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# Fire Safety: The Security Implications

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# Introduction

This presentation will cover:

- ◆ Fire as the most serious hazard facing business
- ◆ The arson problem
- ◆ The duties of security personnel in fire safety management
- ◆ Role of security personnel in prevention and detection of arson





# Fire - the Ultimate Threat

- ◆ While business can be damaged by many security threats, only fire can wipe out an organisation overnight.
- ◆ The Home Office estimates that half of all enterprises suffering a major disaster fail within 12 months
- ◆ The FPA suggests that 20% of companies experiencing a major fire go out of business with 12 months.





# UK Fire Statistics

- ◆ The Home office publish very detailed statistics of all fires attended by the fire brigade
- ◆ The FPA provide in-depth analysis of fires costing over £50,000 involving an insurance claim
- ◆ Other estimates (British Crime Survey, BFPSA, FETA) suggest there are at least three fires for every one reported to the fire brigade



# Recent Changes in Legislation

- ◆ Fire Precautions (Workplace) Regulations 1997
- ◆ Requires all employers to carry out fire risk assessments
  - In writing for five or more employees
  - Obligation to reduce high risks
  - Plan to deal with outbreak of fire
  - Train staff
  - Minimum obligations for all premises
    - Alarm
    - Evacuation
    - Fire fighting

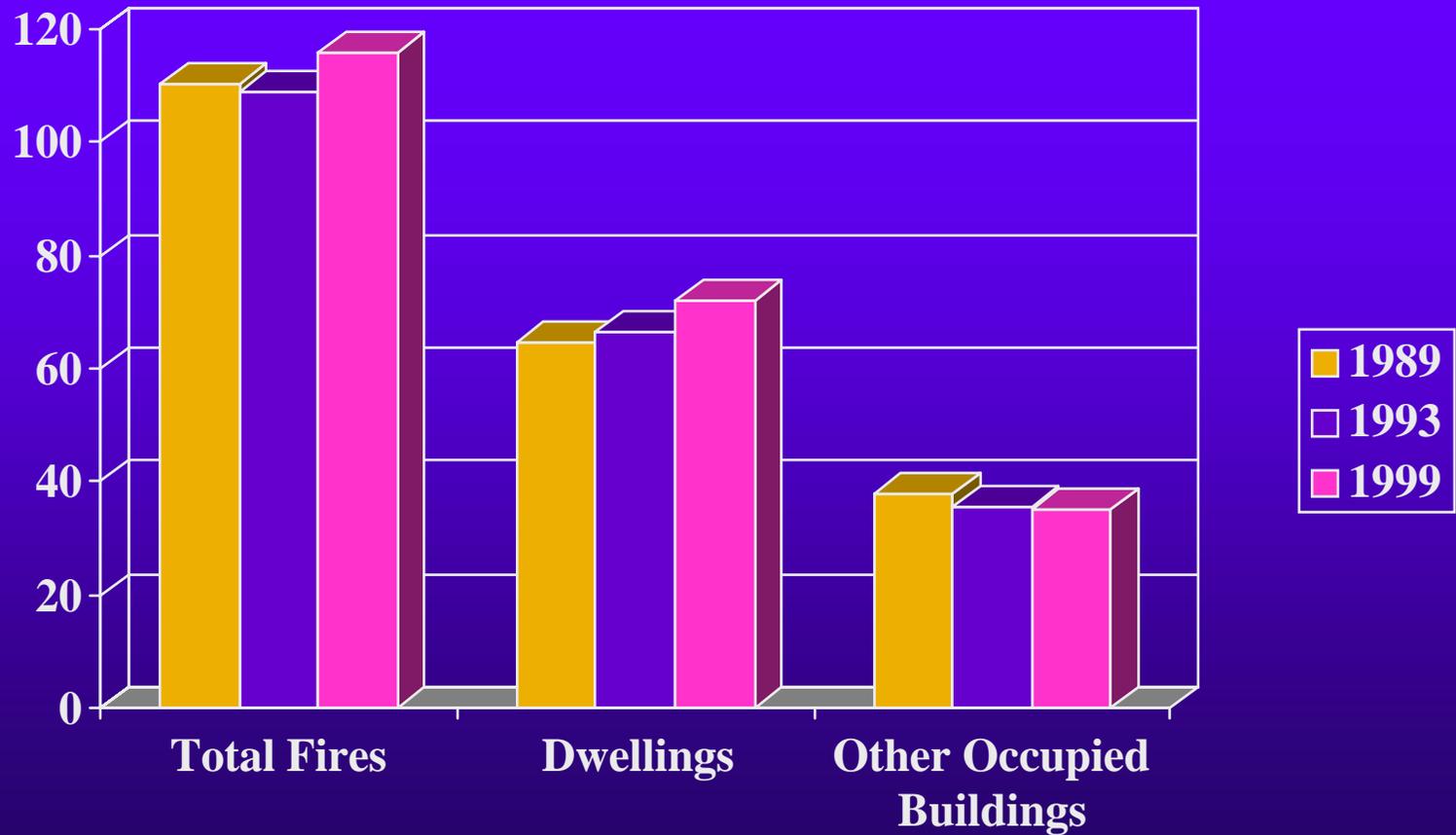
Are UK companies ready for new corporate killing legislation ?





