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Department of Enterprise, Trade and Employment

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**Public consultation by the
Department of Enterprise, Trade and Employment**

**Review of Dangerous Substances Acts – updating the regulatory regime
applying to petroleum spirit (petrol) and other fuels**

1. Background

The focus of this public consultation is on updating the regulatory regime applying to petrol and other fuels, currently provided under the Dangerous Substances Acts and related Regulations.

ARUP Consulting Engineers were commissioned by the Department of Enterprise, Trade and Employment to provide advice and recommendations in support of the review by the Department of the Dangerous Substances Acts 1972 and 1979 and related Regulations - Appendix I lists these. The ARUP Report ["The Report"] is available on the Department's website www.entemp.ie.

The review of the Dangerous Substances Acts and related Regulations takes place against the background that much of the subject matter covered by the Acts is redundant, owing to more recent EU legislation or other planned national legislation, or is outdated. The Dangerous Substances Acts are listed in the Safety, Health and Welfare at Work Act 2005 for eventual repeal.

The existing Regulations applying to petrol set down detailed technical requirements to qualify for a licence from local authorities, or harbour authorities, as appropriate, which, in many respects, are now outdated. For example, they do not provide for

- current technical specifications for equipment,
- dispensing of fuel at automated stations,
- new types of fuel, e.g. bio fuels or
- best current practice fire safety measures, e.g. the recommendations from the outcome of investigations into the Buncefield accident in the UK.

2. Consultants' Recommendations, Consideration, and Possible Ways Forward.

The Report makes 30 recommendations, based on surveys in Ireland and on analysis of practice in other countries. Of these, 19 relate to the regulation of retail and private petroleum stores. The remaining 11 cover the regulation of bulk petrol stores, oil jetties, liquid petroleum gas and alternative fuels. The 30 recommendations can be broadly categorised into 5 issues, namely licensing, risk assessment, enforcement structure, codes of practice and scope. Appendix II sets out the recommendations accordingly.

2.1 Licensing

The Report states that consultation with local authorities suggests that the current licensing system is not being fully implemented and in some cases it has not been implemented at all.

- **Recommendations**

The Report recommends that the requirement to hold a licence should be reconsidered, and leaves open the question of whether or not there should be a licensing system. It also recommends that a national database of petrol stations and private stores be maintained.

Petrol Stations

The Report records the existence of 2,033 petrol retail outlets. The 25 retail stores surveyed by the consultants lead them to comment that possession of a licence of itself is not a guarantee of safety, and thus achieving public safety is not contingent on having a licence.

Private Stores

Private stores refers to stores in which petrol is stored for use in the propulsion of a vehicle, boat, aircraft or any other type of engine in, for example, bus depots, care hire companies, transport companies, golf clubs, public sector organisations, construction sites. The Report indicates that the number and location of private petrol stores that are not licensed is unknown.

Bulk Stores

All petrol bulk stores storing Petrol Class I are subject to licensing by a local authority or harbour authority. Storage of Petrol Classes II and III does not require a licence, but the operator must submit to the appropriate authority, detailed plans and drawings of the store. The Report records the existence of 253 bulk stores, mainly operated by distributors. There is likely to be a number of smaller regional depots, the number and location of which is unknown. Bulk stores diesel and other fuels are not included.

Oil Jetties

A written consent from a harbour master, valid for 3 years, is necessary for loading and unloading of ships. Where a jetty is outside the functional area of a harbour authority, the Health and Safety Authority issues the consent.

LPG

The Report records the existence of 87 LPG outlets. LPG stores on their own are not subject to licensing. LPG may be stored with petrol, subject to being included in the conditions of the licence to store petrol.

- **Consideration**

A system of licensing is a means of providing information to enforcement authorities as to location, types and quantities of fuel stored, and is a simple tool to encourage regulatory compliance, but to work, it must be supported by active enforcement. The real purpose of the licensing system must be clear. Achieving regulatory compliance through a risk assessment approach is dealt with in paragraph 2.2 below. As regards licensing as a source of basic information for enforcement authorities, alternatives that could be considered include the maintenance of a national database through compulsory registration by operators, compulsory notification to the enforcement authority by suppliers and distributors, information from other national regulatory systems [e.g Mineral Oil Traders Licences, or Petrol Vapour Emissions Regulations 1997], registers based on commercial data bases, or monitoring through local enforcement authorities.

The existing Regulations provide that local authorities and harbour authorities, as appropriate, can issue licences. It is an offence under the Dangerous Substances Acts not to have a licence. Under the existing legislation, local authorities and harbour authorities can prosecute for the contravention of the conditions of a licence issued by them. The Health and Safety Authority is the prosecuting authority for failure to have a licence.

- **Possible Ways forward**

These include

- retaining a licensing system, but updating it by linking it to risk assessment.

The alternatives to licensing could be either

- an appropriate system of registration,

- whether a national database specifically set up for this purpose,
- or linked in some way to other regulatory obligations applying to fuel stores [e.g, Revenue Commissioners, local planning authorities, the EPA],

or

- an obligation placed on fuel suppliers to notify the enforcement authority of the names and addresses of customers supplied.

In all cases, risk assessment would still feature, as would site visits and enforcement by the enforcement authorities.

2.2 Risk Assessment

● Recommendations

A strong theme in the Report is that of risk assessment, underpinned by preventive measures and enforcement, be considered as a means of regulation.

The consultants found that the levels of regulatory compliance at company owned petrol stations not holding a licence were comparable to those holding a licence. They comment that space and financial limitations may mean that some stations and in particular kerbside petrol stations may not be able to carry out significant changes to the site. The consultants suggest that a greater number of petrol stations could achieve a high level of safety by adopting a risk assessment approach. The top risk identified in the Report for petrol stations, petrol bulk stores and oil jetties is loss of containment during loading and unloading, posing risk to the environment and public safety.

● Consideration

The Dangerous Substances Acts predate the arrival of the risk assessment approach which is now the accepted tool for managing safety in all kinds of situations e.g. for managing worker safety and health or for judging risk for insurance purposes. There are different levels of risk posed by different situations and so decisions relating to protection and prevention must be appropriate to each.

A risk assessment approach explicitly places the responsibility for safety on an ongoing basis on those responsible for undertakings.

Risk assessment and preventive and protective measures could address the identified top risk of loss of containment during loading and unloading, and other risks presented by the storage and dispensing of petrol and other engine fuels, and new situations such as unmanned petrol stations.

● Possible Ways Forward

This could include an obligation to identify potential hazards to persons and property, to assess the health, safety and environmental risks, to have a written site-specific risk assessment, and to decide and implement protective and preventive measures. An example of such a measure could be to close a petrol station during deliveries if the risk assessment shows this to be necessary.

The risk assessment could take account of risk factors such as the following, and of any relevant Code of Practice –

- General requirement for safety management, including unmanned petrol stations
- