

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

Location : Houston, USA

Injured : 5      Dead : 1

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**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 were rescued and taken to hospital where they were treated for hypothermia. No vessel sank as a result.

[fatality, injury]

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**Lessons**

[None Reported]

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1321113 December 2000

Source : BBC NEWS, 13 DECEMBER, 2000, (<http://www.bbc.co.uk>).

Location : Bermeja, ECUADOR

Injured : -      Dead : 6

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**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.

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**Lessons**

[None Reported]

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1314926 November 2000

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

Location : Cornwall, UK

Injured : 0      Dead : 0

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**Abstract**

A marine transportation incident. A cargo ship containing more than 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]

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**Lessons**

[None Reported]

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**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, NOVEMBER 17, 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 perform 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 :** Johannesburg, SOUTH AFRICA

**Injured :** -      **Dead :** 11

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**Abstract**

A fire and explosion occurred at a chemical factory killing eleven workers and injuring many more.

The incident occurred when fire reached gas containers, which then exploded. It is thought that the fire started when flammable chemical spilled onto a gas burner.

An investigation into the incident is underway.

[burns, fire - consequence, chemical - flammable, hot surface, injury, fatality]

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**Lessons**

[None Reported]

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

**Location** : Great Barrier Reef, AUSTRALIA

**Injured** : 0      **Dead** : 0

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**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]

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**Lessons**

[None Reported]

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

Location : Arizona, USA

Injured : 3      Dead : 1

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**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]

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**Lessons**

[None Reported]

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13192November 2000

Source : BBC NEWS, 5 NOVEMBER 2000, (<http://www.bbc.co.uk>).

Location : , BRAZIL

Injured : 0      Dead : 0

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**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]

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**Lessons**

[None Reported]

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13193November 2000

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

**Location** : Osun State, NIGERIA

**Injured** : -      **Dead** : 100+

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**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]

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**Lessons**

[None Reported]

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**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 perform 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

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**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]

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**Lessons**

[None Reported]

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**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, OCTOBER 22, 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 perform 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 :** Downey, USA

**Injured :** 6      **Dead :** 0

**Abstract**

An explosion occurred at a bottling plant injuring six workers. The incident occurred due to leak on a 1,100-gallon tank containing propane, which is thought to have been ignited by a water heater. The fire was extinguished in forty-five minutes. Nearby buildings within half a mile were damaged by the blast.  
[hot surface, damage to equipment, injury]

**Lessons**

[None Reported]

1318111 October 2000

Source : BBC NEWS, 12 OCTOBER, 2000, (<http://www.bbc.co.uk>).

Location : Nigeria, AFRICA

Injured : -      Dead : -

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**Abstract**

A road transportation incident. A road tanker carrying fuel exploded when in collision with a bus carrying fifty-six people.  
[explosion]

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**Lessons**

[None Reported]

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1319803 October 2000

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

Location : , SINGAPORE OFFSHORE

Injured : 0      Dead : 0

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**Abstract**

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]

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**Lessons**

[None Reported]

---

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**

[None Reported]

---

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**

[None Reported]

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Source : YAHOO UK & IRELAND NEWS, SEPTEMBER 10, 2000, (<http://www.yahoo.co.uk>).

Location : , NIGERIA

Injured : 0      Dead : 0

---

**Abstract**

Approximately 130,000 barrels of oil spilled into a creek and delter from an oil refinery. Containment measures have been put in force. The cause of the spill is not yet known an investigation is underway. It is thought that sabotage is to blame.  
[pollution]

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**Lessons**

[None Reported]

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**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]

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**Lessons**

[None Reported]

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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]

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**Lessons**

[None Reported]

---

**Source** : BBC NEWS, 20 AUGUST, 2000, (<http://www.bbc.co.uk>).

**Location** : Athi River, AFRICA

**Injured** : -      **Dead** : 17

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**Abstract**

A rail transportation incident. A train carrying liquefied petroleum gas (LPG) exploded killing seventeen people and injuring many others.

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

[explosion, fatality, injury]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, NOVEMBER 2000.

**Location** : Kenya, AFRICA

**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**

[None Reported]

---

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**

[None Reported]

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**Source** : BBC NEWS, 7 AUGUST, 2000, (<http://www.bbc.co.uk>); CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, AUGUST 8, 2000, (<http://www.chemsafety.gov>).

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**Location** : Balikpapan, Borneo, INDONESIA

**Injured** : 2      **Dead** : 0

---

**Abstract**

An explosion and fire occurred at a refinery injuring two workers. It is not known what caused the incident. The plant has been closed for further investigation.

[fire - consequence, refining, plant shutdown, injury]

---

**Lessons**

[None Reported]

---

Source : HAZARDOUS CARGO BULLETIN, NOVEMBER 2000.

Location : , GERMANY

Injured : 1      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker containing 30m<sup>3</sup> 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** : 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 residents were evacuated. Fortunately no one was injured in the incident.  
[evacuation]

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**Lessons**

[None Reported]

---

1287019 July 2000

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**

[None Reported]

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**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**

[None Reported]

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 70m<sup>3</sup> of the distillate to spill into the water.

[river barge, collision]

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**Lessons**

[None Reported]

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**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JUNE 2, 2000, (<http://www.chemsafety.gov>)

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**Location :** St Tammany Parish, USA

**Injured :** 5      **Dead :** 0

**Abstract**

A noxious chemical was unearthed during construction. Five people were affected by the fumes. The incident occurred when a backhoe operator dug up a blue container, which had no identifiable markings.

The people affected suffered attacks of nausea, headaches and burning eyes and throats.

[gas / vapour release, people, damage by backhoe, bulldozer/jcb/digger, chemical fumes, injury]

**Lessons**

[None Reported]

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

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**Location :** Akron, USA

**Injured :** 2      **Dead :** 0

**Abstract**

A flash fire occurred at a paint and varnish plant seriously injuring two workers. The incident occurred when four workers were cleaning equipment in the manufacturing area.

They were using a flammable liquid solvent and it is thought that a tow motor passing nearby ignited vapours from the solvent.

The plant was evacuated and the fire was extinguished.

[fire - consequence, hot surface, evacuation, burns, injury]

**Lessons**

[None Reported]

**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]

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**Lessons**

[None Reported]

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**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**

[None Reported]

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

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**Location :** Georgia, USA

**Injured :** 0      **Dead :** 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**

[None Reported]



**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**

[None Reported]

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

**Location :** , DENMARK OFFSHORE

**Injured :** 0      **Dead :** 0

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**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**

[None Reported]

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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]

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**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 7 APRIL, 2000, (<http://www.chemsafety.gov>),

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**Location :** Winterset, USA

**Injured :** 9      **Dead :** 2

---

**Abstract**

A fire and explosion occurred on a fuel tank. The explosion occurred when fire broke out during cutting operations on a rusty fuel tank. Two people were killed and nine others injured in the blast.

[fire - consequence, hot work, fatality, hot surface, injury]

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**Lessons**

[None Reported]

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**Source :** BBC NEWS, 5 APRIL, 2000, ([www.bbc.co.uk](http://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

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**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**

[None Reported]

---

**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]

---

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]

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**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**

[None Reported]



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

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**Location** : Orangeburg, USA**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.

[derailment - consequence, wheel broken]

**Lessons**

[None Reported]

**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**

[None Reported]

---

**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**

[None Reported]

---

**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 16 MARCH, 2000, (<http://www.chemsafety.gov>)

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**Location :** Hangzhou, CHINA

**Injured :** 0      **Dead :** 4

---

**Abstract**

Four people were killed during arc-welding operations at a biogas-generating pit.

The incident occurred when the arc-welding device ignited gas in the pit resulting in an explosion.

[hot surface, fatality, fire - consequence]

---

**Lessons**

[None Reported]

---

**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

---

**Abstract**

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**

[None Reported]

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**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**

[None Reported]

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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**

[None Reported]

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**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]

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**Lessons**

[None Reported]

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

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**Location :** Gulgong, AUSTRALIA

**Injured :** 3      **Dead :** 0

---

**Abstract**

A pesticide leak occurred when an excavator ran over three chemical cylinders. The substance was identified as aluminium phosphide, which is potentially lethal and can cause environmental damage.

The spill was cordoned off and a nearby school evacuated. Three fire fighters were taken to hospital for observation.

[excavation damage, evacuation, injury]

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**Lessons**

[None Reported]

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**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

---

**Abstract**

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]

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**Lessons**

[None Reported]

---

**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.

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**Lessons**

[None Reported]

---

1219511 February 2000

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 car and 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]

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**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**

[None Reported]

---

**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 is highly corrosive and flammable, inhalation of the vaporised chemical in large amounts or contact with skin can cause inflammation. [injury]

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**Lessons**

[None Reported]

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**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**

[None Reported]

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**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**

[None Reported]



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

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**Location :** , USA

**Injured :** 0      **Dead :** 0

**Abstract**

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]

**Lessons**

[None Reported]

**Source :** CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, JANUARY 14, 2000, (<http://www.chemsafety.gov>).

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**Location :** La Guaira, VENEZUELA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Cargo containers were found to be leaking a toxic mix of chemicals after the containers were battered by massive floods. As a result of this, residents of the area were evacuated and access to the area was restricted.

Chemicals leaking from some containers were identified as toxic and posed a threat to public health.

Authorities stated, the chemicals could contaminate the ground and sea, emit dangerous gases and cause an explosion.

Health officials issued public warnings that any survivors from the floods suffering from skin rashes, respiratory ailments or other health problems are to seek medical attention.

The flooding killed between 5,000 and 30,000 people, making it the worst natural disaster in the country this past century.

[evacuation, storage, toxic chemical]

---

**Lessons**

[None Reported]

---

130392000

**Source** : ALTAVISTA, 2 SEPTEMBER, 2000, (<http://www.altavista.com>).

**Location** : Manila Bay, MANILA

**Injured** : -      **Dead** : -

---

**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**

[None Reported]

---

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**

[None Reported]

---

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**

[None Reported]

---

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**

[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**

[None Reported]

---

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]

---



Source : CNN.COM, U.S. NEWS, SEPTEMBER 21, 1999, (<http://www.cnn.com>).

Location : New Jersey, North Carolina, USA

Injured : -      Dead : -

---

**Abstract**

People were told to boil their tap water after fears of contamination caused by Hurricane Floyd.

Drinking water was found to have been contaminated by overflow from sewage plants and animal waste lagoons.

Floodwaters were contaminated by fuel, farm chemicals and manure. Flooding also swept at least 1,000 containers of explosive and toxic materials into waterways. Officials warned people not to come into contact with any drums, cylinders or other unfamiliar objects. The biggest danger comes from flammable materials like gasoline, cleaning solvents and propane gas.

More than a million gallons of waste water thought to contain chromium, spilled at a chemical plant during the hurricane.

[toxic chemical]

---

**Lessons**

Water contaminated by sewage and animal waste could cause a host of gastrointestinal illnesses.

---

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 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]

---

1187314 September 1999

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**

[None Reported]

---

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**

[None Reported]

---

**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**

[None Reported]

---

1210725 August 1999

Source : BBC NEWS, 11 JANUARY, 1999, (<http://www.bbc.co.uk>).

Location : , SOUTH AFRICA

Injured : -      Dead : 9

---

**Abstract**

Fifteen miners became trapped 2,1000 metres underground in a mine. The rock fall is believed to have been caused by an earth tremor measuring 2.9 on the Richter scale. Rescue teams removed 140 tonnes of rubble before they were able to make contact with the miners. Six miners were found alive but four were found dead and five are missing.

[solids processing, injury, fatality, mining]

---

**Lessons**

[None Reported]

---



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

[None Reported]

---

1164717 August 1999

Source : BBC NEWS, AUGUST 19, 1999, (<http://www.bbc.co.uk>); HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

Location : , TURKEY

Injured : -      Dead : -

---

**Abstract**

A fire occurred at an oil refinery complex when a fatal earthquake struck the country.

The earthquake struck Turkey's populous north west, an area that accounts for a third of the country's economic output. Many large companies were badly hit.

[fire - consequence, refining, oil, tank, fatality, damage to equipment]

---

**Lessons**

[None Reported]

---

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**

[None Reported]

---

**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 l 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]

---

**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]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS 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]

---



**Source :** HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.

**Location :** , AUSTRALIA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A marine transport incident. A faulty coupling on a floating hose used for discharging crude oil to a refinery was found to be leaking causing the spillage of 270 m3 of crude oil into the sea, fouling the beaches and a reef.

[coupling failure, unloading, pollution]

---

**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]

---

**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**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, SEPTEMBER 1999.

**Location** : Pambala, AUSTRALIA

**Injured** : 1      **Dead** : 0

---

**Abstract**

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

[fire - consequence]

---

**Lessons**

[None Reported]

---

**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**

[None Reported]

---

1142829 May 1999

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

Location : , AUSTRIA

Injured : 50    Dead : 5

---

**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, collision]

---

**Lessons**

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

---

1147916 May 1999

**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**

[None Reported]

---

**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]

---



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 Iowa 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**

[None Reported]

---

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**

[None Reported]

---

**1051917 March 1999**

**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**

[None Reported]

---

1187415 March 1999

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**

[None Reported]

---

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**

[None Reported]

---

**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]

---

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]

---

1301911 December 1998

**Source** : NATIONAL TRANSPORTATION SAFETY BOARD ABSTRACT OF FINAL REPORT, PIPELINE ACCIDENT REPORT, NTSB/PAR-00/01, NATURAL GAS PIPELINE RUPTURE AND SUBSEQUENT EXPLOSION, ST. CLOUD MINNESOTA, DECEMBER 11, 1998.

**Location** : St. Cloud, Minesota, USA

**Injured** : 13    **Dead** : 4

---

**Abstract**

An explosion occurred on a 1-inch diameter high-pressure plastic gas pipeline. The incident occurred when an installation crew struck and ruptured the pipeline causing a gas leak. Approximately forty minutes later an explosion occurred. Four people were killed and thirteen people injured in the incident. Damage to buildings and equipment is estimated at \$399,000 (1998).

An investigation into the incident revealed the following:

1. The marked location of the ruptured gas line was accurate and therefore was not a factor in the incident.
2. Installation procedures were inadequate in that they did not address steps to take under unusual circumstances such as striking a significant underground obstacle, to ensure that buried utilities were protected during the entire installation process including the underground portion.
3. Has someone immediately called for emergency assistance after the rupture, they may have had time to fully assess the risk and to take actions that could have helped either to prevent the explosion or to avoid the resulting loss of life.
4. The risk to people and property was not fully addressed by emergency personnel.
5. Had the gas line in this incident been equipped with an excess flow valve, the valve may have closed after the pipeline ruptured and the explosion may not have occurred.

[excavation damage, human causes, fatality, injury]

---

**Lessons**

[None Reported]

---



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**

[None Reported]

---

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**

[None Reported]

---

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

CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD, 99-05-1-WA (<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 perform 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 :** Washington State, USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

An explosion and fire occurred in a coker of a refinery after a power failure which was caused by recent wind storm. The fire was quickly extinguished.

[fire - consequence, refining, strong winds, electrical equipment failure]

---

**Lessons**

[None Reported]

---

1044414 November 1998

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**

[None Reported]

---

Source : BBC ONLINE NETWORK 1998.

Location : , OFFSHORE CHINA

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, damage to equipment, pollution]

---

**Lessons**

[None Reported]

---

10446 November 1998

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

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**

[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.

---

10443 October 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**

[None Reported]

---



Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

A failure of an emergency release coupling occurred at a refinery. The incident occurred during the unloading a ship when residual pressure occurred in the hydraulic line of the coupling due to a missing critical shear pin. Approximately 8.5 tonnes of propylene was released to atmosphere. The incident cost an estimated \$48,287 (1999).

[coupling failure, gas / vapour release]

---

**Lessons**

[None Reported]

---

Source : YAHOO NEWS, ASSOCIATED PRESS, (<http://www.yahoo.com>).

Location : , USA

Injured : 0      Dead : 0

---

**Abstract**

Bomb incident leads to evacuation. Workers loading a bomb from a B-52 accidentally dropped the 500 pound explosive on a runway, prompting the evacuation of more than 700 nearby homes.

The bomb did not explode, however the bomb was transported to a remote bomb range where it was placed 15 feet deep, covered with dirt and detonated.  
[human causes, near miss]

---

**Lessons**

[None Reported]

---

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

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Jet oil was seen to be shooting from a stationary tank in a continuous stream. The incident occurred due to valves on the tank being opened by vandals.

Approximately 150,000 litres of oil was released into the environment.

The valve designed to drain rainwater out and keep the bund at full capacity, had been left open and the oil was therefore able to run out and enter the ground.

The company was fined £10,000 and costs of £4,000 (2000).

[vandalism, spill]

---

**Lessons**

[None Reported]

---

Source : BBC NEWS, 7 SEP, 1998, (<http://www.bbc.co.uk>).

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Up to half a million litres of diesel was spilt into a harbour when fuel escaped after vandals tampered with a tank. Around 600,000 litres were released. Much of the diesel was contained within a protective concrete barrier but some spilled into the harbour and a large quantity has soaked into the soil and drainage pipes.

About 24 fire fighters with four tenders and the fire brigade dinghy were on the scene to prevent anymore fuel from leaking into the water.

Two 100m booms were being used to contain the diesel in the harbour while absorbent mats were used to mop up on land.

No wildlife was thought to have been harmed as yet, but efforts were being concentrated on stopping any oil reaching a nearby beach and river.

