

Pipelines Safety Regulations

Pipeline Emergency Plans and Procedures UKOPA Guidance for Testing

1 Introduction

The Pipelines Safety Regulations 1996 currently place a duty on local authorities to prepare emergency plans for pipelines, and enable local authorities to charge for the preparation of these plans. Amendments to these regulations to place a duty on local authorities to test plans every three years and to enable local authorities to charge for these tests were proposed by HSE. These amendments have now been withdrawn.

UKOPA actively participated in the stakeholder consultation for the proposed amendments, and considers that the amendments to safety legislations will be progressed at some time in the future. The consultation exercise identified a number of important issues relating to testing of emergency plans, which UKOPA considers represent best practice and has consolidated as guidance in this document.

2 Pipeline Emergency Plans

2.1 Purpose of Local Authority Emergency Plans

The purpose of a local authority emergency plan is to ensure that the response of all key partners to an accident protects the public and is co-ordinated in the most effective way.

It is important that the interpretation and approach between local authorities, pipeline operators, emergency services and other key partners is clear and allocation of responsibilities in the event of an accident is transparent, so that the requirements for involvement in response are clearly understood.

2.2 Pipelines

As major accident hazard assets, pipelines have particular characteristics (see section 2.4) which are likely to affect the planning and resourcing of emergency plan and procedure tests, and should be taken into account. The scope and scheduling of any planned testing covering specific aspects may need to accommodate specific local requirements. Tests should be planned and co-ordinated of to be efficient and effective and to maximise the value obtained. An auditable process for documentation of programmes, decisions and actions raised in testing of pipeline emergency plans which demonstrates compliance with the Regulations is therefore recommended.

Properly planned and executed tests will result in charges which may be shared between the local authority, the emergency services and the pipeline operator. A transparent approach to costing and charging which is sufficiently flexible to allow for local differences in organisation, infrastructure and resources is required.

2.3 Testing of Emergency Plans – Aims and Objectives

The duties and guidance for the preparation of and charging for preparation of emergency plans for major accident hazard pipelines (MAHPs) are defined in PSR 96. This document covers guidance relating to the testing of Emergency Plans and procedures. The document stresses the importance of dovetailing operators' arrangements with those of the local authority, and the importance of active co-operation and co-ordination during an emergency.

Testing of plans and procedures should ensure that communication information is correct, communication links are active, responsibilities are clear and complete, and all aspects of response to the emergency are covered.

Testing offers local authorities, emergency services and pipeline operators a valuable opportunity to build up levels of understanding that can be reflected in the review and subsequent revision of both the pipeline emergency plan, and other emergency response plans. Experiences gained and lessons learned also have a transfer value, and thought should be given as to how they might be shared on a wider basis.

2.4 Characteristics Particular to Pipelines

As major accident hazard assets, pipelines have particular characteristics which require consideration when planning and co-ordinating emergency plan tests. These characteristics are summarised as follows:

- Pipelines are long, linear distributed assets which are laid on 3rd party land and cross boundaries of several LAs.
- Pipelines are generally remotely located in rural areas, are unmanned and remotely operated.
- Pipelines are buried, so the general public may not be aware of pipeline presence/location.
- In the event of an incident, the Emergency Services are likely to be the first to be notified, and could be the first to arrive at the scene of the incident.
- Rendezvous points may not be known in advance.

The above characteristics are likely to affect the scope, scale and scheduling of reasonable emergency plan tests, and such issues should be clearly documented and reflected in any schedule of testing.

The emergency response plan should include a process in which the pipeline details, route and infrastructure are reviewed to identify:

- New additions and major modifications to the pipeline (including change of operator)
- New developments in the vicinity of the pipeline
- Any changes in organisation of any party involved in emergency response
- Advances in technical knowledge, particularly those which may lead to a better understanding of hazard and risk consequences
- Knowledge gained as a result of major incidents.

2.5 Testing of Characteristics Particular to Pipelines

Based on the characteristics described above, the following aspects are of particular importance in testing of pipeline emergency plans:

- The diagnostic period – including initial reporting and mobilisation
- Communication between all agencies.
- Interface with the media and provision of information to the public.

3 Testing

Where a pipeline carries across several local authority areas and is controlled by the same operator, the scope for joint testing arrangements should always be considered by the respective local authorities, in an effort to avoid any unnecessary duplication of resource and effort, by all likely to be involved. Where joint testing is not appropriate, it is important that local authorities agree phased test arrangements with the operator.

In planning the extent of test arrangements, the local authority should set out to reach agreement with the pipeline operator, the emergency services and adjacent local authorities on the arrangements to be put in place. An exercise planning meeting(s) should be arranged which fully documents, as an auditable stage in the local authorities management of the programme of testing, the aim, objectives, scope and scale of the test. The elements of the plan to be tested should be clearly defined, together with the programme of testing of other aspects of the plan to demonstrate that all relevant aspects are tested. The meeting(s) should confirm and record agreement between the local authority(ies) and pipeline operator(s) regarding all aspects of the operator's involvement in the test.

3.1 Characteristics Particular to Pipelines

The key objectives of any test are:

- To validate the pipeline emergency plan.
- Test characteristics particular to pipelines (ref flowchart, Appendix 1).
- Define what, how and when to test.
- Ensure the response of pipeline operators, emergency services and other key partners dovetails under the LA plan.
- Ensure that programmes, decisions and actions raised in testing pipeline emergency plans are auditable

3.2 Scope

The scope of the test should cover the characteristics particular to pipelines, and should be sufficient to validate the plan and ensure it is adequate.

