explosion occurred on a 220,000 bbl/day crude oil pipeline at kilometre 465 section. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8524 21 February 1995 Location:, BRAZIL

Source: HAZARDOUS CARGO BULLETIN, 1995, APR.

Injured: 0 **Dead** : 0

Abstract

A marine transportation incident. A chemical marine tanker struck an underwater object. 32 tonnes of styrene monomer spilt from port tank to sea. City and port area tainted by odour.

[collision, gas / vapour release, spill]

Lessons

8509 17 February 1995
Source : LLOYDS LIST, 1995, FEB, 18,; NEWSGRID.  Location : Tabasco, MEXICO
Injured: 17 Dead: 0
Abstract
An explosion occurred on gas pipeline 11 miles outside state capital.  Lessons
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8548 17 February 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location: Chiapas, MEXICO Injured: 22 Dead: 1 Abstract Fatality.

Transportation. Flames leapt 50 m in the air following an LPG pipeline explosion, causing knock-on damage and secondary explosions at two other pipelines.

[fire - consequence, damage to equipment]

Lessons

8528 17 February 1995
Source: HAZARDOUS CARGO BULLETIN, 1995, APR.; EUROPEAN CHEMICAL NEWS, 1995, FEB, 27.
Location: Tabasco, MEXICO
Injured: 23 Dead: 1
Abstract
Transportation. Explosion in gasoline pipeline and secondary blasts in parallel natural gas pipeline and LPG pipelines supplying port. Fatality.
Lessons
[None Reported]

### 8972 16 February 1995

Source: HAZARDOUS CARGO BULLETIN, 1997, MAR.

Location:, NORTH ATLANTIC

Injured: 0 Dead: 0

### Abstract

A marine transportation incident. A leak from a tank container occurred aboard a container ship. The frame of a tank container buckled during a storm at sea, causing damage to the tank shell and discharge valve and the loss of some eight tonnes of product (a solution of sodium borohydride and sodium hydroxide in water) occurred. This compound, UN number 1760, is a Class 8 corrosive product and releases hydrogen when in contact with metals. When discovered the frame around the tank container was seen to be bent and the discharge valve was damaged. The crew attempted to staunch the leak but was only partially successful.

[weather effects, damage to equipment, spill]

### Lessons

8134 10 February 1995	
Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location : Marneulskiy, GEORGIA	
Injured: 0 Dead: 0	
Abstract	
A 30 metre section of pipeline was destroyed supplying natural gas.  [sabotage]  Lessons	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

# 8504 07 February 1995 Source: LLOYDS LIST, 1995, FEB, 9. Location: Perama, GREECE Injured: 0 **Dead** : 0 Abstract Transportation. Fire broke out when a fuel oil pipeline running from a storage tank to a loading terminal sprung a leak and ignited. [storage tanks, fire - consequence] Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8515 05 February 1995	
Source: LLOYDS LIST, 1995, FEB, 5.	
Location:, Injured: 0 Dead: 0	
Injured: 0 Dead: 0 Abstract	
A marine transportation incident. Collision between two tankers in lightering area resulting in the discharge of bunker oil. Spill.	
Lessons	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	
Dearth results from IUnemE s accident Database. Information from Sne@icneme.org.uk	

8133 04 February 1995
Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.  Location: Vermilion Bay, Ontario, CANADA
Injured: 0 Dead: 0
Abstract
100 metres of pipeline torn up by explosion and fire involving 45 million scfd of natural gas. [fire - consequence]
Lessons [Name Paranted]
[None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8513 04 February 1995 Source: OBSERVER, 1995, FEB, 5. Location: North Sea, UK Injured: 0 **Dead** : 0 Abstract A marine transportation incident. 100 oil workers were evacuated from a platform as a factory vessel was drifting towards the platform in heavy seas. Oil workers allowed back when tow connected to vessel. Near miss. [offshore, evacuation, weather effects] Lessons [None Reported]

8506 04 February 1995				
Source : LLOYDS LIST, 1995, FEB, 9. Location : Vermillion Bay, CANADA				
Injured: 0	<b>Dead</b> : 0			
Abstract				
	Explosion created two craters along natural gas pipeline that hurled lengths of pipe into the air.			
Lessons				
[None Reported				
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk			

### 8556 03 February 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location : Shandong Province, CHINA

Injured: 57 Dead: 10

### Abstract

Transportation. A massive gas pipeline blast destroyed a busy city intersection and neighbouring power transmission lines as city commuters were returning home. Extensive damage to roadside buildings. Fatality.

