Facility	Humber Refinery
Date	16th April 2001
Consequences	The immediate area of the facility was devastated, many other buildings on site were badly damaged and there was widespread damage to surrounding properties, particularly in the village of South Killingholme. Fatalities and serious injuries were avoided only because the incident occurred on a bank holiday and at shift changeover time when there were very few people out on site.
Description of accident	Failure of pipework led to a major gas release containing 90% ethane/propane/butane. About 20 to 30 seconds after release, the gas cloud ignited resulting in a massive explosion and fire. As the fire burned, it caused failures of other pipework resulting in further fires.
Key Lessons Learnt	Management of pipework inspection: • Effective pipework inspection systems are a vital major accident prevention measure for high hazard pipework. • Such systems should at least meet current industry good practice standard. • Decisions on inspection intervals should be informed by suitable and sufficient information on process conditions and previous inspection findings. Management of change: • Effective management of change systems, which consider both plant and process modifications, are essential to prevent major accidents. • Particular care is needed to ensure that 'quick fix' modifications, during the commissioning and early operation phases of new plant, are covered. Management of corrosion: • Systematic and thorough arrangements are necessary for the effective management of corrosion on major hazard installations. • Such arrangements should ensure that any available information on relevant corrosion degradation mechanisms is identified and acted on. • Adequate resource, including relevant expertise, should be applied to ensure that adequate standards are achieved and maintained. Communication: • Effective communication is an important element of any safety management system. In the context of major hazard establishments the accurate recording and effective sharing of information and data relevant to plant corrosion is essential for major accident prevention. • Communication systems should aim to actively involve the workforce in the prevention of major accidents as part of an adequately resourced process safety management system.

Reports & Links	Public report of the fire and explosion at the Conoco Phillips Humber refinery, Health and Safety Executive (available from the HSE website)