

INDIVIDUAL RISK ASSESSMENT

Hazard/threat category	Sub-category
Industrial accidents and environmental pollution	Major land contamination incident
Hazard and threat description, plus scale	Risk reference number
Pollution incident leading to persistent and/or extensive effect on land quality, major damage to terrestrial ecosystems, property, amenity value and major damage to agriculture/commerce, serious impact on human health	HL5
Author	Environment Agency
Version	2
Date of revision	Next review
December 2007	December 2009

1. Overview of hazard or threat

Major contamination of land can occur as a result of a variety of occurrences including illegal activity, failure of control systems and accidents. Examples include a chemical spillage due to a tank/bund failure or from a tanker RTA.

Major contamination of land can and has resulted in major impact on land quality, use and human health.

2. Key historical evidenceNational events

There have been over 40 incidents resulting in a major environmental impact to land in England and Wales between 2003 and 2006.

Local events

Over the last 4 years the Environment Agency has investigated and responded to 4 incidents that caused a major contamination of land in the EA Thames Region (larger than the TVLRF). These incidents have led to and continue to have major impact on land use and quality some of which require extensive and prolonged remediation to remove the contaminant and protect groundwater.

Incidents of this kind occur regularly and the likelihood of a major contamination of land occurring in the next 5 years is high (probable). Most major environmental incidents have a low/insignificant impact on the economy, human health and society.

3. Likelihood

Hazard	Outcome description	Likelihood
Major land contamination incident	Pollution incident leading to persistent and/or extensive effect on land quality, major damage to terrestrial ecosystems, property, amenity value and major damage to agriculture/commerce, serious impact on human health	Probable (5)

4. Impact

Summary

Hazard	Outcome description	Impact				
		Health	Social	Env	Econ	Overall
Major land contamination incident	Pollution incident leading to persistent and/or extensive effect on land quality, major damage to terrestrial ecosystems, property, amenity value and major damage to agriculture/commerce, serious impact on human health	2	3	5	3	3

Details

Impacts
Primary
Persistent and extensive contamination of land
Major impact on water quality – surface and ground water
Major Impact on flora and fauna
Major damage to terrestrial ecosystem, possibly within designated habitat

(e.g. SSSI, SAC)
Significant impact on amenity
Impact on agriculture/commerce - impact on land use and/or disruption to commerce
Public exposed to concentration levels giving rise to serious and known health risks
Secondary
Long term impact on the environment
Long term impact on water quality
Long term impact on flora and fauna
Continued impact on amenity
Clean up and remediation

5. Vulnerability and resilience

Major contamination of land is unfortunately a regular occurrence.

The Environment Agency is very experienced in dealing with such incidents and works closely with other agencies in responding to remediating and enforcing against such incidents.

Coordination of recovery and restoration following a major incident is likely to be through the relevant LA/Recovery Working Group.

6. Overall assessment

Category	Sub-category		
Industrial accidents and environmental pollution	Major land contamination incident		
Outcome description	Impact	Likelihood	Risk
Pollution incident leading to persistent and/or extensive effect on land quality, major damage to terrestrial ecosystems, property, amenity value and major damage to agriculture/commerce, serious impact on human health	Moderate (3)	Probable (5)	High

Controls in place

- 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.
- Fire and Rescue Service supplied with pollution control equipment and an Environment Protection Unit
- BFRS OC 62/1/1, Chemical waste disposal
- Oxfordshire County Council Emergency Plan
- Milton Keynes Council Major Incident Guide
- 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
- Oxfordshire, Royal Berkshire and Two Shires Ambulance NHS Trusts Major Incident Plan
- West Berkshire Council – Major Incident Plan, LA Land Contamination Strategy held by Env Health, Links with Land Contaminations Consultants
- Royal Berkshire Hospital NHS Trust Major Incident Plan
- Heatherwood and Wexham Park Hospitals NHS Trust Major Incident Plan
- Berkshire Primary Care Organisations Major Incident Plan and Operational Response Manuals
- Berkshire Healthcare Trust Major Incident Plan
- Buckinghamshire Hospitals NHS Trust Major Incident Plan
- Milton Keynes Hospital NHS Trust Major Incident Plan
- Buckinghamshire Mental Health Trust Major Incident Plan
- Buckinghamshire Primary Care Organisations Major Incident Plan
- Oxford Radcliffe Hospitals NHS Trust Major Incident Plan
- Oxford Mental Health Trust Major Incident Plan
- Nuffield Orthopaedic Clinic Major Incident Plan
- Oxfordshire Primary Care Organisations Major Incident Plan
- Thames Valley Strategic Health Authority Major Incident Plan
- Berkshire Integrated Emergency Planning Structure
- Wokingham District Council Emergency Plan
- Reading Borough Council Emergency Plan
- West Berkshire Council Emergency Plan
- Bracknell Forest Borough Council Emergency Plan
- Royal Borough Council of Windsor and Maidenhead Emergency Plan
- Slough Borough Council Emergency Plan

Additional risk treatment required