[damage to equipment]

### Lessons

# 8514 03 February 1995 Source: LLOYDS LIST, 1995, FEB, 6. Location: Senglea, MALTA Injured: 0 **Dead** : 0 Abstract A marine transportation incident. A large internal tank explosion in a chemical tanker ruptured ship. The ship spent 3 days at a tank cleaning facility prior to work on the vessel in the dry docks. Lessons [None Reported]

Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8511 February	1995						
Source : HAZAR Location : Ghen		GO BULLETIN, 1995, A	APR.				
Injured: 0 D	<b>Dead</b> : 0						
Abstract							
A rail transportati <b>Lessons</b>	ion incident.	Leakage of 30-40 kg o	of chlorine from rail ta	anker on site. F	Road and canal tra	affic halted. Spill.	
[None Reported]							
Search results f	rom IChemi	E's Accident Database	e. Information from	she@icheme.	ora.uk		

8502 26 January 1995
Source : HAZARDOUS CARGO BULLETIN, 1995, DEC.  Location : ,
Injured: 0 Dead: 0
Abstract
A road transportation incident. 3 one tonne IBC (intermediate bulk containers) filled with polyester amide (toxic substance) broke through the side of an unaccompanied curtain sided trailer and fell onto the deck. The trailer contained 17 IBC.  [damage to equipment]
Lessons (Name Desputed)
[None Reported]

8498 23 January 1995	
Source : LLOYDS LIST Location : Usinsk, Komi Republic, RUSSIA	
njured: 0 Dead: 0	
Abstract	_
Transportation. 300 tonnes of oil was spilt from corroded pipeline.  [corrosion, spill]  Lessons	_
None Reported]	
· · ·	_
	_
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

8549 23 January 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location: Komi, RUSSIA Injured: 0 **Dead**: 0 Abstract Transportation. A 720 mm break in a pipeline resulted in a spill of about 300 tonnes of crude oil covering 1.5 hectares. Second incident this year. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

### 8495 21 January 1995

Source: LLOYDS LIST, 1995, JAN, 24, JAN, 25. Location: Lac sur Sables, Shawinigan, CANADA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. 28 cars of a 44 car train were derailed causing the spillage of 50,000 gallons of sulphuric acid into the river. The pH of the river was down to 3.7 at the spill and 5.0 16 km away. Limestone was added to the river. Investigation showed that one tanker split open completely, 10 tankers tipped into the lake and, that of these, 6 leaked, while 5 other tankers lost some of their contents. 10 of the 11 cars that lost their contents had damage to the top assembly and rupture disc due to the shield being insufficient.

[damage to equipment, pollution, inadequate guarding, derailment]

### Lessons

There was a lack of shielding on the tanker domes.

8132 21 January 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location: Gardabani District, GEORGIA Injured: 0 **Dead** : 0 Abstract A 200 metre section of the 1,000 diameter gas pipeline was blown up causing disruption of gas flow. [gas / vapour release, sabotage] Lessons [None Reported]

### 8152 21 January 1995

Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location: Tawachiche River, CANADA

Injured: 0 Dead: 0

### Abstract

A rail transportation incident. 50,000 gallons of sulphuric acid spillage into an environmentally sensitive area after 28 rail tankers came off the rail track.

Extensive pollution and damage to fish spawning grounds.

[ecological damage]

### Lessons

### 8131 17 January 1995 Source: SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. Location: Convencion, Norte de Santander Province, COLOMBIA Injured: 0 **Dead** : 0 Abstract Transportation. Spillage of 7,500 bbl of crude oil following the blowing up of a 220,000 barrels per day pipeline. Repairs expected to take 2 days. [sabotage] Lessons [None Reported]

8493 15 January 1995	
Source : LLOYDS LIST, 1995, JAN, 21. Location : Melbourne, AUSTRALIA	
Injured: 0 Dead: 0	
Abstract	
A marine transportation incident. 3000 litres of benzene was spilt from chemical tanker during cargo operations.  [spill]	
Lessons	
[None Reported]	
Search results from IChemE's Accident Database. Information from she@icheme.org.uk	