# Home Office Statistics 1999

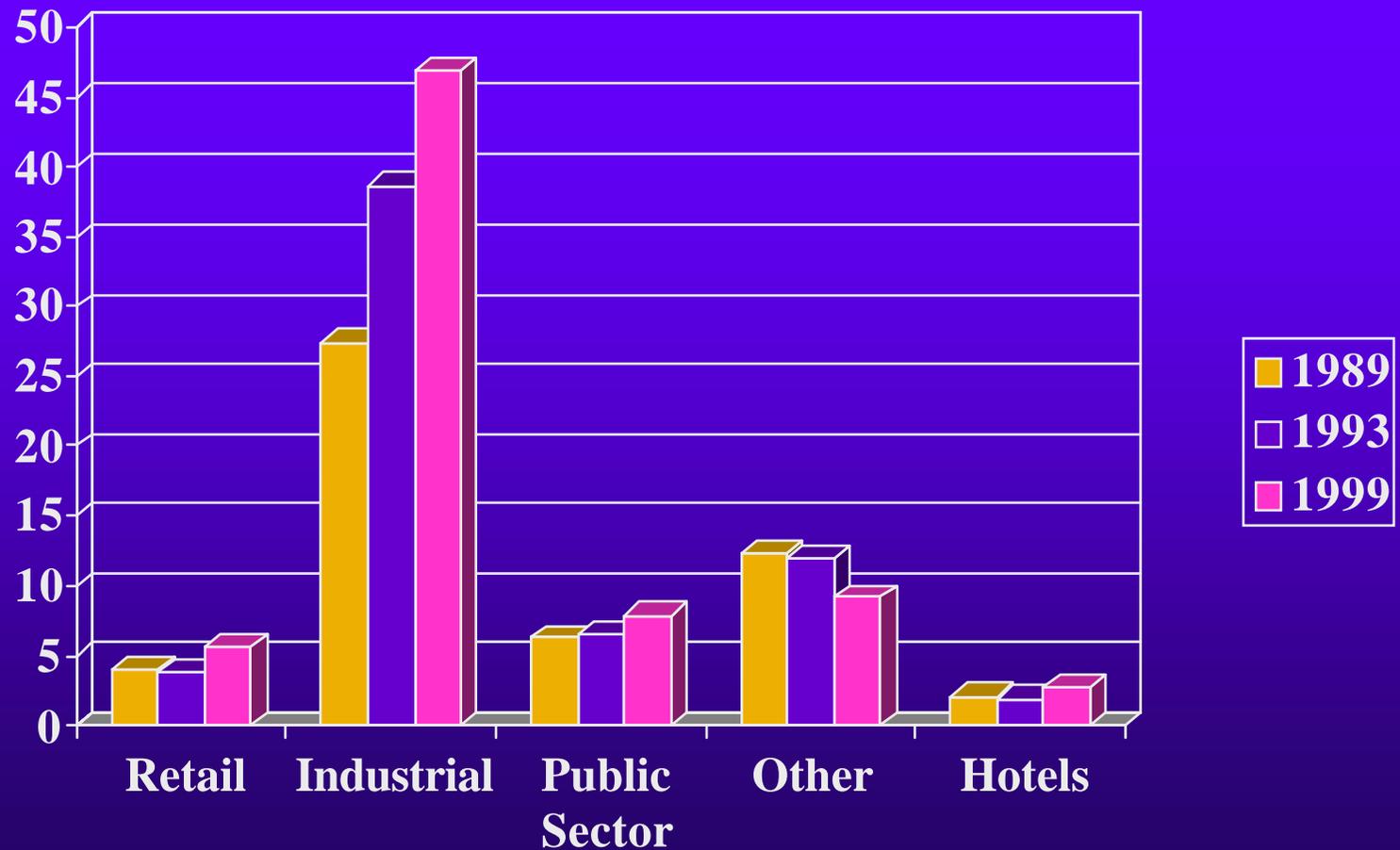
## Fires attended in '000s





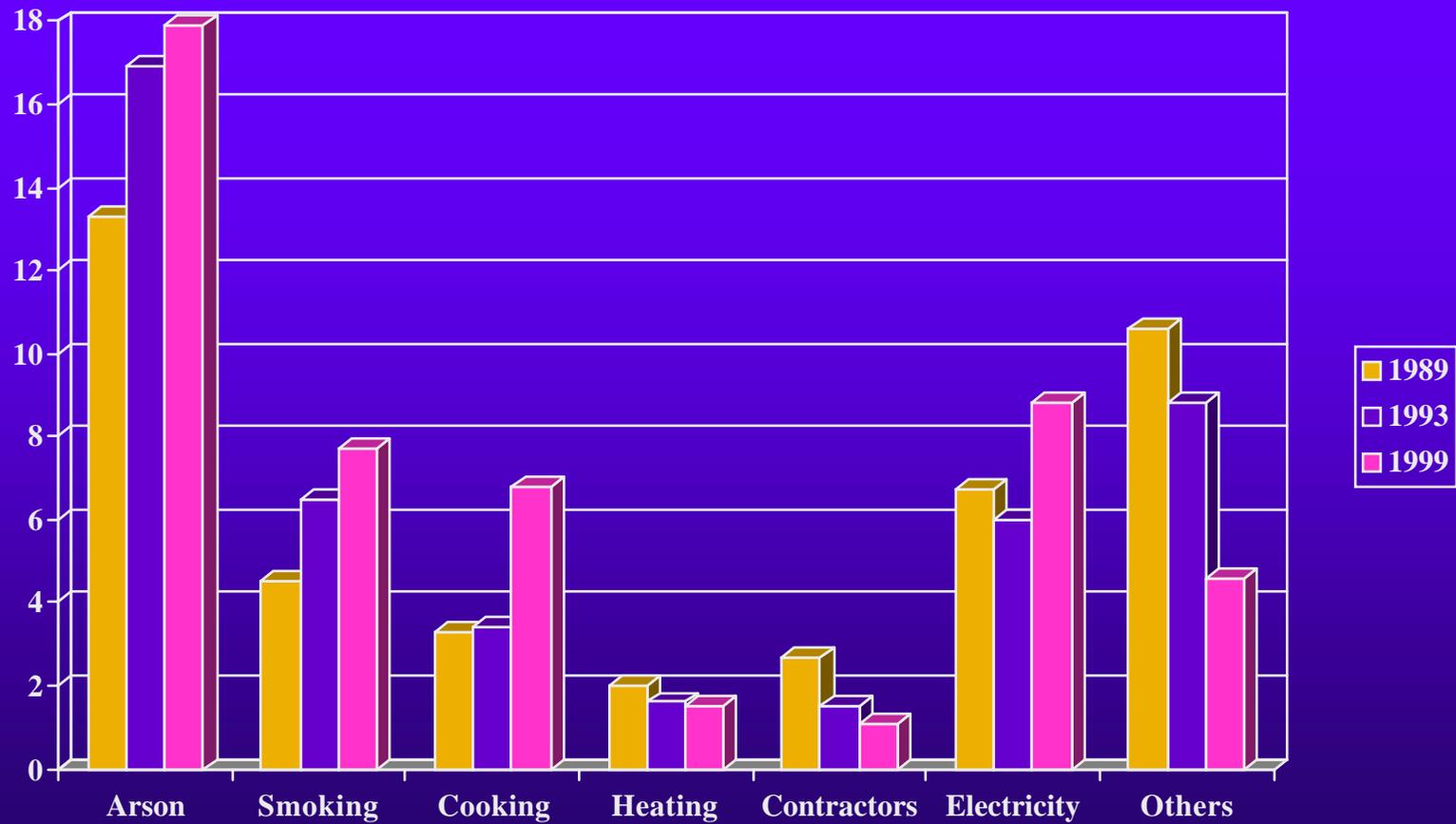