[spill, ecological damage, vandalism]

---

**Lessons**

[None Reported]

---

10790September 1998

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

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Vandals caused five million gallons of raw sewage to pour into an estuary, decimating fish stocks in part of a nearby river.

The vandals cut through a chain fence and closed the valves of a sewage pipe leading to a nearby treatment works. This caused a build-up of pressure which blew open a manhole cover.

Workers had to overcome ammonia fumes to stop the flow of sewage, which is thought to have continued for three hours.

Samples taken from the river revealed levels of oxygen a tenth of what they should be.

[vandalism, spill, pollution, drains & sewers, waste water treatment, overpressure, ecological damage]

---

**Lessons**

[None Reported]

---

10445September 1998

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

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Vandals caused five million gallons of raw sewage to pour into an estuary, decimating fish stocks in part of a nearby river.

The vandals cut through a chain fence and closed the valves of a sewage pipe leading to a nearby treatment works. This caused a build-up of pressure which blew open a manhole cover.

Workers had to overcome ammonia fumes to stop the flow of sewage, which is thought to have continued for three hours.

Samples taken from the river revealed levels of oxygen a tenth of what they should be.

[vandalism, ecological damage, sewer]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

An incident at an ethylene plant. A crane had completed a lifting operation on the previous day. The driver was asked by contractors to look at another job, and when moving the crane, collided with an overhead pipe track. The direct cause was the crane jib being left in the upright position whilst the crane was being driven away.

Personnel congregating at a muster point spilt onto the road and delayed emergency services getting to the scene.

Damage was sustained by two flare lines, but later declared fit for use following leak and pressure testing. Planned flare operations were suspended whilst the lines were inspected. Damage to the pipe-bridge was relatively minor and it was declared fit for short-term use.

[collision, pipeline, transportation, damage to equipment

---

**Lessons**

A notice was issued to all of the contracting company's crane drivers informing them of correct procedures.

An indicator to be installed in the front cab of all cranes to inform the driver when the jib was in the upright position.

Improved control of crane and other large vehicle movements on site, with risk assessments as necessary.

Further familiarisation of the Fire and Emergency Service shift teams.

---

10208July 1998

Source : REUTERS LIMITED, 1998.

Location : North Carolina, USA

Injured : -      Dead : -

---

**Abstract**

Hundreds of thousands of fish have been killed along a lower part of the Neuse River in a major outbreak of the toxic *Pfiesteria* microbe. Heavy spring rains and a dry summer made conditions ripe for emergence of the deadly toxin. The outbreak has killed an estimated 500,000 fish over the past five days, and is an ominous sign for fishermen and boaters along the East Coast.

The *Pfiesteria* microbe has covered a seven-mile stretch of the Neuse River about 15 miles downstream from New Bern in coastal North Carolina. About half the fish caught in one section of the river had ulcerated lesions on their skin associated with an active *Pfiesteria* outbreak.

*Pfiesteria* in recent years has been linked to several major fish kills on East Coast waterways, where scientists say the microorganism thrives in nutrients generated by sewage, animal waste and fertilisers flushed into rivers and streams. It was first discovered swarming in a major fish kill on the nearby New River in May 1991, causes lesions and stupefies fish, and may have similar effects on people exposed to the toxin.

[hot weather, rain, ecological damage, leak]

---

**Lessons**

[None Reported]

---



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]

---

12767May 1998

**Source** : CHEMICAL HAZARDS IN INDUSTRY, JUNE 2000,; MADDEN, G. (SOUTH GLOSTERSHIRE ENVIRONMENTAL SERVICES, UK) ENVIRONMENTAL HEALTH JOURNAL, FEB 2000, 108(2), 46-48.

**Location** : Bristol, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

An underground fuel pipeline was damaged during planned maintenance work forcing two families to be moved out of their homes. Approximately 27,000 litres of kerosene were recovered following the incident. It is estimated that approximately 500-900 litres has been lost to ground. [evacuation, spill, excavation damage, damage to equipment]

---

**Lessons**

[None Reported]

---

1234830 March 1998

**Source** : NATIONAL TRANSPORTATION SAFETY BOARD, 1999, (<http://www.nts.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**

[None Reported]

---

1260117 March 1998

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

Location : Wales, UK

Injured : 0      Dead : 0

---

**Abstract**

Approximately 500 - 1,000 litres of heating oil spilled from a tank into a nearby watercourse. An investigation found that vandals had tampered with the tank. Poor pollution prevention at the site had indirectly been the cause of the pollution. It was found that the oil storage tank was unbunded and was situated directly over a surface water drain. The company was fined £1,000 and costs of £2,662 (2000).  
[storage tanks, vandalism, design or procedure error, 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**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

During the removal of a 42 inch blind (after maintenance) on an overhead vapour line, fuel gas from the opened flange ignited, resulting in a flash fire.

Fortunately, seven contractors working at the scaffolding platform at the time escaped without injury.

Fuel gas had entered the tower from the flare and overhead drum. The source of ignition was considered to be the hot surface of the temporarily fixed halogen lights located directly

downwind. Steam was injected into the base of the tower to extinguish the flange fire.

The immediate cause of the flash fire was the removal of an isolation blind when there was flammable gas present (reverse flow of fuel gas from the flare system) with potential sources of ignition nearby.

The basic causes were:

1. Inadequate control and coordination of the various activities that were being carried out simultaneously by the maintenance contractors and operations personnel.
2. Changes to plant conditions after the issue of a hot work permit for the removal of the blind (work on desalters, increase in fuel gas flow to flare).
3. Failure to thoroughly check the unit to identify potential remaining hazards for the debinding tasks (tower open to flare, use of temporary non-flameproof equipment).
4. Failure to recognise the risks and prepare a written procedure in accordance with in-house rules.

[fire - consequence, design or procedure error]

---

**Lessons**

[None Reported]

---

**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**

[None Reported]

---

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**

[None Reported]

---



**Source :** LOSS CONTROL NEWSLETTER

**Location :** , SINGAPORE

**Injured :** 0      **Dead :** 0

---

**Abstract**

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]

---

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]

---

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]

---

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]

---

**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]

---

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]

---

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]

---

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

Location : , NIGERIA

Injured : 0      Dead : 0

---

**Abstract**

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]

---



**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**

[None Reported]

---

8929 26 July 1997

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

Location : , OFF SINGAPORE

Injured : 0      Dead : 0

---

**Abstract**

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]

---

8927 24 July 1997

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

Location : Texas, USA

Injured : 0      Dead : 0

---

**Abstract**

Oil leaked from a marine tanker during lightering, apparently due to hull crack suffered in collision a month earlier but no damage was found at the time.

---

**Lessons**

[None Reported]

---

**Source :** LOSS CONTROL NEWSLETTER, 1997.

**Location :** , USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A self-elevating drilling platform broke loose from her moorings and collided with an offshore supply vessel, with spillage of 3,500 gallons of diesel oil. The platform then drifted against two double hulled barges.  
[inadequate mooring, collision, marine transport]

---

**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]

---

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]

---

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]

---

**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 : 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]

---

10827 July 1997

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 35 mile 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.

---

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**

[None Reported]

---

**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**

[None Reported]

---

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**

[None Reported]

---

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]

---



**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**

[None Reported]

---

**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**

[None Reported]

---

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 l of diesel oil spilt into the river.

[spill, collision]

---

**Lessons**

[None Reported]

---

**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 1,000m<sup>3</sup> LPG carrier, 50,000 litres of gasoline spilt.  
[spill, collision]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1997, AUG. THE DAY.

**Location** : Connecticut, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

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]

---

Source : HAZARDOUS CARGO BULLETIN, 1997, AUG. UPI.

Location : , INDIA

Injured : 0      Dead : 0

---

**Abstract**

An explosion occurred at a dye factory, forensic experts are investigating bomb reports, the explosion is believed to have been caused by a cooking gas cylinder.  
[terrorism]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1997, AUG. FAIR PLAY.

**Location** : Muang, THAILAND

**Injured** : 20    **Dead** : 4

---

**Abstract**

An explosion occurred when workers were welding a barge at dock. The hull was full of thinner and gas after being painted.

[marine transport, hot surface, fatality]

---

**Lessons**

[None Reported]

---

9003 01 April 1997

Source : CHEMICAL HAZARDS IN INDUSTRY, 1997, SEP.

Location :

Injured : 12    Dead : 0

---

**Abstract**

A road transportation incident. Two road transport trucks collided, spilling 200 litres of caustic soda from three drums. Twelve people were treated for burns.  
[collision]

---

**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]

---

8799 27 January 1997

**Source :** CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.

**Location :** Buckinghamshire, UK

**Injured :** 1      **Dead :** 0

---

**Abstract**

A drum containing polyester resin exploded causing slight injury. The employee who was wearing suitable protective clothing suffered minor burns. He had been working removing the tops of barrels with a flame cutter and had successfully removed three lids the fourth exploded due to a build up of styrene vapours.

[explosion, hot work, container, hot surface, vapour cloud explosion, injury]

---

**Lessons**

[None Reported]

---

9026 23 January 1997

**Source** : CHEMICAL HAZARDS IN INDUSTRY, 1997, AUG.

**Location** : Memmingen, GERMANY

**Injured** : 0      **Dead** : 0

---

**Abstract**

A fire caused poisonous gas to pour into the centre of the town. The gas cloud contained traces of cyanide and ammonia. The fire spread to three nearby houses and four nearby apartment blocks were evacuated. The fire started in a factory hall where cleaning fluids were being produced and spread to another building. Arson is the probable cause.

[fire - consequence, gas / vapour release, evacuation, processing, cyanide fumes]

---

**Lessons**

[None Reported]

---

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]

---

Source : ICHEME

Location : , FRANCE

Injured : 2      Dead : 0

---

**Abstract**

A fire broke out at gas oil hydrodesulfurization unit. The fire was caused by a leak of gas oil and gaseous products from the flange of a temperature control valve. The fire, restricted to the reactor section, was put out within 35 minutes by the refinery fire brigade. Two operators were injured while manoeuvring an extinguisher, but did not incur a lost time accident. The incident occurred following gasoil feed upset in the late morning, heavy rain in the afternoon and a hailstorm at about 22:30 hrs. The fire resulted in damage to control valves, piping, cables and associated heat exchangers.

[flange, valve, refining, rain, design inadequate, inspection inadequate, fire - consequence, flange failure, injury]

---

**Lessons**

Wafer type valves which, by design, are installed by "insertion" are unreliable and liable to leak.

All wafer valves to be identified and a risk assessment carried out to review their continued suitability in service.

Critical flanges need to be identified and regularly inspected, following an established procedure.

The investigation team concluded that the incident was caused by the following factors:

1. Inherent design weakness of the wafer type valves.
  2. The poor condition of the flanges on the valves and piping.
  3. Thermal shock imposed on the valves due to severe weather conditions (rain and hailstorm) and process upset earlier on in the day.
-

**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]

---

**Source** : CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.

**Location** : Cambridgeshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Heavy rainfall caused a failure in a surface water drainage system, resulting in the overflow of oil into a roadside drain and then into a canal.  
[ecological damage]

---

**Lessons**

[None Reported]

---



**Source :** CHEMICAL HAZARDS IN INDUSTRY, 1997, SEP.

**Location :**

**Injured :** 0      **Dead :** 0

---

**Abstract**

A hot oil heat transfer fluid was released under pressure through an orifice in the piping circuit causing a fire. The leak created an atmosphere of various fluid which was ignited by a hot light filament.

[material transfer, fire - consequence, hot surface, heat transfer oil]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

A benzene production plant had been restarted after a three day shutdown, and had been on line for approximately 5 hours, when there was a loss of containment at the inlet flange on the top of the reflux drum as plant production rates were being increased. The released material comprised about 500 Kg of a mixture of 75% benzene and 25% other hydrocarbons.

Increases in production immediately before the release had initiated 2-phase flow in line, leading to severe hammer as alternate slugs of vapour and liquid impacted a pipe bend near the reflux inlet. This hammer caused the nuts on the reflux inlet flange to loosen by vibration, with subsequent leakage. The risk of such hammer from the specific combination of pressure, temperature and flow had not been anticipated, and was not covered in the plant operating instructions.

[gas / vapour release, excessive vibration]

---

**Lessons**

1. Engineering changes were made to the design and operating envelope of the plant to prevent the combination of pressure, temperature and flow giving rise to the hammer phenomenon.
  2. Additional temperature alarms and flow indicators were provided.
  3. Operating instructions were reviewed and revised.
-

**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]

---

Source : ICHEME

Location : , FRANCE

Injured : 0      Dead : 0

### Abstract

An off-site crude unit charge pump operating in parallel with another, caught fire from the mechanical seal about one and a half hours after a common alarm had sounded. The initially small fire spread to the adjacent pumps and the crude unit was shut down for 24 hours until one of the pump's electrical wiring and instrumentation could be repaired. The cause of the vibration leading to the seal failure is either motor bearing failure or coupling failure due to loss of alignment, and there was evidence of cavitation an hour before the initial vibration alarm.

On this refinery the Crude Distillation Unit control room is fed from three identical crude oil feed pumps (A), (B), (S) located off-site in the crude tank farm area about 1 km from the unit. In normal operations two pumps are running in parallel with one spare. Each pump is fitted with a common alarm for six bearing temperatures (two on the electric motor, four on the pump itself) and a vibration detector. At the time of the incident (A) and (S) were running. Analysis of flow recordings and tank levels shows a reducing flow rate as tank level (1) fell. This was a usual event and the new tank (2) was placed in service at 05:50 hrs., about an hour before the first common alarm. Vibration analyser charts show evidence of cavitation in (S) at 05:50 hrs. and this disappeared after the tank change. The common alarm sounded in the control room at 06:48 hrs. Because no vehicle was available and because the alarms were considered unreliable, it was left to the day operator to check the alarm on his rounds, about one and a half hours later. By this time the pump operation had deteriorated seriously, crude was leaking and the fire developed. It was promptly extinguished by the fire crew but the crude unit was shut down until the electrical wiring for one of the other pumps was restored allowing start-up.

Two potential immediate causes have been identified. These are:

1. Rupture of the coupling membranes.
  2. Failure of the bearing on the coupling side of the motor due to lack of oil or mechanical misalignment.
- [fire - consequence, mechanical equipment failure, excessive vibration, design or procedure error, fire - consequence, refining, pump bearing, plant shutdown, lubrication failure]

### Lessons

The following recommendations were made:

1. Operators must respond to alarms, no matter if they may be nuisance alarms.
2. Equipment does have a limited performance capacity, and operating at extremes places operations at risk.
3. Monitoring devices must be maintained in proper working order, especially those for remote operating areas where operator surveillance is less frequent.
4. Mechanical integrity must be maintained by use of the correct part of the equipment, as designed by the equipment supplier.

**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 Aransas. Damage to legs of platform.

[damage to equipment, offshore, collision]

---

**Lessons**

[None Reported]

---

8640 10 September 1996

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

Location : , UK

Injured : 1      Dead : 0

---

**Abstract**

A road transportation incident. Liquid nitrogen spillage onto M25 motorway when road tanker overturned.

---

**Lessons**

[None Reported]

---

12792September 1996

Source : CHEMICAL HAZARDS IN INDUSTRY, JUNE 2000.; SAF. MANAGE. (LONDON), NOV 1998, 27.

Location :

Injured : 1      Dead : 0

---

**Abstract**

A flash fire and explosion occurred inflicting severe burns to a painter. The incident occurred as the painter was working in an enclosed space and had been supplied with an ordinary halogen lamp. The halogen lamp ignited fumes.

The company was fined £10,000 (1998).

[fire - consequence, hot surface, safety procedures inadequate, injury]

---

**Lessons**

[None Reported]

---

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]

---



8608 03 July 1996

**Source** : LLOYDS LIST, 1996, JUL, 5.

**Location** : Ohio, USA

**Injured** : 5      **Dead** : 8

---

**Abstract**

A fire engulfed a firework store caused by arson. Fatality.

[fire - consequence, fireworks, storage]

---

**Lessons**

[None Reported]

---

**Source** : LOSS CONTROL NEWSLETTER, ISSUE 2, 1996.

**Location** : New Jersey, USA

**Injured** : 0      **Dead** : 1

---

**Abstract**

An explosion occurred when a contract welder was in the process of cutting up a metal sump which had been removed from a partially dismantled tank.  
[welding, hot surface, fatality, maintenance]

---

**Lessons**

[None Reported]

---

9999 25 April 1996

**Source** : LOSS CONTROL NEWS LETTER, 2/96.

**Location** : Grozny, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

An oil well, one of the largest in the area, was set alight by machine gun fire. Business Interruption loss estimated at US\$ 0.3m (1996) per day.  
[fire - consequence, processing, terrorism]

---

**Lessons**

[None Reported]

---

9998 09 April 1996

**Source** : LOSS CONTROL NEWS LETTER, 2/96.

**Location** : Beno-Vedeno, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A large quantity of gas condensate was released in the centre of a village which was subsequently evacuated. Incident due to terrorism.

[gas / vapour release, evacuation]

---

**Lessons**

[None Reported]

---

**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]

---

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

**Location** : Ibadan, NIGERIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Explosion on pipeline is attributed to sabotage.

---

**Lessons**

[None Reported]

---

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

Location : , NIGERIA

Injured : 0      Dead : 0

---

**Abstract**

Transportation. A gasoline pipeline blew up at km 64 caused by sabotage.

---

**Lessons**

[None Reported]

---

**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]

---



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]

---

**Lessons**

[None Reported]

---

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.