8503 12 January 1995 Source: HAZARDOUS CARGO BULLETIN, 1995, JAN, 12. Location: North Sea, NETHERLANDS Injured: 0 **Dead**: 0 Abstract A marine transportation incident. Tank container with herbicide lost overboard from ro-ro ship 40 km from Dutch coast. Spill. Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

8490 06 Janu		
Source : LLOY Location : Mis	OYDS LIST, 1995, JAN, 9. Iississippi, USA	
Injured: 0	<b>Dead</b> : 0	
Abstract		
A river transport [material transf Lessons	portation incident. While a barge was transferring bunker oil to a bulk carrier there was a spillage of 10 barrels. nsfer]	
[None Reported	tedl	
[None Reported		
Search results	ults from IChemE's Accident Database. Information from she@icheme.org.uk	

8489 03 January 1995					
Source : LLOY Location : Sha	Source: LLOYDS LIST, 1995, JAN, 7.  Location: Shandong Province, CHINA				
Injured: 57	<b>Dead</b> : 10				
Abstract					
Transportation. [explosion] <b>Lessons</b>	A gas blast destroyed a busy road intersection as a gas pipeline ruptured. Fatality.				
[None Reported	<b>1</b> ]				
. ,	<u>.</u>				
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk				

8522 January 1995
Source : HAZARDOUS CARGO BULLETIN, 1995, JAN, 3. Location : Essex, UK
Injured: 0 Dead: 0
Abstract
A marine transportation incident. Vapour emission during discharge of oil at terminal. Local complaints.  [gas / vapour release, environmental]  Lessons
[None Reported]
[None Reported]
Search results from IChemE's Accident Database. Information from she@icheme.org.uk

124221995		
Source : ICHE Location : ,	ME	
Injured: 0	<b>Dead : 1</b>	
Abstract		
The incident oc When it started the deck of the [fatality, road tra	as killed when he was struck by lightning whilst working on a construction site. curred when four construction workers were carrying out sand compacting tests at a plant construction site. Ito rain the contractors stopped their work and were on their way back to the office by pick-up truck. Two were sitting inside and two were on truck, when one of the persons on the deck was suddenly struck by lightning. The other workers were not injured.  ansport, road transportation]	
Lessons		
[None Reported		

## 8449 29 December 1994 Source: HAZARDOUS CARGO BULLETIN, 1995, FEB. Location: North Sea, Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Container broke apart on deck of ro-ro vessel due to poor weather conditions. 30 barrels containing sulphur oxychloride lost overboard. [weather effects, spill] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

6794 24 December 1994		
Source : BBC NEWS, 1994, 24 DEC.  Location : Stockton-on-tees, UK		
Injured: 0 Dead: 0		
Abstract		
A road transportation incident. Acid spillage from a road tanker in car park.  Lessons		
[None Reported]		
Search results from IChemE's Accident Database. Information from she@icheme.org.uk		
Georgi results from Potenic a Accident palabase. Information from Shewichelle.Uru.UK		

8554 23 December 1994		
	GWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995. LII, UZBEKISTAN	
Injured: 0	<b>Dead</b> : 0	
Abstract		
[spill]	Flow of gas was interrupted following pipeline blast. Terrorism suspected.	
Lessons		
[None Reported	<u>i]</u>	
Search results	from IChemE's Accident Database. Information from she@icheme.org.uk	

## 8448 22 December 1994 Source: HAZARDOUS CARGO BULLETIN, 1995, FEB. Location: Louisana, UK Injured: 0 **Dead** : 0 Abstract A river transportation incident. A towed tank river barge struck steel mooring dolphin. 150,000 litres of crude oil leaked to lower part of the river from gash in single hull. [spill, collision] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk

## 8447 21 December 1994 Source: HAZARDOUS CARGO BULLETIN, 1995, FEB. Location: North Atlantic, Injured: 0 **Dead** : 0 Abstract A marine transportation incident. Collision between tanker and bulk container. Small fire on tanker, 8 crew missing and emergency discharge of 130,000 tonnes of crude oil. [fire - consequence, spill] Lessons [None Reported] Search results from IChemE's Accident Database. Information from she@icheme.org.uk