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TYNE AND WEAR FIRE AND RESCUE AUTHORITY  
EMERGENCY PLANNING UNIT

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*Committee Report*

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**Meeting :** CIVIL CONTINGENCIES COMMITTEE : 25 OCTOBER 2010

**Subject :** MAJOR HAZARD EXERCISE: EXERCISE CORNERSTONE (NGN LTD)

*Report of the Chief Emergency Planning Officer*

**1 INTRODUCTION**

- 1.1 The purpose of this report is to inform members of a Major Accident Hazard Pipelines (MAHP) multi agency table top exercise carried out with Northern Gas Networks at West Denton Community Fire Station 8 September 2010. The event was entitled "Exercise Cornerstone 2010".

**2 BACKGROUND**

- 2.1 The Pipelines Safety Regulations 1996 are made under the Health and Safety at Work Act 1974 and the enforcing authority is the Health and Safety Executive (HSE). The regulations require the Fire and Rescue Authority to prepare an emergency plan and review it regularly (not less than every three years). The HSE describe the purpose of an emergency plan as 'To detail action to be taken to minimise the consequences to the Health and Safety of people in the event of an emergency involving a major accident hazard pipeline' (background paper 2). The duty to prepare an appropriate plan is discharged on behalf of the Tyne and Wear Fire and Rescue Authority by the Tyne and Wear Emergency Planning Unit (TWEPU).
- 2.2 Natural gas high pressure pipelines run through Newcastle City Council Sunderland Council and Gateshead Council areas. The pipelines are manufactured using high quality pressure steel to diameters varying from 75 to 40 centimetres (2 foot six inches to 16 inches) and operate at pressures of up to 38 bar (approximately 550 pounds per square inch). To put this into perspective, a domestic gas supply operates at 1 bar or 14.5 pounds per square inch.
- 2.3 The testing of emergency plans is required to ensure that they are accurate, complete and practicable. "Exercise Cornerstone" has been developed as an important element of the Northumbria Local Resilience Forum (LRF) Training and Exercising programme 2010/2011.

**3 RECENT INCIDENTS**

- 3.1 On 9 September 2010, a gas pipe explosion in the San Bruno City (near San Francisco in the United States of America) killed seven people and destroyed over 37 homes. The blast was so immense that it created a crater and destroyed the water mains, meaning firefighters responding to the call had no local fire hydrants to use.
- 3.2 Although there has been no major gas pipeline incident in the UK for many years, the San Bruno incident illustrates the requirement for continued awareness of the potential impact on the community of gas pipeline incidents
- 3.3 In the UK there are extensive arrangements to reduce the likelihood of serious incidents to such pipelines, covering design, protection and inspection of pipeline routes by routine overflights. However the impact of such incidents is potentially large, as was recently shown by the tragic incident at San Bruno.

## **4 THE EXERCISE**

- 4.1 This exercise was planned, coordinated and facilitated by TWEPU with contributions from Northern Gas Networks (NGN) and Tyne and Wear Fire and Rescue Service (TWFRS) colleagues and members of the Northumbria LRF Training and Exercise Sub Group.
- 4.2 The exercise was held on 8<sup>th</sup> September 2010 and was attended by TWFRS, Northern Gas Networks, Northumbria Police, Newcastle City Council, Gateshead Council, Sunderland City Council, NHS South of Tyne, North East Ambulance Service (NEAS) and TWEPU. North Tyneside Council sent an observer as one of the pipelines runs close to its boundary with Newcastle City Council.
- 4.3 The rationale behind the exercise was to explore activation and response by partners, test the usefulness of the off site plan to responders and to assist partners in identifying issues that need to be addressed or exercised within their own organisations, particularly those emergency responders who would be first on the scene.
- 4.4 The Northumbria LRF Training and Exercise Sub Group asked the Emergency Planning Unit to run the event using three syndicates, one for each locality and with each having local leading officers for the Fire and Rescue Service, Police and representation from the relevant local authority.

## **5 EXERCISE SCENARIO**

- 5.1 The exercise followed a general scenario of a mechanical excavator disturbing a high pressure gas pipe in a relatively populated area. Such mechanical damage is the most common source of incidents or near misses. The subsequent discovery of a loud high pressure leak had several common implications for the responding services, principally, ignition and fire risk, possible large scale evacuation and extremely high noise levels. The locations chosen were Newburn (Newcastle City

Council), Grangetown/Hendon (Sunderland City Council) and Blaydon (Gateshead Council).

## 6 EXERCISE OUTCOMES

6.1 17 out of a possible 21 evaluation sheets were returned. Not all questions were answered by all responding participants. The results of the initial evaluation are as follows:

- Of 17 responding participants none stated that they were 'very familiar' with the Plan, 7 'familiar' and 10 'not familiar'
- In response to the question '**How well did the syndicate seek to use the plan**', 3 participants reported 'very well' 10 'well' and 3 'not well'.
- In response to the question '**How well did the plan support syndicate decision making**', 1 participant reported 'very well' 11 'well' and 4 'not well'.
- All respondents to the question '**Did you find the visual aids and learning methods enabled you to learn?**' answered 'Yes'.
- Of 15 responding participants, all stated that the format was appropriate.
- 10 participants identified issues for their own organisations.
- Overall of 15 responding participants 4 rated the exercise as 'very good' and 11 as 'good'. One participant stated that the exercise was "excellent, really informative and useful"; another stated that it was "extremely worthwhile"; and a third stated that the exercise was "very worthwhile".

6.2 The exercise evaluations showed that the event was considered to be very successful. From a directing staff point of view it was clear that the exercise helped participants appreciate the scale of such a challenge and there was good, joined up thinking and working especially between the Police and Fire and Rescue Service representatives.

6.3 The exercise highlighted a number of areas of improvement and a formal debrief was held on 24 September at TWEPU where issues and lessons learned were agreed. These have been captured and will be shared with partners for action. Of particular importance is the promotion of the plan and its contents to partners, and ways of doing this are under active consideration.

## 7 CONCLUSION

7.1 Exercise Cornerstone was a successful and very useful exercise. Many lessons were learned to aid the development of The Major Accident Hazard Pipelines Plan. A further outcome of the exercise will be a revision

of Standard Operating Procedures by Emergency Services and Partner Agencies.

## **8 RECOMMENDATIONS**

8.1 Members are asked to:

- a) Note the content of this report; and
  - b) Support the continued integrated emergency management of Major Accident Hazard Pipelines in Tyne and Wear.
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## **BACKGROUND PAPERS**

Working papers relating to the above are held in the offices of TWEPU

- 1) The Pipelines Safety Regulations 1996 SI1996 No. 825
- 2) Further guidance on emergency plans for major accident hazard pipelines - HSE