---

8685 18 February 1996

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

Location : Remedios, 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]

---

**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**

[None Reported]

---

**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]

---

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]

---

8415 20 January 1996

**Source** : LLOYDS LIST, 1996, JAN, 22.

**Location** : River Giaga, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. Safety valve broken by thieves in pipeline sending 300 tonnes of oil into frozen river.

[vandalism, spill]

---

**Lessons**

[None Reported]

---

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**

[None Reported]

---



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

**Location** : Krasnodar, RUSSIA

**Injured** : 0      **Dead** : 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]

---

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**

[None Reported]

---

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]

---

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

Location : , RUSSIA

Injured : 0      Dead : 0

---

**Abstract**

1,220 mm oil pipeline damaged by bulldozer carrying out excavation. 242 tonnes oil spillage over an area of 650 sq. metres.  
[excavation damage, bulldozer/JCB/digger]

---

**Lessons**

[None Reported]

---

**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**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

Ice blockage in cooling water system. Due to a sudden change in weather conditions, the water flow into the intake was greatly restricted by an ice build up. There was a rapid decrease in the cooling water to the refinery. This resulted in damage to equipment and product loss. It was found that mud and zebra mussels had blocked the intake.

[cooling equipment, refining, cold weather, flow restriction]

---

**Lessons**

Rarely, but, sometimes, the causes of incidents can be attributed to nature e.g., flooding, storms, frost damage, plant growth - perhaps initiating further problems. Management should be aware of the possibilities and incorporate scenarios into their emergency plans.

---

**Source :** CHEMICAL HAZARDS IN INDUSTRY, 1997, NOV.

**Location :** , UK

**Injured :** 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 times in a rescue attempt.

[ship ran aground, pollution]

---

**Lessons**

[None Reported]

---

**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**

[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]

---

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]

---

**Source :** SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

**Location :** Colombo, SRI LANKA

**Injured :** 0      **Dead :** 20

---

**Abstract**

155,000 tonnes of crude oil and petroleum products were lost following attacks at two depots and fire. Black smoke shrouded the city. Fatality.  
[fire - consequence, sabotage]

---

**Lessons**

[None Reported]

---

8188 16 October 1995

**Source** : LLOYDS LIST, 1995, OCT, 18.

**Location** : Invercargill, NEW ZEALAND

**Injured** : 0      **Dead** : 0

---

**Abstract**

Warehouse fire contained unknown chemicals. Believed to be arson.

[fire - consequence, warehousing, storage]

---

**Lessons**

[None Reported]

---

**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**

[None Reported]

---

**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]

---

**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**

[None Reported]

---

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**

[None Reported]

---



**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**

[None Reported]

---

**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]

---

**1965 16 August 1995**

**Source :** LLOYDS LIST, 1995, AUG, 28.

**Location :** Perm, RUSSIA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Oil leaked from damaged pipe onto hot machinery and spilled over an area of 300 sq. metres. Hot surface.

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

**Location** : Cabinda, ANGOLA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Sinking of offshore drilling semi submersible platform caused 24 people to be evacuated. Cause attributed to someone "pushing the wrong button".  
[evacuation, operator error]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3 RD QUARTER, 1995.

**Location** : Nagaoka, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. The 350 mm, 23.5 km liquefied natural gas (LNG) pipeline was ruptured by a landslide caused by heavy rains in the area. A four hour fire resulted.

[fire - consequence]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

A leak was discovered in the discharge pipework of an ethylene refrigeration compressor. The ethylene plant was shut down, the leak isolated and the associated pipework purged, prior to full inspection and repair.

The location of the leak was discovered at a point where a 2 inch safety valve bypass joined a 10 inch safety valve header on the compressor discharge. It was identified that the failure of the 2 inch pipe had been due to vibration induced fatigue.

The plant had been recommissioned two days previously, following a shutdown brought about by a process upset. It was estimated that 400-50 tonnes of ethylene had been lost in the 48 hours following recommissioning.

[refrigeration unit, plant shutdown, excessive vibration, normal operations]

---

**Lessons**

The enquiry team identified that monitoring of the vibration levels on pipework around the failure location should continue after the installation of new pipe supports. Monitoring and analysis results should be communicated site-wide and to others.

---

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**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 4, 1995.

**Location** : Westville, New Jersey, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Strong winds caused marine tanker to move away from terminal during unloading operations. Flexible hose parted and spillage of 130 tonnes of crude oil occurred into the river causing pollution.

---

**Lessons**

[None Reported]

---





7613 17 July 1995

**Source** : HAZARDOUS CARGO BULLETIN, 1995, SEP.

**Location** : Nizhny Novgorod, 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]

---

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]

---

2475 15 May 1995

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1995.

**Location** : Grozny, Chechen Republic, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

5 storage tanks damaged and 15,000 tonnes of oil destroyed in attack by terrorists using grenade launchers.

[terrorism, damage to equipment, product loss]

---

**Lessons**

[None Reported]

---

**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]

---

**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**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 2      Dead : 0

---

**Abstract**

One operator suffered a burned hand and two others were treated for shock, following a hydrocarbon fire at a chemical facility. A cracking furnace was being isolated, in preparation for de-coking and subsequent maintenance work, when the incident occurred.

The furnace was being isolated from the downstream process and the atmospheric vent valve opened. When the valve was fully opened, steam, as expected, was seen coming from the vent. Discoloured steam was then observed and a 'green distillate like material' was emitted from the atmospheric vent silencer. A 'bang' was heard and a fire was observed. The site emergency services were called.

The hydrocarbon fire burned itself out quickly, leaving small scaffolding fires on the furnace structure, which were dealt with by the emergency services.

Following the incident, it was identified that the block valve, which isolated the de-coking vent line from the cracked gas header, was passing. This allowed cracked gas and steam to enter the downstream pipework and de-coke drum, where steam and some hydrocarbon condensed. During normal operation, with the valve passing, a build up of liquids could have occurred.

The furnace was turned to atmosphere through this piping and steam flow lifted the liquids up and out of the atmospheric vent silencer. Liquids were ignited on the hot furnace surfaces.

Up to five tonnes of material was released in the incident.

[fire - consequence, burns, decommissioning, hot surface]

---

**Lessons**

1. The de-coking line should be positively isolated from the cracked gas header during normal operation.
  2. Operating instructions for normal operation and for decommissioning should be updated in light of the incident. Operator training should also be reviewed.
  3. Single line isolations, integrity of valves, locations of vents and valve operation should all be reviewed.
  4. Review of the HSE's findings should be undertaken.
-

**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**

[None Reported]

---



**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**

[None Reported]

---

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**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Contractors were carrying out excavation tasks associated with improvements to a road pipe track. Foundations were being laid for retaining walls and to improve the drainage system.

A mechanical excavator damaged the external sheath on three of the four 11kV power cables feeding a plant at the chemical facility. The damage occurred close to where the cables entered a sub-station.

Following the incident it was identified that the damage was superficial and that a simple sheath repair was required.

[damage to equipment, excavation damage, drilling/digging/ploughing vehicles]

---

**Lessons**

1. One excavation certificate had been raised for the job, which was to be undertaken in two distinct phases. The first, covering trial digs to locate cables was to be carried out using hand-digging methods only. The second, for subsequent tasks, allowed for mechanical digging, subject to appropriate permission and only in areas free of cables. Two permits to work were raised and it was incorrectly assumed that these were applicable to any part of the job.
  2. The Contractor had not prepared a method statement for the workscope.
  3. Hand-over between Contractor personnel had failed to identify the location of the cables.
-

8130 28 March 1995

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 2, 1995.

**Location** : Neftegorsk, Sakhalin Island, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Earthquake 7.5 on the Richter scale caused extensive damage to the oil production operation. A 53 cm pipeline had 15 breaks. 11 pumping stations, 230 wells and 3 oil and gas gathering stations were damaged.

[damage to equipment, processing]

---

**Lessons**

[None Reported]

---

8104 28 March 1995

**Source** : LLOYDS LIST, 1995, APR, 5.; HAZARDOUS CARGO BULLETIN, 1995, MAY.

**Location** : Brass River, NIGERIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Oil pipeline ruptured near production facility. 85,000 tonnes of crude oil spillage over 2 weeks. Sabotage by local community blamed but local community claiming \$32 million (1995) compensation.

---

**Lessons**

[None Reported]

---

8518 22 March 1995

Source : LLOYDS LIST, 1995, MAR, 25.

Location : , Trinidad

Injured : 0      Dead : 0

---

**Abstract**

Transportation. A rupture in the main 30 inch gas pipeline caused by a tractor clearing land resulted in the evacuation of people.  
[excavation damage]

---

**Lessons**

[None Reported]

---

**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]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

A small explosion was heard and a fire spread across the hammer mill floor. The fire was brought under control in about 2 hours. Most of the damage was to electrical cables and hydraulic hoses.

The total plant outage was only 20 hours as new equipment, which was being commissioned, was brought into use to minimise the outage.

The exact cause of the incident was not clear but it was believed to be related to a previous jam in number 2 hammer mill. Hot spots or embers may have been left from this jam which was cleared less than an hour before the incident.

[fire - consequence, damage to equipment, commissioning, solids processing equipment, hot surface]

---

**Lessons**

The investigation recommended inspection of the hammer mill to ensure that the blades were sharp and that the pusher mechanism was operating correctly.

There was also a recommendation to install additional emergency lighting and ventilation as spread of smoke hampered dealing with the incident.

---



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]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

**Location** : Gardaban Region, GEORGIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A main gas supply pipeline was blown up.

[sabotage, gas / vapour release]

---

**Lessons**

[None Reported]

---

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]

---

8508 08 February 1995

Source : LLOYDS LIST, 1995, FEB, 16.

Location : South China Sea, INDONESIA

Injured : 0      Dead : 0

---

**Abstract**

Oil field shut-in due to marine storage tanker drifted away from mooring buoy. Offshore.  
[storage tanks, inadequate mooring]

---

**Lessons**

[None Reported]

---

Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location : Kobe, JAPAN

Injured : 0      Dead : 0

---

**Abstract**

There have been notifications of plant damage in the area although the scale of this has yet to be fully established.  
[damage to equipment, earthquake]

---

**Lessons**

[None Reported]

---

**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]

---

Source : CHEMICAL HAZARDS IN INDUSTRY, JUNE 2000.

Location : , JAPAN

Injured : -      Dead : -

---

**Abstract**

Liquefied petroleum gas (LPG) leaked from a storage tank following an earthquake forcing the evacuation of nearby residents.

The leak rate increased with subsequent aftershocks. An investigation into earthquake prevention measures found that the leak came from the piping system connected to the tank.

[spill, storage tanks]

---

**Lessons**

The following recommendations were made for earthquake-resisting measures include:

Flexibility of high-pressure gas piping systems.

Improve planning layout.

Protection of auxiliary facilities and improvements in disaster prevention management and emergency response.

---

**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]

---



Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location : Putumayo, COLOMBIA

Injured : 0      Dead : 0

---

**Abstract**

Protestors set on fire 2 storage tanks having occupied pumping stations. Production reduced.

[vandalism]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

**Location** : Grozny, Chechnya, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Serious damage to refinery due to war conditions with risk of fire spreading to 5,000 tonne ammonia storage tanks.

[fire - consequence, damage to equipment, refining, civil war]

---

**Lessons**

[None Reported]

---

**6796 28 December 1994**

**Source :** LLOYDS LIST, 1994, 29 DEC.

**Location :** Maturin; Monogas, VENEZUELA

**Injured :** 15    **Dead :** 30

---

**Abstract**

A road transportation incident. Bus collision caused it to crash into two 12 inch fuel pipelines setting off an explosion. Fatality.

---

**Lessons**

[None Reported]

---

Source : SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

Location : Gazli, UZBEKISTAN

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Flow of gas was interrupted following pipeline blast. Terrorism suspected.

[spill]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1995, FEB.

**Location** : Louisiana, 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]

---

**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]

---

Source : HAZARDOUS CARGO BULLETIN, 1995, FEB.

Location :

Injured : 2      Dead : 0

---

**Abstract**

A rail transportation incident. Double stack train with 131 containers lost control in mountainous area and ran into the back of coal train and derailed. Fuel fire.  
[loss of control, fire - consequence, derailment]

---

**Lessons**

[None Reported]

---

6788 14 December 1994

Source : LLOYDS LIST, 1994, 31 DEC.

Location : , TURKEY

Injured : 0      Dead : 0

---

**Abstract**

Bomb explosion damaged crude oil pipeline.

[sabotage]

---

**Lessons**

[None Reported]

---



**Source :** SEDGWICK LOSS CONTROL NEWSLETTER, ISSUE 1, 1995.

**Location :** Monogas, VENEZUELA

**Injured :** 0      **Dead :** 27

---

**Abstract**

A road transportation incident. A bus ploughed into two buses on the side of a mountainous road, one of which had broken down, resulting in a collision with a 12 inch oil pipeline. The ensuing fire led to fatality. Oil supply to refining centres disrupted.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

Source : LOSS PREVENTION BULLETIN, 126, 3-6.

Location : ,

Injured : 13    Dead : 0

---

**Abstract**

A breakdown of operations occurred on plant which was caused by the bursting of an acrylic acid tank. This resulted in a large-scale fire fuelled by the escaping acrylic acid/polyacrylic acid. The polyvinyl alcohol storage facility nearby also caught fire

The following combination of events lead to the accident:

1. A power supply failure.
  2. External temperature of around 5 degrees C, with a north wind.
  3. The open-topped building.
  4. Crystallising out by the acrylic acid in both pipeline circuits.
  5. Warming-up and polymerisation caused by the pump working against a blocked delivery route.
  6. Thawing of the crystallised acrylic acid in the bypass pipeline.
  7. Transfer of polymers into the acrylic acid storage tank.
  8. Slow warming of the tank's contents by around 0.5 degrees C/hr due to the pump passing against a throttled valve,
  9. Ineffectiveness of the temperature monitoring system, since the large circulation pipeline remained blocked all the time.
- [cold weather, rupture, fire - consequence, polymerisation, chemical missing, instrumentation failure, temperature meter/control]

---

**Lessons**

The following safety procedures were introduced to avoid the reoccurrence of a similar incident:

1. A continuous independent temperature measurement of the tank contents will be provided.
  2. The circulation pump will be equipped with a temperature control safety switch.
  3. Safeguards put in place to ensure that temperatures in acrylic acid storage facilities and in rooms containing acrylic acid pipelines do not fall below a certain level. This will avoid crystallisation of the acrylic acid in the event of a power failure.
  4. Analytical surveillance will ensure that the inhibitor concentration within the acrylic acid does not fall below 200 ppm.
  5. A measuring device will be installed to monitor the throughput of the major pipework.
  6. An emergency reaction inhibition system will be installed.
-

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1995, JAN.

**Location** : Fawley; Hampshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Faulty coupling on loading arm at jetty caused spill of fuel oil.

[coupling failure]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1995, JAN.

**Location** : Hampshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A faulty coupling on loading arm at jetty caused small spill of fuel oil. Some beach pollution.

[coupling failure]

---

**Lessons**

[None Reported]

---

Source : HAZARDOUS CARGO BULLETIN, 1995, JAN.

Location : , BELGIUM

Injured : 0      Dead : 0

---

**Abstract**

A river transportation incident. Collision between tank lighter loaded with 2,200 tonnes benzene penetrated hull of vehicle carrier. Side water ingress and run aground to prevent sinking.

[ship ran aground]

---

**Lessons**

[None Reported]

---

6765 16 November 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1994.

**Location** : Cucuta, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

4000 bbl of crude oil spilled into a river after bombing of a pipeline.

[terrorism]

---

**Lessons**

[None Reported]

---

6763 14 November 1994

Source : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1994.

Location : Grozny, RUSSIA

Injured : 0      Dead : 0

---

**Abstract**

2000 cum oil storage tank destroyed by plastic explosive.

[terrorism]

---

**Lessons**

[None Reported]

---

6756 07 November 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1994.

**Location** : White Tiger, VIETNAM

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. The anchor of a vessel damaged an undersea gas pipeline.  
[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---



6754 05 November 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1995, JAN.

Location : , MALACCA STRAITS

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Due to a navigation error a marine tanker hit rocks, causing a spill of palm oil to the sea from holed tank.

---

**Lessons**

[None Reported]

---

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1995, JAN.

Location : Onitsha, NIGERIA

Injured : 0      Dead : 60

---

**Abstract**

A road transportation incident. A bus was in collision with a road tanker of fuel oil in a remote area and caught fire. Fatality.

---

**Lessons**

[None Reported]

---

6747 31 October 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1995, JAN.

**Location** : Trebister Ness; Shetlands, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Fish factory grounded, broke in two, fuel oil spilt and ammonia from refrigeration unit released.

[marine transportation, ship ran aground, spill, gas / vapour release]

---

**Lessons**

[None Reported]

---

6742 24 October 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, OCT.

Location : Terengganu, MALAYSIA

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A lorry was in collision with a road tanker causing a spill of gasoline which ignited and destroyed shop and house.

---

**Lessons**

[None Reported]

---

**Source :** NEWSGRID

**Location :** Houston; Texas, USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Debris coming down a swollen river caused 3 breaks that spewed about 1.2 million gallon of gasoline and oil into the burning river. Probably 5 pipelines ruptured.

