

## Buncefield, UK, Oil Terminal Disaster

Buncefield oil storage terminal was owned by Hertfordshire Oil Storage. It was a joint venture between Total and Texaco and was operated by Total.

It was originally built in 1960 to supply London's Heathrow airport and was further developed in the 1980s and 1990s with pipelines to transport fuel from Humber and Merseyside in the north of England.

The site, Marylands Industrial Park, attracted other businesses because of its low cost and because of easy access to the main highway systems.

Soon after 6:00 a.m. on Sunday, December 11, 2005, a major explosion and fire took place at the terminal in Hemel Hempstead, not far from London.

The explosion measured 2.4 on the Richter scale and was heard in France and the Netherlands. Although the explosion caused 43 reported injuries, fortunately there were no fatalities.

The north side of the oil storage terminal was largely destroyed, with the blast area covering over half a mile.

The M1 north-south motorway was closed.

Beverage manufacturer Scottish & Newcastle lost stock valued at about £10 million (\$15 million) when fire damaged its warehouse.

Retailer Marks & Spencer had to close one of its six food depots, causing disruption to deliveries to its retail outlets.

Fujifilm, 3Com Corporation, and Alcom buildings close to the site were all damaged.

Andromeda Logistics experienced damage to its distribution center, which was close to the terminal. The company evacuated the site but was able to resume operations on December 12, the day after the explosion, from an alternative distribution center at Hitchin, Hertfordshire.

The explosion, the biggest in peacetime Europe, and the subsequent fire:

- ▶ Destroyed some 5% of UK petrol stocks held in 20 storage tanks.
- ▶ Involved 25 different fire services tackling the blaze with 600 fire fighters.
- ▶ Injured 200 people; 2,000 were evacuated; and over 300 houses damaged.
- ▶ Impacted 600 businesses and 25,000 staff.
- ▶ Had a financial impact of some £5 billion (\$7.5 billion) with Total facing a bill of £750 million (\$1.1 billion).

Although not directly involved in the event, BP took an immediate hit on its share price. Its shares settled back to normal after a few hours.

ASOS (As Seen On Screen), an on-line fashion retailer, had opened a new, central warehouse in the commuter town of Hemel, Hempstead, in November 2005, close to Buncefield. The explosion destroyed ASOS' new warehouse and its entire stock, valued at £ 5.5 million (\$7.8 million). ASOS was unable to fulfill orders. Its CEO had to suspend trading of ASOS shares on the Alternative Investment Market (AIM). ASOS shares were suspended at 77.5p on December 23. Sales and profits anticipated from busy Christmas trading were lost.

Instead of selling goods, the corporate web site was used to cancel orders and generate refunds. Some 19,000 customers, who had ordered goods for Christmas, had to be issued refunds. New premises needed to be found.

Buncefield terminal supplied around 30% of Heathrow airport's fuel via a direct pipeline. British Airports Authority, the owner of Heathrow airport, began to ration aviation fuel at Heathrow, causing airlines to divert to other European airports to refuel. Global air traffic schedules suffered disruption.

Because of concern that motorists would start panic buying, Garage Watch CEO, Mark Bradshaw, broadcasted on BBC radio and television to try to calm fears. "This is not a problem of supply but of distribution," he said. "Our industry is well prepared for this kind of problem and measures are already in place to deal with the situation... UK refining is still at 100% with all nine UK refineries still at full production... we can assure the motorist that garage supplies should not be affected."

Many organizations, affected either directly or indirectly, invoked their BC plans.

Big retailers had to re-assess supply chain issues.

Companies were forced to make public statements to protect their share value.

The headquarters of XL Video – a video producer for trade shows, events, television, and concerts – was 500 meters from the center of the Buncefield explosion and suffered structural damage. A driver was at the XL site when the blast occurred with four trucks ready to unload. The site was evacuated within an hour leaving employees with no access to warehouse or office facilities, although they had 12 projects to load on the Monday morning. Their BCP was invoked to divert projects to First Network in Northolt. Staff members were able to access the IT systems to establish requirements for each project. All shows were shipped on Monday, December 12.

Northgate IS, which provides managed IT services and outsourced applications, had its headquarters near to the terminal. Northgate IS found it necessary to issue a statement to the London Stock Exchange to reassure investors and shareholders that it had successfully invoked its disaster recovery plan and had the situation under control. However, it admitted that its backup systems were "rendered inoperable." Client data was duplicated at the site and collected for offsite storage at 7:00 a.m. daily. But the fire happened at 6:00 a.m., before the backups were collected, and destroyed a whole day's client data. It was estimated to take two weeks to recover the data. As a result:

- ▶ Client Haringey Council was unable to collect any council tax payments.
- ▶ Billing information for utility companies was lost. All records were (over time) reinstated.

