Hazard/threat category	Sub-category
Industrial accidents and environmental pollution	Accidental release of radioactive material from incorrectly handled or disposed of sources
Hazard and threat description, plus scale	**Risk reference number**
Up to 5 fatalities and 100 contaminated people requiring medical monitoring. Many worried well may present at hospitals. Radiation may be spread over several kms, but most concentrated where source if opened	H11
Date of revision	**Next review**
November 2007	November 2008
Version	2
Author	South Central Ambulance Service

1. Overview of hazard or threat

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

Potential causes – fire, explosion, leak, or deliberate release
Public health impact may be immediate or delayed onset (risk of undetected small scale pollution leading to late onset problems - eg. Open source undetected, groundwater pollution.

Fire (& possibly explosion) may generate unpredictable plumes and compounds through mixing or partial combustion of primary materials. E.g., fire in factory producing radioactive 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 under Risk Reference Number H11 have been equated to those that fall within the reporting requirements of the COMAH (Control Of Major Accident

Hazards) regulations, 1999, and MOD premises, licensed nuclear installations and some other premises.

3. Likelihood

Hazard	Outcome description	Likelihood
Accidental or unplanned release of radioactive material from incorrectly handled or disposed of sources	Up to 5 fatalities and 100 contaminated people requiring medical monitoring. Many worried well may present at hospitals. Radiation may be spread over several kms, but most concentrated where source if opened	**Negligible (1)**

4. Impact

Summary

Hazard	Outcome description	Impact			
		Health	Social	Env	Econ
Accidental or unplanned release of radioactive material from incorrectly handled or disposed of sources	Up to 5 fatalities and 100 contaminated people requiring medical monitoring. Many worried well may present at hospitals. Radiation may be spread over several kms, but most concentrated where source if opened	4	4	4	4

Details

Impacts
Primary
Airborne pollution
Secondary
Liquid pollution of water courses/aquifers Resuspension of particulates

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 licensed nuclear installations.

7. Overall assessment

Category	Sub-category		
Industrial accidents and environmental pollution	Accidental or unplanned release of radioactive material from incorrectly handled or disposed of sources		
Outcome description	**Impact**	**Likelihood**	**Risk**
Up to 5 fatalities and 100 contaminated people requiring medical monitoring. Many worried well may present at hospitals. Radiation may be spread over several kms, but most concentrated where source if opened.	**4**	**1**	**MEDIUM**

Controls in place

South Central Ambulance Service Major Incident Plan
Buckinghamshire Fire & Rescue Major Incident 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 Major incident Guide
Oxfordshire, Royal Berkshire & Two Shires Ambulance NHS Trust Major Incident Plans
Royal Berkshire Hospital NHS Foundation Trust Major Incident Plan
Heatherwood & Wexham Park Hospitals NHS Foundation 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
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
Royal Berkshire Fire & Rescue Major Incident Plan
Oxfordshire County Council Emergency 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).