[spill, explosion, fire - consequence, flood]

---

**Lessons**

[None Reported]

---

**6739 21 October 1994**

**Source :** LLOYDS LIST, 1994, 22 OCT., 25 OCT, & 4 NOV.

**Location :** San Jancinto River; Houston; Texas, USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A 40 inch gasoline pipeline ruptured in morning and a 36 inch fuel oil pipeline shortly afterwards. Fire burnt out. Failure of pipeline believed to be due to flood water loosening anchor points or heavy object released by flood striking pipeline.

[spill]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1994.

**Location** : Cedar Bayou; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Texas floods caused plant shutdown at a site involving ethylene and polyethylene plants and general utilities. Flood water breached bund walls, dykes, and inundated substation, control room and offices.

[processing]

---

**Lessons**

[None Reported]

---

Source : LOSS PREVENTION BULETIN, 129, 9.

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

Heavy rains, amounting to approximately 65 cm, resulted in extensive flooding from the surface water as well as overflowing streams. Most of the water that flooded this 90-acre plant. Flood water covered the entire plant in depths ranging from 60 to 150 cm.

Plant management anticipated the flooding and was successful in shutting down all six process units in an orderly manner. Additionally, plant personnel were successful in relocating the smaller and lighter property items to higher ground. This effort notwithstanding, the flood waters caused extensive damage, mainly to computers, electrical substations, switchgear, pumps, motors and buildings. At least 350 electric motors varying in size from 5 to 20 horsepower were completely submerged and required replacement, while the larger electric motors up to 1,500 horsepower were disassembled, baked out, and repaired.

The plant was shut down for approximately two months as a result of this flooding. During this period, the ethylene, polyethylene, olefins, and acetylene black production was shut down, resulting in a business interruption loss estimated at \$85,000,000 (1994).

[damage to equipment]

---

**Lessons**

[None Reported]

---



6732 17 October 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, OCT.; LLOYDS LIST, 1994, 6 DEC.

**Location** : Off Kainan City; Wakayama, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker was in collision with another tanker causing a hole below waterline, a spill of crude oil and severe pollution

**Lessons**

[None Reported]

---

6727 14 October 1994

**Source** : LLOYDS LIST, 1994, 8 NOV, & 19 NOV.

**Location** : Vung Tau, VIETNAM

**Injured** : 0      **Dead** : 0

---

**Abstract**

An anchor of a vessel damaged a 67 mile undersea gas pipeline. Rupture occurred between 14th and 22nd october.  
[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---

6726 14 October 1994

Source : LLOYDS LIST, 1994, 17 OCT.

Location : , OFF NORTHERN PORTUGAL

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A spill of 2000 tonnes of crude oil occurred when a marine tanker holed on rocks. 80000 tonnes transferred to another tanker.

[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1994.

**Location** : Aguazul Casanare, COLUMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

2 production stations blown up by terrorists. The blast set ablaze some large crude oil storage tanks.

[terrorism, fire - consequence]

---

**Lessons**

[None Reported]

---

Source : PROCESS SAFETY PROGRESS, VOLUME 16, NO.1, GLENN E MAHNKEN, MICHEAL T ROOK.

Location : , USA

Injured : 0      Dead : 0

### Abstract

A fire consumed the titanium tube bundle of a steam turbine condenser during demolition work in a decommissioned power plant. The titanium fire is believed to have initiated by contact with hot steel slag from torch cutting which was being conducted to remove sections of the steel condenser casing above the tube bundle. The approximately 25 ft long bundle was essentially consumed end-to-end, including the tube sheets.

A fire watch had stationed as part of the plant's Hot Work Permit System, but the initial phase of the fire was obscured from view. Workers reported a bright yellow low flame coming from inside the south end of the tube bundle. Water application on the fire by workers and the local fire department was followed by explosions within the tube bundle and discharge pipes. Fortunately, no injuries or property damages occurred from this incident.

[fire - consequence, hot work, hot surface]

### Lessons

Conclusions and Recommendations:

1. Titanium is a known "combustible" metal, but fire experience is mainly with chips, fines and powders. Ignition of a self-propagating tube bundle fire during torch or arc cutting is a less frequent type of fire, but such fires can have severe consequences. Ignition appears to occur by development of a "hot spot", either directly by contact with the torch, or indirectly via heat transfer from accumulating hot steel slag particles. The hot spot develops into a self-sustaining fire due to the close spacing of the tubes in the bundle.
2. There is a risk of subsequent explosions if water is applied to extinguish heat exchanger fire.
3. Prevent, prevent, prevent. Before performing any hot work on a heat exchanger, the materials of construction must be verified, in addition to other standard hot work precautions. If titanium tubes are present, hot work must not be allowed unless the tubes are first removed mechanically.
4. Heat exchangers containing titanium tubing must be labelled to that effect, with a hot work fire hazard notice posted on the unit.
5. Hot work permits in use in plants where titanium could be present is to contain a specific check box to confirm that no "combustible metals" are present in the work area.
6. Persons involved in hot work and emergency organisation personnel to be trained to recognise metal fires and to use proper metal fire extinguishers (if safe to do so).
7. A co-operative, aggressive and co-ordinated effort by all parties involved in the incident and the loss investigation helped to expedite the determination of the cause and the necessary measures to prevent a recurrence.

6663 14 August 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, OCT.

Location : Tbilisi, GEORGIA

Injured : 16    Dead : 24

---

**Abstract**

A rail transportation incident. A passenger train was in collision with a freight train causing a spill of 3200 tonnes of fuel oil. [fatality, injury]

---

**Lessons**

[None Reported]

---

6662 10 August 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1994.

**Location** : La Plata, ARGENTINA

**Injured** : 0      **Dead** : 0

---

**Abstract**

1.7 million litres of lubricating oil spilled as a result of suspected sabotage.

---

**Lessons**

[None Reported]

---

6656 07 August 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, OCT.; LLOYDS LIST, 1994, 9 AUG.

Location : North Bay; Ontario, CANADA

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. A train hit gravel truck on level crossing. 1 of 12 rail tankers ruptured causing a spill of sulphuric acid.  
[collision]

---

**Lessons**

[None Reported]

---



6651 01 August 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1994.

**Location** : Corpus Christi; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker damaged fender at a marine terminal causing a spill of 35 tonnes fuel oil.  
[collision]

---

**Lessons**

[None Reported]

---

**Source :** ICHEME**Location :** ,**Injured :** 0     **Dead :** 0

---

**Abstract**

Fire at crude unit pump on a refinery. During flushing of the coil in a cooler box, a coupling associated with a temporary pump installation, failed, and resulted in release of LGO. A fire started before any action could be taken to stop the release. There was damage to equipment and product loss. It was found that previous attempts to use the pump had resulted in failure, these were repaired but not reported. The cause was the pump being run beyond its design capabilities. In addition the maintenance leader had no intimate knowledge of the equipment to be used consequently inadequate instruction was provided, suppliers were aware that this equipment had not been used on this duty before on a "live" process unit; but they did not discuss this aspect.  
[coupling failure, design or procedure error, fire - consequence, refining, temporary equipment]

---

**Lessons**

Use of temporary equipment (such as pumps) needs careful consideration and approval as to its design, suitability, and any risk it could present as a potential ignition source.

---

Source : ENDS REPORT, 1996, JUN.

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

Gas oil mist released from a temporary pump caught fire after coming into a contact with a pipe at 300 degrees C. The damage was estimated at £750,000 (1994) and cost £2,000,000 (1994) in lost production.

[fire - consequence, damage to equipment, product loss, hot surface]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A fire broke out on a crude oil distillation unit at a refinery. A release of crude oil had occurred during maintenance work on a desalter, and the oil is thought to have ignited from an adjacent furnace.

The site emergency services were quickly at the scene and the fire was extinguished by 15:55 hours. There were no injuries sustained. Damage was confined to cabling and instrumentation, the unit being shut down with an estimated start-up date of early August.

During previous shifts the relief valves (RV) on the desalter unit were being prepared for on-line testing. The desalter is fitted with two 100 percent capacity RVs, one of which is in service at a time. The procedure on the 28th required changeover of the in-service RV and verification of the integrity of both the RV isolation valves and the balanced bellows unit integral to each RV. The equipment is located on an elevated platform at about 50 feet above grade. The RVs are designed to handle hot crude feed relief from the desalters (operating conditions approximately 9.5 barg and 140 degrees C) to the unit main fractionator column. In the process of isolation valve integrity checks, a hose was fitted to a three quarter inch drain point and led to a drain at ground level.

During the work an isolation valve was opened while the drain valve was 25 percent open, and the desalter began to discharge liquid to drain. Because the exit point of the hose was not visible from the platform, the discharge was not detected by those involved. The liquid discharge formed a pool and a flammable vapour cloud developed. The vapour cloud ignited, with a flash fire, followed by a pool fire. Calculations based on pool size and the distance from the release point to the lower flammable limit of the cloud indicated that the most likely source of ignition was from the crude oil charge furnace. The hose burned back to the drain point on the elevated platform resulting, in a torch fire at the drain point, it was, however, fortunate that the torch was directed into space and did not impinge on equipment.

The ground fire was extinguished within 12 minutes. The strategy adopted towards the torch fire was to cool adjacent equipment and remove the feed to the fire. This was accomplished, and the fire extinguished within 22 minutes.

[fire - consequence, hot surface, spill, damage to equipment, design or procedure error]

---

**Lessons**

The following recommendations were made:

1. It is essential that when equipment/plant of any type is opened up, i.e., containment broken, that adequate measures are taken to prevent unwanted release of contents from associated parts of the system.
  2. Measures to include not only adequate work procedures, but also monitoring of site conditions throughout the work by "responsible" personnel.
  3. When draining vessels to open drains the outlet point from drain hoses should be within view of those involved in the operation.
-

6643 25 July 1994

**Source** : LLOYDS LIST, 1994, 2 AUG.

**Location** : Marathon; Texas, USA

**Injured** : 0      **Dead** : 4

---

**Abstract**

A rail transportation incident. Two trains were in collision causing a spill of diesel that caught fire. None of the hazardous chemicals were involved in the fire. Fatality.

---

**Lessons**

[None Reported]

---

6635 17 July 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, SEP.; LLOYDS LIST, 1994, 21 JUL.

**Location** : Rio Blanco; Vera Cruz, MEXICO

**Injured** : 25    **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker truck was in collision with a passenger train at a crossing and led to spillage of 5283 gallons of caustic soda.  
[sodium hydroxide, injury]

---

**Lessons**

[None Reported]

---

6618 05 July 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1994.

**Location** : Antwerp, BELGIUM

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. An LPG marine tanker destroyed a jetty during berthing and damaged pipelines. Gas escaped but did not ignite.  
[collision, damage to equipment]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, AUG.

**Location** : Off Kithira Islands, GREECE

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker with 4200 tonnes of caustic soda grounded. No spillage. Near miss.  
[sodium hydroxide, ship ran aground]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, AUG.

**Location** : Thetford; Norfolk, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker overturned at a roundabout and 5000 litres of diesel oil was spilled from 1 of 4 compartments. No spill to river.

**Lessons**

[None Reported]

---

6572 28 May 1994

**Source** : LLOYDS LIST, 1994, 31 MAY.

**Location** : Houston Ship Canal; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision of 2 barges with marine tanker. Small oil spill.

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1994.

**Location** : Pasadena; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A small fire broke out on oil soaked insulation in a delayed coker unit.

[lagging fire, processing]

---

**Lessons**

[None Reported]

---

6554 14 May 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JUL.

**Location** : , ENGLISH CHANNEL

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. 3 of 8 containers of chemicals lost overboard after collision.

[spill, unknown chemicals]

---

**Lessons**

[None Reported]

---

6552 12 May 1994

Source : HAZARDOUS CARGO BULLETIN, 1994, 12 MAY.

Location : Queretaro, MEXICO

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. Collision between 2 freight trains hauling wheat and acid. Acid tankers remained intact.

---

**Lessons**

[None Reported]

---

6549 10 May 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, AUG.

**Location** : Dhandi, PAKISTAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

Collision on level crossing when express train hit a road trailer taking drilling rig to new location. Truck and rig destroyed.  
[damage to equipment, transportation]

---

**Lessons**

[None Reported]

---

6545 09 May 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JUL.

**Location** : Neuengamme, GERMANY

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. Collision of 2 river tankers in fog caused 100 000 litres of gasoline to spill into a river.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JUL.

**Location** : Strait Of Malacca, MALAYSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision of a marine tanker with a bulk carrier in a thunderstorm led to the tanker being holed in 2 tanks and 400 tonnes of jet fuel and gas oil to be spilled to the sea.

[weather effects]

---

**Lessons**

[None Reported]

---



6543 09 May 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1994.

**Location** : Mekong River, VIETNAM

**Injured** : 3      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision between 2 marine vessels caused a spill of 200 tonnes of crude oil.

---

**Lessons**

[None Reported]

---

6540 08 May 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JUL.

**Location** : Long Tau River, CHINA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision of a marine tanker with a container ship led to a spill of 200 tonnes of fuel oil.

---

**Lessons**

[None Reported]

---

6521 23 April 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1994.

**Location** : Nagaland, INDIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Operations were temporarily stopped when exploration drilling crew were kidnapped by a militant group.

[terrorism]

---

**Lessons**

[None Reported]

---

6522 23 April 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1994.

**Location** : Viljoensdrift, SOUTH AFRICA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Bomb attack on a diesel pipeline. Explosion led to a fire that blazed for 5 hours.

[fire - consequence, sabotage]

---

**Lessons**

[None Reported]

---

6520 21 April 1994

**Source** : LLOYDS LIST, 1994, 25 APR.

**Location** : Sasolburg; Johannesburg, SOUTH AFRICA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Explosion blasted a diesel oil pipeline. Cause terrorism.

---

**Lessons**

[None Reported]

---

6518 20 April 1994

**Source** : LLOYDS LIST, 1994, 2 APR.

**Location** : Gulf Of Suez, EGYPT

**Injured** : 4      **Dead** : 0

---

**Abstract**

An offshore oil platform caught fire and was destroyed after cargo vessel collided with it.

[collision, fire - consequence]

---

**Lessons**

[None Reported]

---

6512 16 April 1994

**Source** : LLOYDS LIST, 1994, 18 APR.

**Location** : Cork Harbour, IRELAND

**Injured** : 0      **Dead** : 0

---

**Abstract**

Natural gas pipeline damaged by vessel which dragged pipeline 25 m across the seabed. Possibly caused by an anchor.  
[marine vessel snagged pipeline, damage to equipment]

---

**Lessons**

[None Reported]

---

6499 09 April 1994

**Source** : LLOYDS LIST, 1994, 11 APR.

**Location** : Mesana; Gujarat State, INDIA

**Injured** : 6      **Dead** : 3

---

**Abstract**

A terrorist bomb attached to a pipe caused an explosion on this state-owned oil rig.

[terrorism, processing]

---

**Lessons**

[None Reported]

---



**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1994, FEB.

**Location** : La Esmeralda; Arauquita; Arauca, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A crude oil pipeline was bombed for 13th time.  
sabotage, explosion]

---

**Lessons**

[None Reported]

---

6485 31 March 1994

Source : LLOYDS LIST, 1994, 1 APR.

Location : , GULF OF OMAN

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. 2 marine tankers were in collision resulting in an oil spillage of 7000 tonnes. No fire.

---

**Lessons**

[None Reported]

---

6479 24 March 1994

Source : THE CHEMICAL ENGINEER, 1994, 31 MAR.; EVENING MAIL, 1994, 25 MAR.

Location : Durham Woods; Edison; New Jersey, USA

Injured : 50    Dead : 1

---

**Abstract**

Explosion of an underground natural gas pipeline caused massive flames which were seen 50 miles away. Pipeline installed at a depth of 2.5 metres and now found to have 5-7 metres of earth covering it. 50 m crater left. An investigation revealed that the pipeline had been gouged by excavation damage. The mechanically induced gouge probably produced a crack that grew to critical size most likely as a result of metal fatigue.

Fatality.

[fire - consequence]

---

**Lessons**

Install retrospectively automatic or remotely operated isolation valves where high pressure pipelines enter and leave urban areas.

Aerial surveillance procedure inadequate as it did not require the identification of excavation activities within industrial locations.

---

6466 17 March 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1994.

**Location** : Batman, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

Fire started by terrorists at gas processing unit.

[fire - consequence, terrorism]

---

**Lessons**

[None Reported]

---

6460 14 March 1994

**Source** : THE GUARDIAN, 1994, 15 MAR.; HAZARDOUS CARGO BULLETIN, 1994, APR., 80.

**Location** : Bosporus, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision of marine tanker of crude oil with freighter led to explosion and fire.

[fire - consequence]

---

**Lessons**

[None Reported]

---

6448 04 March 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1994.

**Location** : North Sea, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Smoke alarm due to smouldering lagging on a fuel gas heater on an offshore platform.

[lagging fire]

---

**Lessons**

[None Reported]

---

6420 14 February 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, APR.

Location : , OFF DUTCH COAST

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Steering fault in heavy swell, 21 containers lost overboard, 4 with chemicals sank in 45 m of water.  
[spill, weather effects, steering failure]

---

**Lessons**

[None Reported]

---

6419 13 February 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, APR.

Location : Sukai Off, JAPAN

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Collision between inbound vessel and marine tanker with 499 tonnes of ethyl acetate. No spillage.  
[damage to equipment]

---

**Lessons**

[None Reported]

---



6416 10 February 1994

Source : LLOYDS LIST, 1994, 11 FEB.