# Fires by Industry Sector

## Fires in '000s





# Fires by Cause (in '000)





# Perils of the Night



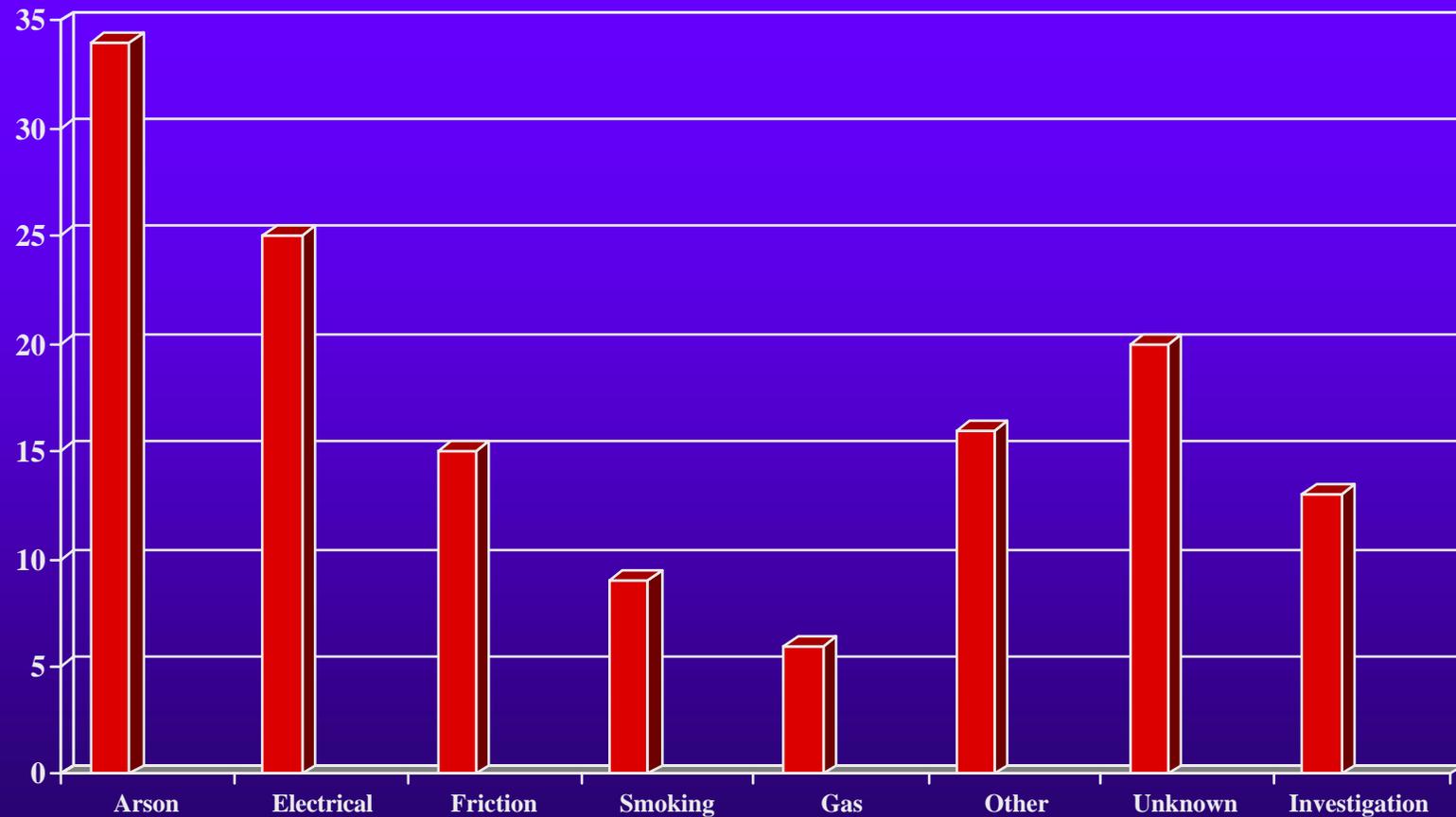
## Day

## Night

49%	Deaths (Accidental fires)	51%
36%	Deaths (Arson)	64%
44%	Injuries	56%
32%	No. of Large Fires	68%
27%	Cost of Large Fires	73%
32%	No. of Arson Fires	68%



