

<b>Hazard/threat category</b>	<b>Sub-category</b>
Industrial accidents and environmental pollution	Industrial accident involving toxic release
<b>Hazard and threat description, plus scale</b>	<b>Risk reference number</b>
Up to 1km around site causing up to 10 fatalities and up to 100 casualties	HL3
<b>Date of revision</b>	<b>Next review</b>
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<b>Version</b>	2
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## **1. Overview of hazard or threat**

Uncontrolled release of toxins beyond site boundary. The physical dispersal limits of solids or liquids indicate that the primary risk is from airborne pollution, as gas, vapour, liquid droplets or particulates/powders. The hazard may be transient or persistent in the environment. A secondary risk is represented by liquid run-off, where there is the risk of entry into water courses or aquifers.

Potential causes – fire, explosion, leak. Public health impact may be immediate or delayed onset (risk of undetected small scale pollution leading to late onset problems - eg., groundwater pollution from petrol stations, or Minamato Bay mercury poisoning)

Fire (& possibly explosion) may generate unpredictable secondary combinations of compounds through mixing or partial combustion of primary materials. E.g., fire in plastics factory producing airborne chlorine and cyanide compounds.

## **2. Key historical evidence**

The major incidents database indicates that a limited number of incidents have been recorded globally, of which the majority were transport accidents. The primary source of risk is therefore considered to be the movement of hazardous materials through Thames Valley, rather than fixed sites in, or adjacent to, our area.

For the purposes of commonality, fixed sites that may pose a risk have been equated to those that fall within the reporting requirements of the COMAH (Control Of Major Accident Hazards) regulations, 1999, as ‘Lower tier’ sites. These exclude MOD premises, licenced nuclear installations and some other premises.

As of November 2005, there are 11 declared Lower Tier COMAH sites in the Thames Valley area. Lower Tier COMAH sites are required to prepare a Major Accident Prevention Policy (MAPP).

### 3. Likelihood

Hazard	Outcome description	Likelihood
Industrial accident involving toxic release	Up to 1km around site causing up to 10 fatalities and up to 100 casualties	2

### 4. Impact

#### Summary

Hazard	Outcome description	Impact			
		Health	Social	Env	Econ
Industrial accident involving toxic release	Up to 1km around site causing up to 10 fatalities and up to 100 casualties	4	4	4	3

#### Details

Impacts
<b>Primary</b>
Possible serious environmental contamination of land, surface water and/or groundwater. Poor air quality due to smoke which may include toxic and noxious substances
<b>Secondary</b>
Possible impact to surface and/or groundwater which may effect abstractions used for industry, agriculture and potable supply. Long term impact on surface and groundwater and contaminated land

### 5. Vulnerability and resilience

Static sites controlled through regulation. Transport risks controlled by regulation, but vulnerable to accident or deliberate action at any point on journey. Deliveries to notifiable sites fall under those regulatory requirements only when on site – an accident outside the factory gate is not required to be covered in pre-planning.

**6. Mitigation and control measures**

Sites falling within the regulations are required to report particulars to the appropriate enforcing authority Site and produce a MAPP. Exemptions include Crown premises, MOD property, and licenced nuclear installations.

**7. Overall assessment**

<b>Category</b>	<b>Sub-category</b>		
Industrial accidents and environmental pollution	Industrial accident involving toxic release		
<b>Outcome description</b>	<b>Impact</b>	<b>Likelihood</b>	<b>Risk</b>
Up to 1km around site causing up to 10 fatalities and up to 100 casualties	4	2	High

**Controls in place**

Requirement to report particulars to enforcing authorities  
Oxfordshire County Council Emergency Plan  
Buckinghamshire County Council Emergency Plan.  
Aylesbury Vale District Council Emergency Plan.  
Chiltern District Council Emergency Plan.  
South Bucks District Council Emergency Plan.  
Wycombe District Council Emergency Plan.  
Milton Keynes Council Major Incident Guide  
Environment Agency Incident Management Plans  
Environment Agency 24/7 incident response Environment Agency  
Memorandum of Understanding with Fire Brigades, Police, Local Authorities,  
Highways Agency, Health Protection Agency and Health Authority  
South Central Ambulance NHS Trust Major Incident Plans  
Royal Berkshire Hospital NHS Trust Major Incident Plan  
Heatherwood & Wexham Park Hospitals NHS Trust Major Incident Plan  
Berkshire Healthcare Trust Major Incident Plan  
Berkshire Primary Care Organisations Major Incident Plan and Operational  
Response Manuals  
Buckinghamshire Hospitals NHS Trust Major Incident Plan  
Buckinghamshire Primary Care Organisations Major Incident Plan  
Buckinghamshire Mental Health Trust Major Incident Plan  
Milton Keynes Hospital NHS Trust Major Incident Plan  
Oxford Radcliffe Hospitals NHS Trust Major Incident Plan  
Nuffield Orthopaedic Clinic Major Incident Plan  
Oxfordshire Primary Care Organisations Major Incident Plan  
Oxford Mental Health Trust Major Incident Plan  
South Central Strategic Health Authority Major Incident Plan  
Oxfordshire Fire and Rescue Service response plan  
Buckinghamshire Fire and Rescue Service response plan  
Royal Berkshire Fire and Rescue Service response plan  
Thames Valley Police Emergency Procedures Manual  
ACPO Emergency Procedures Manual

**Additional risk treatment required**

1. Confirmation of dissemination of reported site information to appropriate Category 1 responders.
2. Identification of principal transport hazards (air, rail, road, water) –
  - Destination in TV area; transiting through TV area; originating in TV area.
  - Identification of principal transport choke points where incident could create abnormal impact – e.g., transport node where road, rail and air interchanges are coterminous (Daventry International Rail Freight Terminal, Heathrow/M4/M25, etc).