Location : Ulyanovsk, RUSSIA

Injured : 1      Dead : 0

---

**Abstract**

A bulldozer excavating along a pipeline caused an explosion and fire.

[bulldozer/JCB/digger, fire - consequence, excavation damage]

---

**Lessons**

[None Reported]

---

6415 08 February 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAY. 5-94

Location : Suez Canal, EGYPT

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A marine tanker grounded after collision with ferry. 3000 tonnes of liquid cargo transferred.  
[damage to equipment]

---

**Lessons**

[None Reported]

---

6408 04 February 1994

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, APR.

Location : Mutsure Off, JAPAN

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Collision between a cargo vessel and marine tanker with methyl methacrylate and trichlorethylene. No spillage.  
[near miss]

---

**Lessons**

[None Reported]

---

6400 31 January 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1994.

**Location** : Cizre, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

Sabotage occurred to a major crude oil pipeline close to the town. 50000 barrels of oil was spilled.

---

**Lessons**

[None Reported]

---

6392 25 January 1994

Source : LLOYDS LIST, 1994, 11 FEB.

Location : Whiting; Indiana, USA

Injured : 0      Dead : 0

---

**Abstract**

3 fires in the space of 17 hours knocked out production. Severe weather conditions caused freezing of pipes and subsequent cracking of pipes.  
[weather effects, fire - consequence, processing]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , USA

Injured : 0      Dead : 0

---

**Abstract**

A section of utility piping failed in a new distillate desulfurization unit at a refinery. The failure was as the result of internal overpressure generated from water freezing in a dead leg section of piping.

There was a release of hot product from the stripper section of the hydrotreater. The resulting vapour cloud ignited, and fire damage to nearby equipment released additional hydrocarbon.

The fire was brought under control in approximately one hour, and it was extinguished in 2 hours.

There were no injuries to personnel. Although the unit was quickly isolated, there was extensive damage to pumps, several air coolers, analysers, instrumentation, electrical conduits, and process piping. Direct damage to the unit was \$5.9 million (1994), and the unit was down for 52 days.

The dead leg piping was a result of improper piping design and inexact project execution.

[overpressurisation, cold weather, mechanical equipment failure, vapour cloud explosion, gas / vapour release, damage to equipment, design or procedure error, fire - consequence, processing]

---

**Lessons**

1. Ensure that design teams identify expertise needed at an early stage; e.g., cold weather design experience was needed.
  2. Resolve HAZOP issues, not items, making sure that the group which resolves actions communicates back to the HAZOP team, to ensure that true concerns are adequately addressed.
  3. The Pre-Startup Safety Review (PSSR) should not only verify installation detail but that systems will function as intended. Piping configurations and other construction detail can sometimes cause systems to work poorly, or not as designed.
  4. Ensure that new plant has an adequate provision of fire protection, both in terms of equipment and emergency response.
-

6385 18 January 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.

**Location** : Northridge; California, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. An earthquake caused derailment of a freight train and one tanker of sulphuric acid leaked.

[spill]

---

**Lessons**

[None Reported]

---

6384 18 January 1994

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1994.

**Location** : Cesar, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Crude oil pipeline sabotaged and around 5000 barrels of oil were spilled and subsequently ignited.

[fire - consequence]

---

**Lessons**

[None Reported]

---



**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1994.

**Location** : Los Angeles; California, USA

**Injured** : 1      **Dead** : 0

---

**Abstract**

Four breaks occurred in a 10 inch crude oil pipeline system causing a spill leading to pollution and property damage following an earthquake. The pipeline was not in operation at the time but company spending \$20 million (1994) on clean up. Pipeline may not be used again.

---

**Lessons**

[None Reported]

---

6381 12 January 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.

**Location** : Rotterdam, NETHERLANDS

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. Collision between river tanker with 1050 tonnes of gasoline and a cargo ship led to a gasoline spill into a river.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.; LLOYDS LIST, 1994, 10 JAN., & 11 JAN.

**Location** : Lesanthe, ZIMBABWE

**Injured** : 5      **Dead** : 0

---

**Abstract**

A rail transportation incident. Train loaded with 1.5 million litres of gasoline and diesel in 29 wagons was in collision with another train and burst into flames. 11 rail tankers were saved. Fire controlled after 9 hours.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

6371 07 January 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.; LLOYDS LIST, 1994, 8 JAN.

**Location** : Condado Beach, PUERTO RICA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A spill of 29000 gallons of no. 6 fuel oil occurred from a barge transporting 1.5 million gallons when it broke loose from tow and ran aground.

[ship ran aground]

---

**Lessons**

[None Reported]

---

6370 06 January 1994

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, APR.

**Location** : Yangtze River, CHINA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine vessel was in collision with an oil tanker. Series of explosions and fire burned for 20 hours. Tanker sank with 500 tonnes of oil residue on board.

---

**Lessons**

[None Reported]

---

124091994

Source : ICHEME

Location : ,

Injured : 2      Dead : 0

---

**Abstract**

A fire occurred on one of the charge pumps of the debutaniser section of a hydrocracker unit, resulting in severe damage to pumps, heat exchanger, air coolers, surrounding pipework, steel structure and the debutaniser column.

The cause of the fire was attributed to failure of the screwed drain connection of the pump casing.

Fortunately, there were no severe casualties, and only two minor injuries occurred during the fire-fighting operation. Repairs took six months to complete and cost approximately USD 7.5 million (1994).

The cause:

It was found that, in addition to the blown-out pump drain, some process lines had ruptured and a number of flanges had failed. However, since these lines and flanges showed no signs of significant corrosion, it was concluded that their failure was due to the heat of the fire.

[fire - consequence, damage to equipment, material of construction failure, flange failure, hot surface, injury]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.

**Location** : Off Nuavitas, CUBA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A gas carrier with ammonia grounded when leaving port. Cargo transferred and refloated. Near miss.  
[ship ran aground]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , FRANCE

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. 24 rail tankers imported into site derailed due to broken rail. 2 rail tankers fell down and severely damaged fuel gas supply pipeline to the site. One rail tanker leaked causing a spill of dichloroethane. The gas supply pipe did not leak.  
[rail broken, damage to equipment]

---

**Lessons**

[None Reported]

---



6347 19 December 1993

**Source** : LLOYDS LIST, 1993, 23 DEC.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JAN.

**Location** : Bay Lake; Latchford; Ontario, CANADA

**Injured** : 1      **Dead** : 0

---

**Abstract**

A road transportation incident. A spill of 11000 litres of aluminium sulphate occurred when 2 road tankers were in collision on a highway.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.

**Location** : Rio De Janeiro, BRAZIL

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker grounded with 200 tonnes lube oil additive and 500 tonnes brake fluid. Transferred to another tanker with no spillage.

[near miss, ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JAN.

**Location** : Channel Islands, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Ro-ro with steering fault and onboard spillage of 3 tonnes of sodium hydroxide returned to port.

[steering failure]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1993.

**Location** : El Tarra; Norte De Santander, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Pipeline ruptured by explosive for second time in a week by terrorists causing 10000 bbl of crude oil to spill into a river creating an oil slick 20 km long. 37 bombings on pipeline in 1993.

[terrorism]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1993.

**Location** : Buchan A; North Sea, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Floating production offshore platform shut down operations when a windward anchor cable failed in 50 knot storm winds. One day interuption resulted.  
[strong winds, plant shutdown]

---

**Lessons**

[None Reported]

---

6317 25 November 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, MAR.; LLOYDS LIST, 1994, 11 JAN.

**Location** : Pavlodar, KAZAKHSTAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A fire destroyed a refinery when a pipe ruptured in cold weather and released gasoline onto hot water equipment which then ignited.

[fire - consequence, refining]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, JAN.; LLOYDS LIST, 1993, 25 NOV.

**Location** : Jiddah Island, BAHRAIN

**Injured** : 0      **Dead** : 0

---

**Abstract**

About 3000 bbl crude oil spilled from a pipeline supplying a refinery after impact by a barge. An adjacent line was put into operation immediately avoiding refinery throughput loss.

[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---

6300 16 November 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, FEB.

Location : Rauma, FINLAND

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A marine tanker grounded and refloated. Cargo of ethylene glycol transhipped. Near miss.  
[ship ran aground]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, FEB.

**Location** : Ressons-sur-matz, FRANCE

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker of mono propylene glycol overturned after collision with heavy goods vehicle. Tanker contents remained intact. Near miss.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, FEB.

**Location** : Glen, FRANCE

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. Collision at level crossing in central France between passenger train and road tanker which fractured causing a spill of 16000 litres of fuel oil.

[rail transportation,

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1994, JAN., 74.; LLOYDS LIST, 1993, 12 NOV.

**Location** : South West, FRANCE

**Injured** : 50    **Dead** : 15

---

**Abstract**

A road transportation incident. A collision involving a road tanker of methanol on a motorway led to a fire that engulfed cars in a pile up. Fatality.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, FEB.

**Location** : Kelso; Washington, USA

**Injured** : 0      **Dead** : 5

---

**Abstract**

A rail transportation incident. Explosion and fireball after head on collision in fog between two freight trains. 32 of 193 tank wagons overturned. Diesel/fuel oil ignited. Fatality.

---

**Lessons**

[None Reported]

---

6265 20 October 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1994, FEB.

Location : Lechang, CHINA

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. Derailment of train caused rail tanker wagons to overturn and sulphuric acid to spill.

---

**Lessons**

[None Reported]

---

6264 19 October 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, DEC.

Location : Uzhgorod, UKRAINE

Injured : 0      Dead : 0

---

**Abstract**

Oil thieves reported as having left pipeline valve open and 65 tonnes of diesel was spilled to a river.

[sabotage]

---

**Lessons**

[None Reported]

---

6252 02 October 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, DEC.

Location : Felling; Tyne And Wear, UK

Injured : 0      Dead : 0

---

**Abstract**

Forklift truck punctured 2 drums of ethylamine causing a spill. Fumes spread through storage depot.

[collision]

---

**Lessons**

[None Reported]

---

6249 01 October 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, DEC,

**Location** : Off Daesan, SOUTH KOREA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker grounded on approach to a terminal. Bottom damaged and 8400 tonnes of naphtha spilled to sea.  
[ship ran aground]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1999, DEC.; LLOYDS LIST, 1993, 29 SEP., & 30 SEP.

**Location** : Temara, MOROCCO

**Injured** : 103 **Dead** : 14

---

**Abstract**

A rail transportation incident. Collision of passenger train and freight train carrying naphtha caused fire. Fatality.  
[fire - consequence, injury]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, DEC.

**Location** : Off Yosu, SOUTH KOREA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision between loaded ship and towed bunker barge. 1000 tonnes of oil spilled to sea from holed barge.

---

**Lessons**

[None Reported]

---

6223 14 September 1993

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Barrancabermeja, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Considerable spill of crude oil into nearby river after terrorism attack on a pipeline.

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Rotterdam, NETHERLANDS

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. 50% of jetty disappeared following collision by a marine tanker.

---

**Lessons**

[None Reported]

---

**6202 25 August 1993**

**Source** : LLOYDS LIST, 1993, 26 AUG.

**Location** : Nurdagi, TURKEY

**Injured** : 23    **Dead** : 6

---

**Abstract**

Earth moving vehicle struck crude oil pipeline while constructing road and ruptured pipeline. Fatality.  
[excavation damage]

---

**Lessons**

[None Reported]

---

6191 17 August 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, OCT.

**Location** : Off Toulon, FRANCE

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Bow of rising submarine hit marine tanker and caused spillage of 2800 tonnes of crude oil.  
[collision]

---

**Lessons**

[None Reported]

---

6189 16 August 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, OCT.

Location : Nr Cherepovets, RUSSIA

Injured : 0      Dead : 0

---

**Abstract**

A river transportation incident. Collision in river between 2 tank barges caused the spillage of 37 tonnes of gas oil.

---

**Lessons**

[None Reported]

---

**6185 10 August 1993**

**Source :** LLOYDS LIST, 1993, 13 AUG.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, OCT.

**Location :** Tampa Bay; Florida, USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A river transportation incident. Collision between inbound pusher tugs and tank barges with 1670 tonnes of jet fuel engulfed in flames and ablaze for 14 hours. Subsequently barge carrying 6000 tonnes of phosphates hit barge and 70 tonnes of fuel oil spilt.

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, OCT.

**Location** : Icklingham; Thetford; Norfolk, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A lorry carrying 45 drums of desalination chemical overturned on trunk road. Firemen using breathing apparatus cleared chemicals.

[spill]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Georgia, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Incident on a natural gas pipeline due to terrorism.

---

**Lessons**

[None Reported]

---

6178 04 August 1993

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Remedios; Antioquia, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A spill of 3000 barrels of crude oil, causing serious ecological damage, occurred due to terrorism.

---

**Lessons**

[None Reported]

---

6176 02 August 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, SEP.

**Location** : St Louis; Missouri, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Floods loosened 50 propane storage tank foundations at tank farm, causing vapours to leak from the pipe connections. Flash fire led to the evacuation of 11 500 people.

[gas / vapour release]

---

**Lessons**

[None Reported]

---

6161 26 July 1993

**Source** : FIRE, 1993, SEP.

**Location** : Cheshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. Rail tankers of gasoline were being reversed and hit buffers. Two tankers overturned into a river but did not leak. Damage caused to nitrogen pipeline and signal box.

---

**Lessons**

[None Reported]

---

6159 24 July 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, SEP.

**Location** : Paramaribo, SURINAM

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision caused spillage of 27 tonnes of crude oil.

---

**Lessons**

[None Reported]

---

6158 23 July 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, SEP.

**Location** : Off Shimoda, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision between a loaded vehicle carrier and oil marine tanker caused a spill of 500 tonnes of heavy oil.

---

**Lessons**

[None Reported]

---

6157 22 July 1993

**Source** : LLOYDS LIST, 1993, 2 AUG.

**Location** : St Paul; Minnisota, USA

**Injured** : 11    **Dead** : 2

---

**Abstract**

A natural gas pipeline was ruptured by a backhoe during routine sewer work. Fatality.

[damage by backhoe]

---

**Lessons**

[None Reported]

---



6148 12 July 1993

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Arauquita; Arauca, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

An act of terrorism caused a spill of crude oil from a pipeline.

---

**Lessons**

[None Reported]

---

6142 05 July 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, SEP.

**Location** : Off Marsa El Brega, LIBYA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Fully refrigerated LPG marine tanker carrier loaded with anhydrous ammonia grounded. Ship offloaded to another ship and refloated.

[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1993.

**Location** : Barzan Oilfield, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

Fire after an explosion in floating roof tank of crude oil destroyed 2 tanks.

[terrorism, storage]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A marine tanker (dwt 2,180 tonnes) was approaching to berth in order to discharge its cargo to an installation via the 12 inch product line.

The tanker dropped anchor and was manoeuvring to tighten the ropes on the buoys. At the time, a strong wind blowing West-East, (25-31 mph), which caused the tanker to drag on its anchor and the Pilot decided to abandon the berth.

While doing this, either the anchor entangled with the 12 inch line (crude oil/black products) or the marking buoy got entangled with the propeller with the result that six flexible hoses and couplings from the line broke off and 5-10 m of oil product entered the sea.

At 18.30 hours it was found that oil had polluted part of the beach. At 19.00 hours the spill was sprayed with oil dispersant on sea and land. Cleaning operations continued through the next day.

Estimated cost of the incident was C£60,500 (approximately US\$120,000) (1993), which includes clean up costs - C£15,000 (1993), ship fine - C£3,000 (1993), repair to pipeline - C£16,000 (1993) and demurrage (delayed crude oil ship) - C£26,500 (1993).

[shipping incidents, strong winds, pollution, ecological damage]

---

**Lessons**

[None Reported]

---

6111 09 June 1993

**Source** : LLOYDS LIST, 1993, 10 JUN.

**Location** : Gateshead; Tyne And Wear, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Terrorist attack caused an explosion of a natural gas storage tank.

[terrorism]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1993, FEB.

**Location** : Padilla, BOLIVIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Terrorist attack led to an explosion. Substance involved crude oil.

[sabotage]

---

**Lessons**

[None Reported]

---

6098 03 June 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUL.; CIVIL PROTECTION, 1993, AUTUMN

**Location** : Antwerp, OFF BELGIUM COAST

**Injured** : 0      **Dead** : 9

---

**Abstract**

A marine transportation incident. 2 ships were in collision in thick fog. The tanker carrying 24000 tonnes of gasoline burst into flames but the cargo ship limped into port. Fatality.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

6094 01 June 1993

**Source** : LLOYDS LIST, 1993, 9 JUL.

**Location** : Owosso; Michigan, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Fire in plastic bumper factory attributed to arson.

[fire - consequence]

---

**Lessons**

[None Reported]

---



Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Damage to marine crude oil pipeline.

Strong winds caused a marine tanker to move, dragging its anchor. The anchor became entangled with other underwater lines, with an end result of six flexible hoses being broken and 5-10 m3 of LFO entering the sea. Spill.

Repairs to pipeline, demurrage, clean up costs, ship's fine C £60,500 (1993) (\$120,000) (1993).

[damage to equipment]

---

**Lessons**

Periodic sea bed surveys need to be conducted at anchor drops to determine if the soil will hold the anchor reliably.

Weather is another element in an operation that needs to be monitored.

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, AUG.

**Location** : Moscow, RUSSIA

**Injured** : 0      **Dead** : 11

---

**Abstract**

A road transportation incident. Container lorry crashed into road tanker spilling fuel oil which ignited and set alight 3 trolley buses. Fatality.  
[collision]

---

**Lessons**

[None Reported]

---

6085 31 May 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUL.