# FPA Large (> £.25 m) Fire Analysis June 99 - May 2000 - by Cause





# FPA Large (> £.25 m) Fire Analysis June 99 - May 2000 - by Occupancy (1)

.. Shops	20
.. Schools	19
.. Food and Drink	10
.. Pubs and Clubs	10
.. Dwellings	8
.. Motor Industry	7
.. Furniture	6
.. Agriculture	5



## FPA Large (> £.25 m) Fire Analysis June 99 - May 2000 - by Occupancy (2)

.. Unoccupied Buildings	5
.. Engineering	5
.. Chemical and Plastics	5
.. Textiles	5
.. Warehouses and wholesale	4
.. Hotels and boarding houses	2
.. Construction	2
.. Printing	1
.. Others	19
.. <b>Total</b>	<b>138</b>



## Arson as a Cause of Fire

- ◆ Between 1989 and 1999, malicious fires have increased from 29% to 41% of the total - while total number of fires has fallen by around 5%
- ◆ So while fires have been falling in number, arson has been increasing
- ◆ This can only be partly accounted for by the improvement in fire investigation

# Occurrence of Fires (All Causes)

FPA 20 year average



.. Dwellings	60%
.. Other Commercial	15%
.. Garages, sheds etc	7%
.. Shops	4%
.. Pubs, Clubs & Restaurants	3%
.. Agriculture	2%
.. Hospitals	2%
.. Hotels	2%
.. Schools	2%
.. Places of Public Entertainment	2%
.. Construction Industry	1%

# Proportion of Fires due to Arson

FPA 20 year average



..	Constructions	54%
..	Schools	53%
..	Places of Public Entertainment	48%
..	Garages, sheds	48%
..	Shops	34%
..	Agriculture	32%
..	Restaurants, pubs & clubs	22%
..	Hospitals	21%
..	Hotels	17%
..	Other Industrials	15%
..	Dwellings	15%





# Arson Overview

- ◆ The larger the fire, the more likely it is to be deliberate
- ◆ Arson fires are increasing while accidental fires are decreasing
- ◆ Nearly one third of all fires in buildings are deliberate
- ◆ The occupancies most at risk are:
  - Schools
  - Retail
  - Leisure facilities
  - Construction



# School arson is set to cost £85m in a single year

By John O'Leary  
Education Editor

A HUGE rise in arson at schools has caused more damage in the first four months of this year than in the whole of 1999, insurers said yesterday.

Zurich Municipal, which insures most schools in England, put the combined cost of school fires since January at £45 million. Experts fear that the bill for the year could reach £85 million, almost double the average over the past decade. This would dwarf previous records and is the equivalent of building 85 new schools.

Arsonists are responsible for seven out of ten school fires, and average of three attacks a day nationally. Almost half of those convicted of the crime are between 15 and 19, while two thirds cautioned are between ten and 14. Many carry out the offence under the influence of drugs or alcohol and come from poor families in inner-city areas.

the sudden increase. The Arson Prevention Bureau, funded by the Home Office, is promoting community projects in an attempt to reverse the trend.

Larry Stokes of Zurich Municipal, chairman of the bureau's working group on schools, said: "These mindless attacks cost millions of pounds that could be better spent building and equipping new schools or employing more teachers.

"When the risk of loss of life and the human costs of lost work, disruption to education and the effect on communities of major fires are taken into account the cost is far greater."

Research by the group found widespread under-reporting of minor school fires and a lack of awareness of the problem among many head teachers.

The bureau's first pilot project was introduced yesterday in Nottingham, where there have been seven school fires so far this year and were

and risks of arson. Trained actors will use a script aimed at teenagers to demonstrate the impact of the crime.

One pupil from each class will be nominated as a "fire checker" to do risk assessment of the school, discuss their findings with colleagues and contribute to a report for the school.

Paul Woods, Nottinghamshire's Chief Fire Officer, said his brigade already had close links with schools. "We see only too often the devastation a fire causes a school, its teachers, pupils and neighbours and are sure that this initiative will have a real impact in reducing the number of school arsons."