The scope of a pipeline emergency plan test would normally include:

- Incident identification
- Process for establishing communications
- Strategy for mobilisation of resources
- Emergency response by all agencies, including

It would not normally include physical deployment of resources, off-site support and welfare facilities, stand down and recovery and restoration, all of which are general to all emergency response requirements.

3.3 Methods

Various methods can be applied to the testing of pipeline emergency plans:

3.3.1 Communication Exercises

Communication exercises test the essential direct links, contact numbers and contact details which are required in the event of an emergency.

Communication exercises in which the direct communications links and contacts between key stakeholders are tested to confirm accuracy and reliability are an essential requirement.

3.3.2 Control post testing

Control post testing is the recommended method for testing communications, which is an essential component of the emergency plan and must be included in every test programme.

A control post communication exercise examines the adequacy of communications between all key players in an emergency. Testing in this way involves resources based at the posts and locations that they would take up in the event of an accident. This means that without deploying any resources, personnel work through the communications involved in the roles, decisions and actions that arise in response to an accident. The exercise may include simulating some of the potential problems that can be experienced during real incidents.

3.3.3 Table Top Exercises

The method recommended for testing of emergency plans for pipelines is a table top exercise. Table top exercises bring together the appropriate personnel and resources in one place to work through their roles in the event of an emergency in a realistic way. Table top exercises are flexible, and can test the response to more than one of the identified hazards with very little additional effort and expense.

Other methods of testing are:

Internet-based Communications Software, Information Technology or Virtual Reality Systems

These systems being developed allow realistic simulations of accidents and the response to them. Such systems have the potential to enable effective and practical testing, and to enhance the scope of the exercise.

Table top testing is considered to be a relevant and effective means of testing emergency plans, and is the recommended method for testing of pipeline emergency plans.

Seminar, Workshop or Discussion Based Tests

These test exercises are aimed at informing participants about the organisation and procedures which would be invoked in response to an accident. This approach can be used to provide information on current developments, and generally focus on particular aspects of response to an accident.

Live Exercises

Live exercises involve the deployment of appropriate resources in a simulation of their actual response to an accident scenario selected from the identified hazards. This type of testing is time consuming and resource intensive, and requires careful planning to ensure maximum benefit is gained.

3.4 Planning and Co-ordinating

The test scenario and the scope and scale of a test of the pipeline emergency plan should be agreed between local authorities, pipeline operators and emergency services at an exercise planning meeting, held before the test is carried out, and developed at any subsequent planning meetings required.

The exercise planning meeting should be fully documented, as an auditable stage in the management of the testing. The aims and objectives, scope and scale of the test with respect to the elements of the plan which are being tested, including how the value of the test is maximised and how learning will be shared, should be clearly documented. The benefit of the test to all partners involved should be considered, to ensure that the value of the test is maximised at the earliest opportunity and learning is shared.

Pipelines cover large distances and are likely to cross the boundaries of several LA and emergency service organisations, so any tests should be planned to cover a practical geographic area which enables the interfaces between key partners to be examined.

Emergency plan tests should be supplemented by operational checks, for example accessibility to critical locations on the pipeline route by the emergency services.

In selecting the geographic area for and therefore participants in the test, consideration of the use of Police Authority Areas is recommended, but other locally determined areas or groups may be determined. However, the selected geographic area should take account of local requirements and enable maximum benefit to be gained.

Where possible the test should involve more than one pipeline operator in order to ensure maximum benefit and learning. As pipelines are remotely located and their operation is unmanned, the diagnostic period may involve interfaces between the emergency services and all pipeline operators present. In addition, the most effective response to an accident may involve input from more than one pipeline operator.

Test programmes should be co-ordinated with adjacent areas to ensure reasonable involvement of the operational resources. In many cases, pipeline operators have responsibilities for pipelines which cross the boundaries of several LA and emergency service organisations. Test programmes should therefore be co-ordinated to minimise the disruption to operational resources caused by involvement in a number of different tests, and programmed with them to ensure plans are adequately tested without placing unrealistic burdens on any of the participating agencies.

3.5 Evaluation

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The key stages test should be identified and reviewed in accordance with HS(G)65 principles, and each stage should be evaluated in a structured way to identify shortcomings, successes, learning points and actions. Once actions have been identified, a programme, responsibilities and timescales to address these should be established.

Debriefings following an emergency plan test should be carried out in an open and blame free atmosphere. This should allow any problems in implementing the emergency plan to be identified, the reasons for the problems to be discussed and appropriate solutions to be considered.

Debriefings should be organised to ensure involvement by all relevant parties, and scheduled appropriately, ie

- a) On the day multi-agency debriefing, involving all key partners involved in the test,
- b) Follow up meeting to obtain direct single agency feedback if required
- c) Test report – including a summary of learning points and actions with responsibilities and timescales for completion.
- d) Communication of lessons learned to other LAs and operators.

3.6 Charges for Tests

There is no provision for charging by the Local Authorities to pipeline operators for testing of emergency plans. Before any test of a pipeline emergency plan is carried out, the local authority should reach agreement with the operator on the scale and scope of the test (see 2.4) and any charges for cost recovery proposed.