**Location** : Off Shiogama, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. 500 tonnes spillage of heavy oil from a marine tanker after collision.

---

**Lessons**

[None Reported]

---

6082 27 May 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUL.

**Location** : Flushing, NETHERLANDS

**Injured** : 0      **Dead** : 0

---

**Abstract**

A barge was in collision with a marine gas carrier loading butane at a refinery. Gas tanker holed aft. Loading completed without further incident.  
[marine transport]

---

**Lessons**

[None Reported]

---

6070 11 May 1993

**Source** : LLOYDS LIST, 1993, 28 MAY.

**Location** : Kaohsiung, TAIWAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

Pipeline ruptured by construction work causing spillage of 1500 gallons of oil.  
[excavation damage]

---

**Lessons**

[None Reported]

---

6061 02 May 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUL.

Location : , EAST CHINA SEA

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Loaded chemical tanker which was in collision with a research vessel which sank.

---

**Lessons**

[None Reported]

---

6058 01 May 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUL.

**Location** : Off Worthing; Sussex, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision in fog and bow penetrated marine tanker below waterline leading to a spill of tonnes of lubricating oil.

---

**Lessons**

[None Reported]

---

6054 May 1993

**Source** : LLOYDS LIST, 1993, 13 JUN.

**Location** : Widuri Fields, JAVA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Rupture of subsea pipeline when a tanker barge snagged a support line caused a spill of less than 100 barrels of waxy crude oil.  
[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JUN.

**Location** : Busan, SOUTH KOREA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Coastal marine tanker with 690 tonnes of bunker oil ran aground and sank.

[ship ran aground, sinking]

---

**Lessons**

[None Reported]

---

6014 03 April 1993

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1993.

**Location** : Casablanca, MOROCCO

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. Freight train carrying crude oil was in collision with another. 24 of 34 rail tankers destroyed.

---

**Lessons**

[None Reported]

---

6004 28 March 1993

Source : OIL AND GAS JOURNAL, 1993, MAR.; LLOYDS LIST, 1993, 9 APR.

Location : Virginia, USA

Injured : 0      Dead : 0

---

**Abstract**

9708 barrels of fuel oil spill from pipeline threatened water supply to town. Rupture caused by fatigue crack initiated by mechanical damage from heavy construction equipment. The rupture was 52 inch long and 5 inch wide.

[damage by backhoe]

---

**Lessons**

[None Reported]

---

5989 17 March 1993

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAY.

**Location** : Fort Lauderdale; Florida, USA

**Injured** : 0      **Dead** : 5

---

**Abstract**

A transportation incident. Explosion and fireball after a passenger train was in collision with a road tanker, carrying gasoline, at level crossing. Fire engulfed 5 vehicles.

[fire - consequence]

---

**Lessons**

[None Reported]

---

5985 15 March 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAY.

Location : Ipe, BRAZIL

Injured : 0      Dead : 3

---

**Abstract**

A rail transportation incident. Head on collision in tunnel due to alleged signalling fault. Train with ethyl alcohol burst into flames. Line shut for 20 days. Fatality.

**Lessons**

[None Reported]

---

5968 26 February 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, APR.

Location : Fakenham; Norfolk, UK

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker jack-knifed in wet at roadworks, resulting in a collision with the car in front. Tanker had previously discharged propane load.

[gas / vapour release]

---

**Lessons**

[None Reported]

---

5967 26 February 1993

Source : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1993.

Location : Warrington, UK

Injured : 0      Dead : 0

---

**Abstract**

Bomb explosion destroyed natural gas storage tank. Fire followed. Led to the evacuation of 250 families.

[sabotage, fire - consequence]

---

**Lessons**

[None Reported]

---

Source : LLOYDS LIST, 1993, 22 FEB, 29 MAR.

Location : Toledo; Ohio, USA

Injured : 0      Dead : 0

### Abstract

At about 08.58 hrs on the 20th February, 1993, an explosion and fire occurred in the pipe alley west of this vacuum distillation unit due to a failed line.

There were no injuries, environmental impact was minimal.

Total cost of the incident is estimated at \$14 million - \$10.5 million(1993) in production losses, the remainder in maintenance and associated costs.

After interviews with the operators and inspection of the pipe alley following the fire and explosion, it was determined that a stream of vapour and liquid naphtha released from the fractured 2 inch line was ignited by either the vac furnace or the hot transfer line. This produced a brilliant flash-back towards the source of the leak and a moderate intensity explosion. Immediately subsequent to this, a much larger explosion and fire erupted in the area of the vac furnace and transfer line.

The fire was caused by a freeze-up failure of a 2 inch carbon steel pipe which released a spray of light hydrotreated naphtha (LHN) under 95 psig pressure towards the vac furnace and transfer line where it ignited. Based on eye witness accounts of the initial flash location and an assessed autoignition temperature for LHN as under 550 degrees F, it is most likely that one of the uninsulated flange joints on the vac transfer line from the heater to tower was the source of ignition (metal temperature of exposed flanges would have exceeded 700 degrees F).

During the morning of the 19th February, 1993, the local area had experienced an extreme cold front, with temperatures falling below 10 degrees F. The trapped water in the line froze, expanded, and cracked the pipe just under the orifice flange. The spray release occurred when the ice plug in the line started to melt on the following morning. At the time of the failure the ambient temperature was 25 degrees F, but the temperature in the immediate area of the release was probably higher because of adjacent heat exchangers. Alternatively cascading water from a broken 3/4 inch bleed valve on the tower may have melted the ice plug. Once a path for any leakage had been established, naphtha at 80 degrees F and 95 psig would quickly melt and dislodge the ice plug. The 5 inch x 3/8 inch vertical crack just beneath the orifice flange had the classical brittle appearance of a freeze-up failure with virtually no wall thickness reduction and little change in pipe diameter. The failed 2 inch line was taken out of service about 20 years ago when the refinery stopped making a particular fuel. The line was never fully isolated or decommissioned, leaving the section under pressure with no flow. This allowed water to accumulate in the "dead leg." The most likely source of water was from the steam purging during the October, 1992, turnaround. Although there are drain valves located at the bottom of the dead leg, these were never drained. Other, but less likely, sources of water are from process stream malfunctions or in feed streams from tankage. The dead leg piping could have been removed, or if desired to retain, modified and periodically drained.

[refining, cold weather, fire - consequence]

### Lessons

1. Process piping deadlegs and lines in intermittent service should be identified and a program implemented to remove or safely manage them.
2. Process hazard analysis should include reviews of isometric drawings and a physical survey of piping in the units.
3. Management of Change procedures are required to enhance safe management of lines which are decommissioned.
4. Fire proofing valves for certain services (e.g., fuel gas) will eliminate addition of fuel in fire situations.
5. Wherever possible, avoid flanges with "exposed bolts" which are subject to rapid failure under fire conditions.
6. Aluminium cladding on pipes/vessels, over insulation, gives only a very short time exposure under fire impingement.
7. A callout system which uses a multiple coded bleeper arrangement can reduce the response time for emergency teams and management.
8. Winterization programs at refineries are essential to protect equipment from freezing and rupturing.



5944 03 February 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, APR.

Location : Hingham; Norfolk, UK

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker jack-knifed and overturned after taking evasive action to avoid a car in a minor shunt. Gasoline leaked. Exclusion setup and road closed for 10 hours.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAY.

**Location** : Wester Scheldt, BELGIUM

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. A river tanker with 600 tonnes of crude oil grounded and broke her back causing a major pollution threat.  
[ship ran aground, spill]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : , UK

Injured : 0      Dead : 0

---

**Abstract**

An LPG gas carrier broke loose from moorings at a jetty during an unusually severe squall while loading butane. No injuries or damage were sustained but a full investigation was carried out due to the potential of the incident. The loading arms reached the limit of their envelope and disconnected without loss of material. The vessel was brought to anchor after just missing another vessel.  
[weather effects, marine transport, inadequate mooring, near miss]

---

**Lessons**

[None Reported]

---

5935 20 January 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAR.

Location : , SUMATRA

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Collision of two marine tankers caused spillage of 32 000 tonnes of crude oil.

---

**Lessons**

[None Reported]

---

5914 09 January 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAR.

Location : Mandal, NORWAY

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. An explosion occurred after a listing ship with 200 tonnes of dynamite in hold overturned when tow broke. Led to the evacuation of 100.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1993, FEB., 71.

**Location** : Les Epares, FRANCE

**Injured** : 0      **Dead** : 10

---

**Abstract**

A road transportation incident. A road tanker carrying dialkyl-ammonium-meta-sulphate was in collision with other vehicles possibly due to brakes failure, and caused fire of vehicles in village. Cargo intact. Fatality.

[brakes faulty]

---

**Lessons**

[None Reported]

---

5908 06 January 1993

Source : BBC NEWS

Location : Kent, UK

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker of gasoline overturned on roadway.

---

**Lessons**

[None Reported]

---

5906 05 January 1993

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAR,; LLOYDS LIST, 1993, 6 JAN.

Location : Shetland Islands, UK

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. The destruction of an oil tanker on the coast of Shetland with the loss of its 85,000 tonne cargo of crude oil. The environment itself managed to flush out the effects of the pollution, wind and wave action broke up the light crude oil into tiny droplets more efficiently than any chemical dispersant, these droplets were then captured by silt sediment churned up from the sea floor during the ferocious storm that was raging at the time of the incident. The silt sank back to the sea floor when the weather calmed taking the oil droplets with it. More oil evaporated and some was blown onto the island where it has been degraded into the soil. The main problems caused by the spill concerned the fishing industry and there is still a ban on the harvesting of scampi since these crustaceans burrow into the sea floor and so become tainted with the oil still held in the sediment. The impact on other types of fish and other marine life, such as sea otters and seals, has been very limited.

[ship ran aground]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, MAR.

**Location** : Cape Girardeau; Missouri, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. A river barge was in collision with a towboat causing 700 tonnes of liquid fertiliser, ammonium nitrate, to be spilled.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, FEB.

**Location** : Houston Ship Channel; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. Cargo ship was in collision with a river tanker barge containing 2800 tonnes of molten sulphur which sank. Cargo intact.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, FEB.

**Location** : Off New London; Connecticut, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. A towed river barge grounded and 70 tonnes of fuel oil spilled into the sound.

[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1993, JAN.

**Location** : Corunna, SPAIN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Massive pollution after marine tanker grounded with 80 000 tonnes of crude oil.  
[ship ran aground]

---

**Lessons**

[None Reported]

---

5851 18 November 1992

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Bruce Field; North Sea, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Sabotage to offshore platform equipment found.

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Antioquia, COLOMBIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Blast caused a spill of 5000 barrels of crude oil from a pipeline. 12th guerilla attack.

[sabotage]

---

**Lessons**

[None Reported]

---

5838 31 October 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, DEC.

**Location** : Willemstad, NETHERLANDS

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A tug was in collision with a moored marine tanker causing 80 tonne spillage of naphtha from ruptured tank.

---

**Lessons**

[None Reported]

---

5836 27 October 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, DEC.

**Location** : Port Said, EGYPT

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision at harbour entrance penetrated marine tanker and caused 350 tonnes crude oil to spill.

---

**Lessons**

[None Reported]

---



5828 20 October 1992

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Caucasus, RUSSIA

**Injured** : 18    **Dead** : 1

---

**Abstract**

Second incident in a week. Alleged shot caused explosion at pipeline and set alight 2 tanks containing hexane. Fatality.

[sabotage]

---

**Lessons**

[None Reported]

---

**Source :** ICHEME

**Location :** ,

**Injured :** 18    **Dead :** 1

---

**Abstract**

Transportation. An explosion in a pipeline set fire to 2 storage tanks containing hexane. Fatality.

[sabotage]

---

**Lessons**

[None Reported]

---

5805 03 October 1992

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Antioquia, COLOMBIA

**Injured** : 1      **Dead** : 0

---

**Abstract**

Transportation. Guerillas dynamited a section of a pipeline carrying crude oil. Spill of 8000 barrels.

[sabotage]

---

**Lessons**

[None Reported]

---

**Source :** SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location :** Huila, COLOMBIA

**Injured :** 0      **Dead :** 0

---

**Abstract**

4 storage tanks dynamited putting production out of operation and causing spillage of 26,000 barrels of crude oil.  
[sabotage]

---

**Lessons**

[None Reported]

---

5795 25 September 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, NOV.

**Location** : Naestved, DENMARK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. Collision of trains caused a rail tanker to overturn and spill 600 kg of acrylonitrile.

---

**Lessons**

[None Reported]

---

**Source** : LLOYDS WEEKLY CASUALTY REPORTS 289/13; FIRE PREVENTION, 1993, APR.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, NOV.

**Location** : Sherman; Texas, USA

**Injured** : 4      **Dead** : 1

---

**Abstract**

An explosion and fire occurred in a tank when youth removed access cover and lit match to look inside. 7 men were having a party while intruding on site. Tank contained 300 barrels of crude oil and vapour caused explosion. Fatality.  
[vandalism, fire - consequence]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1992.

**Location** : Strait Of Malacca, MALAYSIA

**Injured** : 0      **Dead** : 41

---

**Abstract**

A marine transportation incident. Collision between a marine tanker and container vessel. Tanker loaded with 40000 tonnes of crude oil ruptured 1-2 tanks and both vessels caught fire. Fatality.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

5776 03 September 1992

Source : LLOYDS LIST, 1992, 18 SEP.

Location : Voronezh Oblast, RUSSIA

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. Derailment of 14 tanks containing fuel oil when an automatic coupling broke. Fuel oil from two rail tankers leaked onto the ground.  
[coupling failure, spill]

---

**Lessons**

[None Reported]

---



**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1992.

**Location** : Katin, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

One of eight crude oil storage tanks were set on fire.

[sabotage, fire - consequence]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1992.

**Location** : Gulf Of Mexico, USA SECTOR

**Injured** : 0      **Dead** : 0

---

**Abstract**

Fire erupted on an unmanned natural gas offshore gathering platform. The platform apparently overturned as a hurricane approached and a break in the pipeline occurred.

[fire - consequence, capsize of platform]

---

**Lessons**

[None Reported]

---

Source : LOSS PREVENTION BULLETIN, 114, 15-17; THE SCOTSMAN, 1992, 27 AUG.

Location : Sunderland, UK

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker had been loaded with 44,000 litres of gasoline at the Docks. After it had travelled about 4 kilometres a van pulled out of a side street in front of it. The tanker driver tried to take avoiding action but this caused the tanker to turn over on its near side. The momentum of the tanker caused it to slide on its side for some distance and this was responsible for some of the punctures in its shell. The van was also turned over on its side and came to rest some distance away. After the tanker came to rest, the issuing petrol almost immediately caught fire, probably from hot surfaces on the tractor unit. The burning liquid spread and ignited parked cars.

[fire - consequence, collision, spill]

---

**Lessons**

[None Reported]

---

5757 25 August 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, OCT.

Location : Agen, FRANCE

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A road tanker was hit from behind at traffic lights by a heavy goods vehicle causing leak of LPG from pipes. 100 evacuated.  
[collision, gas / vapour release, evacuation, spill]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Gulf Of Mexico, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

14 offshore platforms were reported toppled and 4 leaning. 31 satellites were toppled and 82 leaning. 112 structures were damaged, there were 7 pollution incidents, 2 fires and 5 adrift. Pipeline damage extensive.  
[hurricane, oil, damage to equipment]

---

**Lessons**

[None Reported]

---

5753 19 August 1992

Source : LLOYDS LIST, 1992, 22 AUG.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, OCT.

Location : Dorion; Quebec, CANADA

Injured : 0      Dead : 0

---

**Abstract**

A rail transportation incident. Derailment of 5 rail tankers containing propane which overturned. The leaking tanker was repaired. 30 people evacuated.  
[evacuation, spill]

---

**Lessons**

[None Reported]

---

5752 19 August 1992

**Source** : LLOYDS LIST, 1992, 21 AUG.

**Location** : Lancaster; Ohio, USA

**Injured** : 0     **Dead** : 0

---

**Abstract**

Transportation. Telephone cable laying crew struck a natural gas pipeline causing an explosion which ignited nearby buildings.  
[fire - consequence, drilling/digging/ploughing vehicles, excavation damage]

---

**Lessons**

[None Reported]

---

5751 17 August 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, OCT.

Location : , STRAITS OF GIBRALTAR

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Bow of a ro-ro ferry holed side of chemical tanker in fog. Cargo of sulphuric acid transferred.

---

**Lessons**

[None Reported]

---



5739 04 August 1992

Source : LLOYDS LIST, 1992, 6 AUG.

Location : Karlsruhe, GERMANY

Injured : 4      Dead : 1

---

**Abstract**

A road transportation incident. A road tanker skidded off road and fell 10 metres onto a intercity locomotive. Fatality.

[loss of control]

---

**Lessons**

[None Reported]

---

5730 28 July 1992

**Source** : LLOYDS LIST, 1992, 6 AUG.

**Location** : Crowley; Louisiana, USA

**Injured** : 22    **Dead** : 0

---

**Abstract**

A rail transportation incident. A train was in collision with a road vehicle carrying containers of xylene and hydrochloric acid and caused spillage of 1300 gallons.

---

**Lessons**

[None Reported]

---

5718 18 July 1992

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, OCT.

**Location :** , YELLOW SEA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A marine transportation incident. Collision between an oil tanker in ballast and gas carrier with vinyl chloride. No injuries or pollution.