The highest bill for school fires was £57 million in 1990 when the bureau was established. By 1993 the cost had halved. Although there were increases in the middle of the decade, the figure was down to £42 million last year.



# Motives for Arson

Arson Prevention Bureau, 1996, Kidd 1998\*

## ❖ Causes for arson are varied

– Revenge	24%
– Mental illness	20%
– Alcohol/drugs	19%
– Concealment of crime	7%
– Financial gain	6%
– Excitement	5%
– Terrorist/extremist	2%
– Would-be heroism	1%
– Motive not determined/unclear	17%

\*based on 6580 arson fires



# Security Role in Fire Safety (1)

- ◆ Mergers and cutbacks have seen most company fire brigades disappear
- ◆ Many specialist fire officers made redundant
- ◆ Some amalgamations of fire and security
- ◆ In the absence of another specialist, once again security gets it !
- ◆ Not all bad news - fire precautions have statutory basis - unlike security
- ◆ Insurers generally more concerned about fire losses



## Security Role in Fire Safety (2)

- ◆ Government policy now to let employers or owners take responsibility - fire authority rarely seen
- ◆ New European legislation has eliminated many previous inconsistencies - all places of work now required to:
  - Undertake risk assessment
  - Have plan to deal with fire
  - Provide means of escape, means of warning, means of fire fighting



## Security Role in Fire Safety (3)

- ◆ Security can help - a risk assessment is a risk assessment
- ◆ Detection systems are converging - use of computerised monitoring
- ◆ Given that fire is the greatest threat and that arson is a primary cause, does it not make sense to ensure that security measures are designed to ensure maximum protection from arsonists ?
- ◆ Including fire in patrol schedules makes these a lot more interesting and provides useful data for doubtful managers.



# Security Duties in Fire Safety

- ◆ Making safe equipment left switched on
- ◆ Checking obstructions to exit routes/doors
- ◆ Checking fire extinguishers
- ◆ Reporting spills/leaks
- ◆ Enforcing smoking regulations
- ◆ Monitoring/escorting contractors
- ◆ Supervising deliveries of fuel
- ◆ Reporting electrical faults



# Security Contribution to Fire Safety

- ◆ Incident reporting helps analysis of risks
- ◆ Provide additional eyes
- ◆ Oversee contractors working out of hours
- ◆ Issue/collect/monitor hot work permits
- ◆ Provide first line fire fighting
  - All to be extinguisher/hose reel trained
  - All to understand fire systems (inc sprinklers)
  - Respond to all alarms and assist fire wardens



# Guards and Arson (1)

- ◆ Guards can provide invaluable assistance to the fire service and police in arson incidents:
  - Guiding brigade to scene
  - Providing information eg
    - Doors open or shut ?
    - Lights on or off ?
    - Broken glass before or after fire
    - Noises, smells colours of flames
    - Previous unexplained incidents



## Guards and Arson (2)

- ◆ Guard patrol logs, tapes etc will be useful to police and insurers (may be critical !)
- ◆ Insurers may have warranty on level of security - if this has been breached - no cash !
- ◆ Guard response to fire may be key factor in claim - was it appropriate ?
- ◆ While no one expects guards to risk their lives it is not unreasonable to expect an attempt to fight a small fire



# The Security Survey and Fire (1)

- ◆ Unless excluded worth thinking about
- ◆ The following must be considered
  - Size of building and type of construction
  - Location (nearby hazards, fire bde. response)
  - Automatic detection ?
  - Automatic protection/suppression ?
  - Ventilation
  - Level of compartmentation
  - Occupancy (materials, processes)



## The Security Survey and Fire (2)

- ◆ Consider possible external threats relating to the Company's activities:
  - Animal Lib.
  - World trade activists
  - Environmentalists/ecofreaks
- ◆ Don't overlook the internal/HR aspects:
  - Are the premises involved in disputes ?
  - Are redundancies pending ?
  - Are proper references taken for new staff ?



# Crisis Management and Post-fire Planning

- ◆ Great interest in this area as it can play a major part in reducing losses and aiding recover (business interruption)
- ◆ Insurers promoting concept (premiums !)
- ◆ Role for security involvement
- ◆ Can be integrated in other emergency planning (ie bomb threat, flood, etc)

How much do you want left after the fire ?





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Presentation will be posted to web  
site: <http://www.risk-consultant.com>  
by 29 April.