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|--|---|
| <b>Hazard/threat category</b>  | <b>Sub-category</b>   |
| Industrial accidents and environmental pollution   | Fire or explosion at a gas terminal as well as LPG, LNG and other gas onshore feedstock pipelines and flammable gas storage sites |
| <b>Hazard and threat description, plus scale</b>   | <b>Risk reference number</b>  |
| Up to 3km around site causing up to 500 fatalities and up to 1500 casualties. Gas terminal event likely to be of short duration once feed lines are isolated; event at a storage site could last for days if the explosion damaged control equipment | H1  |
| <b>Date of revision</b>  | <b>Next review</b>  |
| December 2007  | December 2008   |
| <b>Version</b>   | 2   |
| <b>Author</b>  | Royal Berkshire Fire and Rescue Service   |

### 1. **Overview of hazard or threat**

Severe fire and explosion involving one or more gas storage cylinders/tanks, spreading debris over a large area. A large rapidly expanding fireball would cause smaller fires to start.

Damage to surrounding buildings and infrastructure would be very severe making access in and around the site very difficult for responding emergency services.

Water supplies for fire fighting could be damaged.

Smoke from the initial fire and subsequent fires could be toxic and will spread over a large area depending on the weather conditions.

### 2. **Key historical evidence**

There is no historical evidence of an incident like this taking place in the UK. There have been several large fires at storage and distribution sites that have had the potential to fall into this category.

### 3. **Likelihood**

| <b>Hazard</b>  | <b>Outcome description</b>  | <b>Likelihood</b>     |
|--|---|-----------------------|
| Fire or explosion at a gas terminal as well as LPG, LNG, and other gas onshore feedstock pipelines and flammable gas storage sites | Up to 3km around site causing up to 500 fatalities and up to 1500 casualties. Gas terminal event likely to be of short duration once feed lines are | <b>Negligible (1)</b> |

|  |  |  |
|--|--|--|
|  | isolated; event at a storage site could last for days if the explosion damaged control equipment |  |
|--|--|--|

#### 4. Impact

##### Summary

| Hazard   | Outcome description  | Impact |        |     |      |
|--|--|--------|--------|-----|------|
|  |  | Health | Social | Env | Econ |
| Fire or explosion at a gas terminal as well as LPG, LNG, and other gas onshore feedstock pipelines and flammable gas storage sites | Up to 3km around site causing up to 500 fatalities and up to 1500 casualties. Gas terminal event likely to be of short duration once feed lines are isolated; event at a storage site could last for days if the explosion damaged control equipment | 4      | 3      | 3   | 3    |

##### Details

| <b>Impacts</b>   |
|--|
| <b>Primary</b>   |
| Damage to surrounding properties leading to members of the public unable to return to their homes or place of work |
| Large numbers of casualties requiring treatment for burns.   |
| Recovery of bodies from the site and the surrounding area  |
| Poor air quality due to smoke which may contain toxic or noxious substances  |
| Possible environmental contamination of land, surface water and ground water                                       |
| <b>Secondary</b>   |
| Long term effects on business not directly involved in the fire  |
| Possible health implications due to toxic substances in the smoke.   |
| Drifting smoke may affect adjacent transport networks  |
| Possible impact to surface and ground water from contamination of run off  |

**5. Vulnerability and resilience**

Plans in place under COMAH regs to deal with on and off site incidents.

**6. Mitigation and control measures**

**7. Overall assessment**

| <b>Category</b>  | <b>Sub-category</b>   |                   |               |
|--|---|-------------------|---------------|
| Industrial accidents and environmental pollution   | Fire or explosion at a gas terminal as well as LPG, LNG and other gas onshore feedstock pipelines and flammable gas storage sites |                   |               |
| <b>Outcome description</b>   | <b>Impact</b>   | <b>Likelihood</b> | <b>Risk</b>   |
| Up to 3km around site causing up to 500 fatalities and up to 1500 casualties. Gas terminal event likely to be of short duration once feed lines are isolated; event at a storage site could last for days if the explosion damaged control equipment   | <b>3</b>  | <b>1</b>          | <b>Medium</b> |
| <p><b>Controls in place</b><br/>           COMAH regs including on and off site plans<br/>           Site Specific Plans<br/>           BFRS OC 11/30, Major Incidents; OC 11/44, Gas Pipelines; OC 14/2/1, Gas Indicator combustible<br/>           Oxfordshire County Council Plan<br/>           RBFRS Major Incident Plan<br/>           Environment Agency Incident Management Plans<br/>           EA 24/7 Incident Response<br/>           EA MOU with Fire Brigades, Police, Local Authorities, Highways Agency, Health Protection Agency &amp; Health Authorities<br/>           Oxfordshire, Royal Berkshire &amp; South Central Ambulance NHS Trust Major Incident Plans<br/>           Royal Berkshire Hospital NHS Trust Major Incident Plan<br/>           Heatherwood &amp; Wexham Park Hospitals NHS Trust Major Incident Plan<br/>           Berkshire Healthcare Trust Major Incident Plan<br/>           Berkshire Primary Care Organisations Major Incident Plan and Operational Response Manuals<br/>           Thames Valley Strategic Health Authority Major Incident Plan<br/>           Berkshire Integrated Emergency Planning Structure<br/>           Berkshire Unitary Authorities Emergency Plans X 6<br/>           Thames Valley Police Emergency Procedures Manual<br/>           ACPO Emergency Procedures Manual<br/>           Oxfordshire Fire &amp; Rescue Service Major Incident Policy</p> |   |                   |               |

**Additional risk treatment required**

Local/Regional joint emergency plans

Local/Regional joint exercises