---

**Lessons**

[None Reported]

---

Source : LLOYDS LIST, 1992, 14 JUL. ICHEME

Location : , SINGAPORE

Injured : 60    Dead : 6

---

**Abstract**

A marine transportation incident. Flash fire erupted on marine tanker undergoing repairs in shipyard. Fire could have occurred when cleaning fluid accidentally splashed on an engine in the boiler room.

Six people were killed and 60 others injured (8 critically) when a flash fire erupted on board a chemical tanker, which was undergoing repair at a Singapore shipyard on the morning of July 12, 1992. Initial investigations indicated that the fire was caused when cleaning fluid splashed down onto hot work being done further below in the engine/boiler rooms.

Police said there were 225 people working on the 24,000 dwt tanker when the fire broke out.

The dead, and most of the injured, were working in the boiler and engine rooms at the time.

Witnesses said there was panic when fire and intense smoke engulfed the rooms. Many people scrambled to the only staircase leading to the ship's main deck above.

Fire safety officers from the shipyard were the first at the scene and were joined within minutes by firemen of the Singapore Civil Defense Force (SCDF). Half of the firemen concentrated on the fire while the rest evacuated the casualties. The fire was put out within 30 minutes.

Over eighty firefighters were involved in the operation

A foreman led 15 workers to shelter behind a thick steel wall of a control room where they were protected from the fire but not from smoke. This group, however, was rescued after about 30 minutes, the foreman using his mobile radio to attract help. Most of the injured who survived the initial fire were overcome by the dense smoke and fumes, which filled the three levels of the boiler room.

The probable cause of the incident was a 'Permit to Work' on the ship which had been issued following gas free tests by port chemists.

Workers said that some cleaning liquid which was being used to clean pipes fell onto a boiler on a lower deck where welding was being done. A leak in cleaning hoses was mentioned.

Witnesses said they saw the fluid begin to burn as it hit the boiler, with a flash fire. Some workers said that the fluid smelled like thinner or kerosene. The fire spread to insulation material inside the boiler room, and this is believed to have released toxic fumes. Fatality.

[fire - consequence, hot surface, evacuation, toxic fumes, injury]

---

**Lessons**

1. Strict control of hot work and use of flammable materials is essential to avoid incidents.

2. Safe means of emergency escape from work area should be provided.

Ship board repairs, when alongside refinery jetties (docks), must only be allowed subject to site and Maritime Code restrictions - e.g., International Oil Tanker Terminal Safety Guide (IOTTSG), national and harbor regulations, etc.

---

5710 09 July 1992

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 4TH QUARTER, 1992.

**Location** : Della; North Sea, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. Damage to natural gas pipeline caused by unidentified trawler.  
[marine vessel snagged pipeline, damage to equipment]

---

**Lessons**

[None Reported]

---

5704 06 July 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, AUG.

**Location** : Kii Channel, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision of container ship and chemical tanker carrying acrylic acid n-butyl ester. No cargo lost.

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1992.

**Location** : Sriracha, THAILAND

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. Impact occurred to a crude oil pipeline loading facility and jetty during berthing. The cause is attributed to failure of a marine tanker reversing system. Part of the pipeline fell into the sea and leakage occurred. Approximately 80 cubic metres of oil spilled.

[collision]

---

**Lessons**

[None Reported]

---

5673 01 June 1992

**Source** : LLOYDS LIST, 1992, 13 JUN.

**Location** : Intan And Widuri Fields, JAVA SEA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Transportation. Rupture of pipeline when tender barge snagged a pipeline support and a small quantity of waxy crude oil escaped into the sea.

[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---



5667 23 May 1992

**Source** : LLOYDS LIST, 1992, 26 MAY.; THE STRAITS TIMES, 1992, 26 MAY.

**Location** : Salina Cruz, MEXICO

**Injured** : 49    **Dead** : 0

---

**Abstract**

Transportation. Ammonia leak from pipeline was caused by construction work. Led to the evacuation of 1000 people.  
[excavation damage]

---

**Lessons**

[None Reported]

---

5661 14 May 1992

**Source** : LLOYDS LIST, 1992, 15 MAY., & 16 MAY.

**Location** : Yarimca; Kocaeli, TURKEY

**Injured** : 0      **Dead** : 0

---

**Abstract**

A fire occurred in a butadiene storage tank which led to a blast and fire that engulfed synthetic rubber tanks and a carbon black factory. Blast broke windows and could be heard a few miles away. Sabotage suspected.  
[fire - consequence, storage tanks]

---

**Lessons**

[None Reported]

---

5659 10 May 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, JUL.

**Location** : Off Busan, SOUTH KOREA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker with 1500 tonnes of monopropylene glycol grounded and hull broke in 3 pieces, causing a spill.  
[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1992, JUL., 78.

**Location** : Lozere, FRANCE

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker went out of control on a steep hillside road and careered down a ravine spilling part of its 30000 litres of diesel.  
[road incidents, loss of control]

---

**Lessons**

[None Reported]

---

**Source :** SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1992.

**Location :** , AEGEAN SEA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A marine transportation incident. A collision occurred involving a cargo ship and oil tanker, which resulted in total loss of contents of the oil tanker, 48,000 tonnes.

Detergent spraying efforts were hampered by strong winds. Pollution also threatened nearby islands.

[spill]

---

**Lessons**

[None Reported]

---

5648 29 April 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, JUN.

Location : , SOUTH CHINA SEA

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Collision of container ship and cruise ship. No injuries but 1000 drums of calcium carbide removed from flooded hold.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, JUN.

**Location** : Near New Orleans, Louisiana, USA

**Injured** : 0      **Dead** : 2

---

**Abstract**

Debris from oil treatment explosion penetrated adjacent tank causing spillage of 200 tonnes of crude oil. Fatality.

[missile]

---

**Lessons**

[None Reported]

---

5610 25 March 1992

Source : LLOYDS LIST, 1992, 22 APR.

Location : , PAKISTAN

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Natural gas pipeline damaged in four places following sabotage.  
[damage to equipment]

---

**Lessons**

[None Reported]

---



5601 14 March 1992

Source : LLOYDS LIST, 1993, 27 MAY.

Location : , NORTH SEA

Injured : 0      Dead : 11

---

**Abstract**

Helicopter crash in North Sea after flight from an offshore platform. Inquiry concluded that pilot error was the prime cause of the disaster but failure of the operating company to comply with statutory regulations governing the use of standby vessels, defects in the company's system of work and a failure to consider the effect of adverse weather on available rescue facilities had contributed to the loss of life. Fatality.

[driver error]

---

**Lessons**

[None Reported]

---

**Source** : LLOYDS LIST, 1992, 2 MAR.

**Location** : Montgomery County; Texas, USA

**Injured** : 3      **Dead** : 0

---

**Abstract**

Transportation. Liquid natural gas pipeline ruptured by worker paving a car park and ignited.  
[excavation damage, fire - consequence]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, MAY.

**Location** : Greenwich; New Jersey, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker of propane was in collision with a train within a refinery and overturned. No spill or injuries but 60 homes evacuated.

[evacuation]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, MAY.

**Location** : Kwangiu, SOUTH KOREA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. Explosion and huge fire occurred after brake failure caused truck unloading LPG to reverse into storage tank. 3 gas storage tanks ablaze. Led to the evacuation of 20,000 people.

[road transport, brakes faulty, fire - consequence]

---

**Lessons**

[None Reported]

---

5580 14 February 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, APR.

Location : Near Zaragoza, SPAIN

Injured : 0      Dead : 0

---

**Abstract**

Transportation. An explosion caused by small terrorist bomb destroyed natural gas pipeline and rack.  
[terrorism]

---

**Lessons**

[None Reported]

---

5572 09 February 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, APR.

Location : Near Evanston; Wyoming, USA

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A truck overturned and 120 drums of chemicals spilt. The spill involved, sodium hydroxide, phosphoric acid and sulphuric acid.

**Lessons**

[None Reported]

---

5567 05 February 1992

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, APR.

Location : , GULF OF MEXICO

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Towed tank barge with 3390 tonnes of asphalt and 750 tonnes of fuel oil sank in rough seas.  
[spill, sinking]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, 1992, MAR., 82.

**Location** : Petersfield; Hampshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker carrying 9000 litres of kerosene and 3000 litres of heating oil overturned in freezing fog conditions. 100 litres of kerosene entered drains.

[spill, cold weather]

---

**Lessons**

[None Reported]

---



5558 26 January 1992

**Source** : LLOYDS LIST, 1992, 5 FEB.

**Location** : Wimbledon; London, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A fire started in rubbish against factory wall spread to factory.

[arson, fire - consequence]

---

**Lessons**

[None Reported]

---

5557 25 January 1992

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, APR.

**Location** : Near Morgan City; Louisiana, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision between tugs with tank barges caused spillage of 270 tonnes of styrene.

---

**Lessons**

[None Reported]

---

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, APR.

Location : , GULF OF THAILAND

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A tank cracked during salvage operation of grounded gas carrier. 500 tonnes of vinyl chloride monomer (VCM) spilled to sea.  
[ship ran aground]

---

**Lessons**

[None Reported]

---

Source : LOSS PREVENTION BULLETIN, 104, 10.

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A 2,300 litre kettle was being lifted out of an old plant in mid January 1992. All the pipes had been disconnected or burned off and the plant thoroughly decontaminated. The kettle had a flat top with a rolled steel joist (RSJ) across it to support the agitator, which was still inside the kettle. A cooling coil entered and exited the vessel via the lid, both pipes having been cut about 20 cm above the lid.

From the RSJ, two plates were welded on, with holes to form lifting eyes for the vessel. On this occasion the holes were not large enough for the lifting shackles, and so they were enlarged with a gas cutting torch.

The vessel was lifted, checked, then raised clear of the plant and lowered to the adjacent lay-down area.

About 20-30 minutes later, there was a loud bang. An ice plug shot out of one of the cooling coil pipes on the top of the vessel and disintegrated on a wall 13m away. Calculations showed that this ice plug was discharged with an average flight energy of about 650 joules.

Fortunately the two personnel near at the time were standing to each side of the missile.

The most probable cause was thought to be that the heat from the cutting operation, which was near to one of the cooling coil end pipes, must have heated the area sufficiently to cause an expansion of water in the coil.

The coil was full of water as no low level drain was fitted. Both ends for about the 20cm above the lid were (had been) frozen solid.

It was also felt that because of the freezing of the ends of the pipes, the coil would have been put under pressure by the ice formation. The time delay between the burning with the cutter and the release of the ice plug was presumably a heat soak period in which the grip the ice had on the tube wall was relaxed.

[cold weather, demolition, hot work]

---

**Lessons**

Before any hot work is done on plant in freezing conditions, an inspection for ice plugs should be made; and, if found, they should be thawed out carefully first.

---

**Source** : ENDS REPORT, 1992, AUG.

**Location** : Dagenham; Essex, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

During heavy rain, debris washed into an effluent drainage system and blocked pump suction. Sump overflowed into the storm water drain and allowed toluene to drain into a river causing pollution.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, MAR.

**Location** : Salt Lake City; Utah, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. 3 rail tankers with sulphuric acid suffered a derailment and overturned. No rupture or leaks.

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, MAR.

**Location** : Bayonne; New Jersey, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker barge grounded and holed causing a spill of 61 tonnes of gasoline. Barge patched and refloated.  
[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source :** OIL AND GAS JOURNAL, 1994, MAR.

**Location :** Simpsonville; Durbin Creek; South Carolina, USA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Transportation. Rupture of pipeline caused spillage of 13,100 barrels of fuel oil causing pollution of 26 miles of waterway. Probable cause was damage by backhoe that worked for a golf course.

---

**Lessons**

[None Reported]

---



**Source** : LLOYDS LIST, 1992, 18 JAN.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, FEB.

**Location** : Greenville; South Carolina, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. Split in pipeline caused a spill of 500,000 gallons of fuel oil into a river. Alternative water sources required for two towns. Cause of rupture is believed to be damage from an excavation crew.

[excavation damage]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, MAR.

**Location** : Springfield; Massachussets, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A fire occurred after a car hit a truck carrying 5 tonnes of new steel fuel rods, which contained uranium dioxide pellets. No radiation leak.

[fire - consequence, collision]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A road transportation incident. A collision occurred between an ethylene oxide road tanker and another vehicle in fog. No damage to tank and no leak.  
[storage tanks]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, JAN.

**Location** : Dublin Bay, EIRE

**Injured** : 0      **Dead** : 3

---

**Abstract**

A marine transportation incident. A container ship with 123 units capsized and sank after collision. Drums of butanoic acid and hydrogen iodide onboard. Fatality.  
[sinking]

---

**Lessons**

[None Reported]

---

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1992, JAN.

**Location :** , FLUSHING ROADS

**Injured :** 0      **Dead :** 0

---

**Abstract**

A marine transportation incident. Collision after mooring anchors dragged and penetrated hull of a marine tanker causing spill of 150 tonnes of naphtha.  
[shipping incidents]

---

**Lessons**

[None Reported]

---

5461 November 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

Location : Barcelona, SPAIN

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Excavation machine ruptured pipeline connecting tank farm with port causing a release of butane.  
[excavation damage, gas / vapour release]

---

**Lessons**

[None Reported]

---

5432 17 September 1991

**Source** : LLOYDS LIST, 1991, 19 SEP.

**Location** : Knox; Indiana, USA

**Injured** : 5      **Dead** : 1

---

**Abstract**

A rail transportation incident. Two freight trains were in head on collision causing a fire of sulphur and diesel. Led to the evacuation of 40 people. Fatality.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, NOV.

**Location** : Shaxi; Jiangxi Province, CHINA

**Injured** : 600 **Dead** : 37

---

**Abstract**

A road transportation incident. Fire occurred when valve on tank with 2.4 tonnes of pesticide chemical hit tree branch. Pesticide sprayed over large area. Driver on prohibited route. Fatality.  
[fire - consequence, driver error]

---

**Lessons**

[None Reported]

---



5421 27 August 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, DEC.

**Location** : High River; Alberta, CANADA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A semi trailer truck overturned spilling chemical onto road.

---

**Lessons**

[None Reported]

---

5412 13 August 1991

Source : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1991.

Location : Alaska, USA

Injured : 0      Dead : 0

---

**Abstract**

4000 gallons of diesel spilled from a ship's fuel tank when it was in collision with the leg of an offshore drilling rig.

---

**Lessons**

[None Reported]

---

5405 08 August 1991

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1991.

**Location** : Tuapse; Black Sea Coast, SOVIET UNION

**Injured** : 0      **Dead** : 0

---

**Abstract**

Beaches were closed when hundred of tonnes of oil products spilled into a river and onto the sea as a result of flooding after storms.

---

**Lessons**

[None Reported]

---

5401 02 August 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, OCT.

Location : Drogobych, USSR

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Flood waters damaged refinery pipeline causing major spill of oil products.

[refining]

---

**Lessons**

[None Reported]

---

5395 30 July 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, OCT.

**Location** : Dobbin; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. Head on collision led to the derailment of 18 wagons. Methanol from a ruptured rail tanker caught fire.

[fire - consequence]

---

**Lessons**

[None Reported]

---

5389 25 July 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, SEP.

**Location** : Brailsford; Derbyshire, UK

**Injured** : 0      **Dead** : 3

---

**Abstract**

A road transportation incident. A loaded road tanker swerved to avoid a car, rolled over and crushed two cars. No spillage reported. Fatality.  
[overturn]

---

**Lessons**

[None Reported]

---

Source : ICHEME

Location : ,

Injured : 0      Dead : 0

---

**Abstract**

A transfer pump was hooked up to the water draw off connection of tank A, and the last 4' of product was transferred to tank B (11th July 1991). This was completed on the 17th July. Tank transfer line blinds were inserted on the 18/19th and arrangements were made to start cleaning the tank as soon as the manways were opened. This was the same procedure used for sister tanks B and C in 1990/91.

On the 24th July the manways on the north and south side of tank 68 were removed by fitters, who reported that the tank was open shortly after 11.00 hours. At approximately 11.30 hours the Area Supervisor arrived at the tank to verify that the tank was open and to assess the amount of material to be removed. As he approached the bundwall to walk around the tank, a fire erupted inside the tank with flames initially shooting out of the manway.

No one else was in the vicinity of the tank at the time and there were no injuries.

The supervisor immediately activated the Emergency Response Team, and they controlled the fire by cooling the tank shell and injecting foam into the open manway on the north side of the tank.

The fire was finally extinguished by 13.30 hours.

The most probable cause of the fire was from pyrophoric scale which ignited residual naphtha in the tank.

Between the tank being emptied on the 17th July and when it was opened on the 24th, there had been extremely high ambient temperatures (95 degrees F), which had most likely dried out the scale in the tank.

The introduction of air by opening the manways and the continuing high ambient temperatures completed the drying out of the scale and led to the fire incident. [material transfer, fire - consequence, spontaneous combustion, hot weather]

---

**Lessons**

The following recommendations were made:

1. Flooding the tank with at least 4' of water immediately after the connection blinds are installed, and maintaining this water level in the tank until the manpower is available to remove the manways and begin cleaning the tank.
  2. The cleaning process to begin immediately after the tank is opened.
  3. The incident clearly shows how rapidly pyrophoric scale can react following a drying out period and then exposure to the air. Refineries must pay particular attention to this aspect when tanks are known or suspected to have been on 'sour duties' and adjust their procedures accordingly, for example cross flows of air (i.e. opposite manholes open) should be avoided at the early stage, keeping deposits well wetted down with water.
-

5387 22 July 1991

**Source** : LLOYDS LIST, 1994, 26 OCT.

**Location** : Washington, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Two marine vessels were in collision. One sank leading to a spill of 53,000 gallons of diesel oil and 120,000 gallons of fuel oil. Owners fined \$9m (1991).