Among other impacts:

- ▶ 25,000 people were unable to get to work.
- ▶ Hundreds of schools were closed.
- ▶ Local transport was disrupted.
- ▶ Motorists were advised to keep windows closed and air-conditioning off.
- ▶ Local residents who had not been evacuated were advised to stay indoors with windows closed.
- ▶ Regional radio and TV companies broadcast advice.
- ▶ 12 million liters of contaminated fire water with up to 40 different contaminants had to be disposed of. It took 500 tankers 5 weeks to move it to temporary storage, where it later had to be incinerated.
- ▶ 10 buildings were demolished.
- ▶ Rebuilding/refurbishment costs were put at £100 million (\$150 million).
- ▶ By January 10, 2011, data recovery and communications restoration was still ongoing.
- ▶ By January 11, 2011, 75 businesses employing 5,000 people were still unable to use their premises.
- ▶ Insurance coverage often proved inadequate to cover losses. Three years later, some insurance claims remained unsettled.
- ▶ A major hospital that was on standby for casualties (that didn't actually arrive) lost all their hospital systems for 2 days including patient records and occupancy planning, causing chaos to the normal daily hospital activities.

The local emergency management plans worked superbly. In Hertfordshire, the County Council's Crisis Management Plan worked; it had been used at the Potters Bar and Hatfield rail incidents and been tested in October 2005. The Council had also implemented a Local Resilience Forum (required by the UK Civil Contingencies Act) including Category 1 responders. These initiatives created a coordinated, multi-agency response, involving people who understood their crisis roles and the roles of others and who actually knew each other and had worked together previously. The Council's 12-person Emergency Planning Team implemented shifts working to staff teams at both Police headquarters and County Hall.

### *International Coordination*

An appreciation of local, federal, national, and emergency organizations will help the BC managers put their own BC arrangements into the broader context (and is also a requirement for certification in most of the relevant professional institutes).

In catastrophic disasters, international, national, federal, state, and local government organizations will coordinate with voluntary organizations and the private sector to provide appropriate response. The national military may also be involved. Figure 8-2 illustrates this relationship.

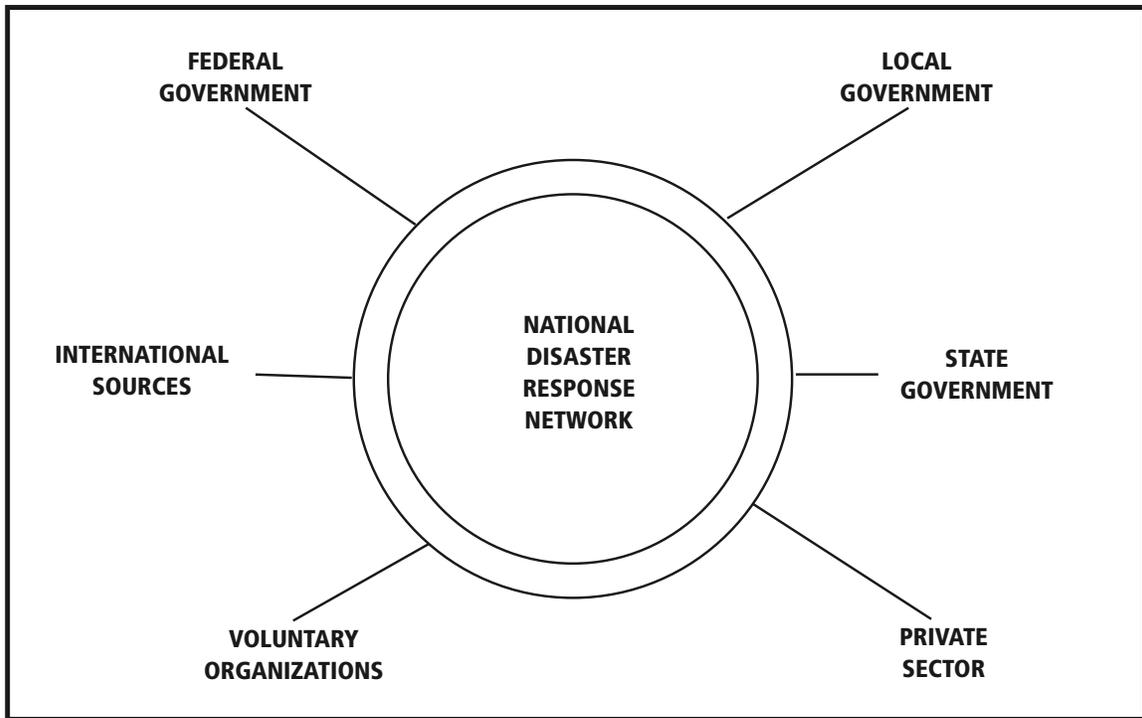


Figure 8-2. *The US Emergency Response Umbrella*

## **8.4 US Department of Homeland Security**

After the World Trade Center attack in 2001, the US developed anti-terrorist national strategies to help secure cyberspace and the infrastructures and assets vital to public health, safety, political institutions, and the economy. The US Department of Homeland Security (DHS),<sup>7</sup> formed in November 2002, consolidated 22 agencies. It has over 200,000 employees, responsible for several separate federal functions in a single federal agency tasked with preventing, protecting against, and responding