[sinking]

---

**Lessons**

[None Reported]

---



5378 14 July 1991

**Source** : MARINE ACCIDENT INVESTIGATION BRANCH 2/92

**Location** : River Humber, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Minor collision between oil tanker of fuel oil and gas carrier of ammonia occurred without release of cargo.

---

**Lessons**

[None Reported]

---

5364 27 June 1991

**Source** : LLOYDS LIST, 1991, 27 JUL.

**Location** : Park City; Utah, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Transportation. Fence crew damaged a buried pipeline causing 92,000 gallons of crude oil to spill into irrigation ditches. 50 400 gallons recovered.  
[excavation damage]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1991, 3RD QUARTER.

**Location** : Baytown; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A spill of 9,000 gallons of crude oil occurred from a storage tank due to vandalism. 6,800 gallons were recovered. 1 mile of beach polluted.  
[pollution, storage tanks]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, AUG.

**Location** : New York, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A tug in contact with tug and barge resulted in spillage of 1900 litres of acetone into harbour.  
[collision]

---

**Lessons**

[None Reported]

---

**Source** : LLOYDS WEEKLY CASUALTY REPORTS 285/5

**Location** : Channelview; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

Vandals damaged waste oil storage tanks causing a spill of 105,000 gallons of oil onto marshlands and polluted a river. An estimated 75,600 gallons recovered.

[vandalism, pollution, damage to equipment]

---

**Lessons**

[None Reported]

---

5331 16 May 1991

**Source** : LLOYDS LIST, 1993, 2 JUN.

**Location** : El Segundo; California, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Anchor from a marine tanker pierced under water pipeline used to offload crude oil from tankers to a refinery and spilled 20,000 gallons of diesel fuel.

[marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---

5327 10 May 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JUL.

**Location** : Parry Sound; Ontario, CANADA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker ran aground in fog causing a spill of 140 tonnes of gasoline and diesel.

[ship ran aground]

---

**Lessons**

[None Reported]

---

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1991.

**Location** : California, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Ship snagged pipeline and damaged riser whilst trying to grapple a lost anchor.

[marine transport, marine vessel snagged pipeline, damage to equipment]

---

**Lessons**

[None Reported]

---



5325 10 May 1991

**Source** : LLOYDS LIST, 1991, 10 MAY.

**Location** : Santa Barbara Channel; Los Angeles; California, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Supply marine vessel punctured an offshore oil pipeline causing a spillage of 4200 gallons of crude oil.  
[marine transport, marine vessel snagged pipeline]

---

**Lessons**

[None Reported]

---

5319 06 May 1991

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JUL.

**Location :** , GULF OF MEXICO

**Injured :** 0      **Dead :** 0

---

**Abstract**

A cargo vessel was in collision with an offshore platform causing a natural gas leak.

[marine transportation]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JUN.

**Location** : Baton Rouge; Louisiana, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. Collision between tug pushing 3 river tanker barges and tug pushing 23 empty barges. 550 tonnes of toluene spilt to a river.  
[spill]

---

**Lessons**

[None Reported]

---

5312 03 May 1991

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JUN.; HAZARDOUS CARGO BULLETIN, 1991, JUN, 74 & 76.

**Location :** , NORTH SEA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Four 24,000 litre tank containers were lost from a ferry in heavy seas and two carrying ethyl acetate floated 25 miles to the coast. The other two sank. One that was beached was found to be leaking leading to the evacuation of 200.

[spill, sinking]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JUN.

**Location** : Madison; Wisconsin, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A fire at a warehouse after forklift truck overturned and ignited butter. Blaze spread to adjacent buildings with chemicals leading to the evacuation of 3000.  
[fire - consequence, warehousing]

---

**Lessons**

[None Reported]

---

**Source :** SEDGWICK LOSS CONTROL NEWSLETTER, 2ND QUARTER, 1991.

**Location :** , COLOMBIA

**Injured :** 0      **Dead :** 0

---

**Abstract**

Transportation. A crude oil pipeline was damaged by terrorist explosion. 5000 barrels of crude oil spilt. 29th attack this year.  
[terrorism, spill]

---

**Lessons**

[None Reported]

---

5301 10 April 1991

Source : LLOYDS LIST, 1991, 22 APR.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAY.

Location : Off Leghorn, ITALY

Injured : 0      Dead : 141

---

**Abstract**

A marine transportation incident. Collision with a ferry in dense fog caused a fire on a marine tanker carrying naphtha. Fatality.

[fire - consequence]

---

**Lessons**

[None Reported]

---

5287 19 March 1991

**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1991.

**Location** : Ocean Bounty; North Sea, UK

**Injured** : 6      **Dead** : 0

---

**Abstract**

Collision between offshore exploration rig and its supply vessel caused fire on rig. All non-essential and injured persons evacuated.

[fire - consequence, evacuation, injury]

---

**Lessons**

[None Reported]

---



5270 26 February 1991

**Source** : BBC NEWS; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, APR.

**Location** : Coryton; Essex, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. Gasoline road tanker overturned and caught fire. Blaze contained by fire services.

[fire - consequence]

---

**Lessons**

[None Reported]

---

**5261 21 February 1991**

**Source :** LLOYDS LIST, 1991, 22 FEB.

**Location :** Cordoba, SPAIN

**Injured :** 0      **Dead :** 0

---

**Abstract**

Transportation. An explosion on a 800 km oil pipeline near a pumping station. Sabotage suspected.

---

**Lessons**

[None Reported]

---

5255 15 February 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, APR.

Location : Phangnga, THAILAND

Injured : 0      Dead : 171

---

**Abstract**

A road transportation incident. Truck with dynamite and detonators overturned on sharp bend. Huge explosion occurred one hour later when surrounded by a crowd. 50 homes destroyed. Fatality.  
[damage to equipment]

---

**Lessons**

[None Reported]

---

5245 01 February 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, APR.

Location : Off Molfetta, ITALY

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Hull crack in gale caused marine tanker to sink with 3 013 tonnes of ethyl chloride and 549 tonnes of acrylonitrile. Spill caused pollution threat to Adriatic. Cargo recovered.

[strong winds]

---

**Lessons**

[None Reported]

---

5243 31 January 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, APR.

**Location** : Off Ceuta, SPAIN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Grounding of chemical tanker with 1041 tonnes arcisol and 4539 tonnes of methyl tert butyl ether. Although the double bottom was open to the sea, all of the cargo was transferred.

[ship ran aground]

---

**Lessons**

[None Reported]

---

5242 28 January 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : Tokushima, JAPAN

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. The collision of a motor vessel with steel pipes fractured the side an of oil tanker loaded with 436 tonnes of heavy oil, causing a spill of 13 tonnes.

---

**Lessons**

[None Reported]

---

5241 23 January 1991

Source : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1991.

Location : , COLOMBIA

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Crude oil pipeline damaged from terrorist explosion and led to 15000 bbls of crude oil spilling into local rivers. Third sabotage incident on this pipeline in 1991.

---

**Lessons**

[None Reported]

---

5239 22 January 1991

**Source** : EUROPEAN CHEMICAL NEWS, 1991, 56, (1457), 4 FEB., 5.; EUROPEAN CHEMICAL NEWS, 1991, 56, (1458), 11 FEB.1991, 4.; CHEMICAL WEEK, 1991, 13 FEB.; LLOYDS LIST, 1991, 1 FEB.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : Nizhnekamsk, RUSSIA

**Injured** : 0      **Dead** : 0

---

**Abstract**

An explosion and fire occurred in crude unit producing naphtha for adjacent ethylene plant. 11 pumps and cooling water equipment destroyed. Entire electrical system destroyed. Extreme cold and frost led to pipe failure. Cracker to be on stream in one month.

[cold weather, cracking]

---

**Lessons**

[None Reported]

---



5234 18 January 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : Houma; Louisiana, USA

**Injured** : 4      **Dead** : 0

---

**Abstract**

Transportation. An explosion and fire occurred when four salt barges were in collision with a natural gas pipeline on intercoastal waterway. The pipeline was ruptured causing a release.

[fire - consequence]

---

**Lessons**

[None Reported]

---

5231 14 January 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : New Orleans; Louisiana, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transport incident. Flood water caused 15 river barges to break free and sever a 500 mm pipeline. This led to a spill of 19,000 litres of crude oil.  
[transportation]

---

**Lessons**

[None Reported]

---

5223 09 January 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

Location : Baton Rouge; Louisiana, USA

Injured : 0      Dead : 0

---

**Abstract**

A river transportation incident. Collision between a river barge and a towing tug. One barge with 40,000 litres of trichloroethane grounded and leaked.  
[spill, ship ran aground]

---

**Lessons**

[None Reported]

---

5220 07 January 1991

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : Milford Haven; Dyfed, UK

**Injured** : 7      **Dead** : 0

---

**Abstract**

A rail transportation incident. A locomotive and one rail tanker of ten derailed and overturned down embankment causing 9000 litres of diesel to spill.  
[derailment]

---

**Lessons**

[None Reported]

---

5221 07 January 1991

Source : SEDGWICK LOSS CONTROL NEWSLETTER, 1ST QUARTER, 1991.

Location : Bojaba, COLOMBIA

Injured : 0      Dead : 0

---

**Abstract**

Transportation. Second sabotage of pipeline this year.

---

**Lessons**

[None Reported]

---

**5216 04 January 1991**

**Source** : LLOYDS LIST, 1991, 11 JAN.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.; HAZARDOUS CARGO BULLETIN, 1991, MAR., 71-72.

**Location** : Stein, SWITZERLAND

**Injured** : 0      **Dead** : 0

---

**Abstract**

A rail transportation incident. A goods train derailed on entry to station and 8 rail tankers overturned ripping open one of them. The contents of 3 tankers caught fire and 250,000 litres of gasoline lost. Incident led to the evacuation of a school and 200 people.

[derailment, fire - consequence]

---

**Lessons**

[None Reported]

---

5215 02 January 1991

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

Location : Salt Lake; Utah, USA

Injured : 18    Dead : 3

---

**Abstract**

A road transportation incident. Collision in fog involving cars and road tankers. Substances involved: sulphuric acid and oxygen. Fatality.

---

**Lessons**

[None Reported]

---

**Source** : MARINE ACCIDENT INVESTIGATION BRANCH 1/91

**Location** : River Humber, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Collision between 2 marine tankers ruptured slop tank and the heat generated ignited the escaping crude oil and fuel oil. This caused fires on both vessels which were extinguished.

[fire - consequence]

---

**Lessons**

[None Reported]

---



**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, MAR.

**Location** : Southampton; Hampshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A spill of hot animal feed oil occurred when a road tanker overturned. Spillage contained in drain channel by floating booms installed on previous day.

---

**Lessons**

[None Reported]

---

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, FEB.

**Location :** , NORTH SEA

**Injured :** 0      **Dead :** 0

---

**Abstract**

A marine transportation incident. Tank container with 22 tonnes of pyridine overturned on deck of a container ship and ship's rail punctured tank. Emergency team attended ship.

[spill]

---

**Lessons**

[None Reported]

---

Source : NATIONAL TRANSPORTATION SAFETY BOARD, NEWS DIGEST VOL 11,NO 1

Location : , HAWAII

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. A marine tanker grounded on ouhu shoal and was a total loss.

[ship ran aground]

---

**Lessons**

[None Reported]

---

5166 05 November 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JAN.

**Location** : Milford Haven; Dyfed, WALES

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker sank in harbour spilling 220 tonnes of fuel oil.

[sinking]

---

**Lessons**

[None Reported]

---

**Source** : PROCESS ENGINEERING, 1992, JAN.

**Location** : Stanlow; Cheshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

The wrong valve was opened during routine maintenance causing a release of butane. An emergency valve was opened to burn the gas off through a flare stack. But a blockage in the pipework caused such a massive vibration that the whole piping system collapsed.

[gas / vapour release, excessive vibration, flow restriction, maintenance inadequate]

---

**Lessons**

[None Reported]

---

5157 30 October 1990

Source : LLOYDS LIST, 1990, 10 NOV.

Location : Marion; Illinois, USA

Injured : 0      Dead : 0

---

**Abstract**

Construction work damaged 40 inch crude oil pipeline and caused its shutdown.  
[excavation damage]

---

**Lessons**

[None Reported]

---

5153 26 October 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JAN.

**Location** : Marlborough, New York, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker barge ran aground causing a spill of 490 tonnes of kerosene into a river.

[ship ran aground]

---

**Lessons**

[None Reported]

---

5152 25 October 1990

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, DEC.

Location : , KANMON STRAIT

Injured : 0      Dead : 0

---

**Abstract**

A marine transportation incident. Ship hit side of marine chemical tanker. Acetone spill to sea from No.2 tank.  
[collision]

---

**Lessons**

[None Reported]

---



5151 23 October 1990

**Source** : NEW CIVIL ENGINEER, 1990, NOV; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1991, JAN.; CHEMISTRY IN BRITAIN, 1990, DEC.

**Location** : M1 Motorway; Luton, UK

**Injured** : 15    **Dead** : 0

---

**Abstract**

A road transportation incident. 20 drums of hydrobromic acid were scattered on motorway when the flat bed lorry carrying them was involved in an accident. Two drums ruptured by following vehicles causing the motorway to be closed.

[collision, spill]

---

**Lessons**

[None Reported]

---

5148 19 October 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, DEC.

**Location** : Stainmore; Cumbria, UK

**Injured** : 0      **Dead** : 1

---

**Abstract**

A road transportation incident. Fireball when truck shunted car at temporary traffic lights and car driver killed. Exploding aerosol cans hindered rescue operations. Fatality.

[collision, fire - consequence, aerosol propellant]

---

**Lessons**

[None Reported]

---

5146 14 October 1990

Source : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, DEC.

Location : Tver, USSR

Injured : 12    Dead : 1

---

**Abstract**

A rail transportation incident. Collision of passenger train and freight train caused overturning of tank wagons with toxic chemicals and flammable liquids leaking. Fatality.  
[injury]

---

**Lessons**

[None Reported]

---

5147 14 October 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, DEC.

**Location** : Southampton; Hampshire, UK

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. A road tanker carrying liquid nitrogen overturned on a bend, causing the evacuation of 20 residents while load was transferred.

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, NOV.

**Location** : Houston; Texas, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. Oil/chemical marine tanker was in collision with a barge causing 380 tonnes of hydrocarbon reformatate to spill.

---

**Lessons**

[None Reported]

---

**Source :** HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, NOV.

**Location :** , KARIMARA STRAIT

**Injured :** 0      **Dead :** 18

---

**Abstract**

A marine transportation incident. A marine gas carrier with 1,300 tonnes of ammonia capsized and sank after collision with another marine vessel. Fatality.  
[sinking]

---

**Lessons**

[None Reported]

---

**Source** : LOSS PREVENTION BULLETIN 101, 19-21; LLOYDS LIST, 1990, 2 OCT.

**Location** : Bangkok, THAILAND

**Injured** : 100 **Dead** : 68

---

**Abstract**

A road transportation incident. A road tanker carrying 5 tonnes of LPG was involved in a collision at a busy road junction and resulted in a flash fire involving many vehicles. The road tanker was not licensed to carry LPG and had two pressure vessels on a flatbed lorry. The vehicle overturned and the vessels broke away from the lorry. The two interconnecting lines are believed to have sheared to release the LPG. Fatality.  
[fire - consequence]

---

**Lessons**

[None Reported]

---

5121 13 September 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, NOV.

**Location** : River Rhine, GERMANY

**Injured** : 0      **Dead** : 0

---

**Abstract**

A river transportation incident. In fog 2 river barges were in collision causing a spill of 160,000 litres of diesel oil. International pollution alarm issued.

---

**Lessons**

[None Reported]

---



**Source** : SEDGWICK LOSS CONTROL NEWSLETTER, 3RD QUARTER, 1990.

**Location** : Tarrogon, SPAIN

**Injured** : 0      **Dead** : 0

---

**Abstract**

An explosion and resulting fire occurred in a refinery. Believed to be an act of sabotage.

[fire - consequence, refining]

---

**Lessons**

[None Reported]

---

**Source** : HAZARDOUS CARGO BULLETIN, NOVEMBER 1999.

**Location** : Perth Amboy; New Jersey, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A road transportation incident. Approximately 380 l of acid was spilled when a truck carrying various chemicals collided with a car.  
[collision, loss of control]

---

**Lessons**

[None Reported]

---

5102 24 August 1990

**Source** : HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, NOV.

**Location** : New Orleans, Louisiana, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker barge ran aground causing a spill of 1,900 litres of crude oil into a river.

[ship ran aground]

---

**Lessons**

[None Reported]

---

5097 19 August 1990

**Source** : THE WASHINGTON TIMES, 1990, 20 AUG.; HAZARDOUS CARGO BULLETIN INCIDENT LOG, 1990, OCT.

**Location** : Lewes; Delaware, USA

**Injured** : 0      **Dead** : 0

---

**Abstract**

A marine transportation incident. A marine tanker was in collision with a barge being pushed by a tug causing a spill of 425 tonnes of gasoline into a bay.

**Lessons**

[None Reported]

---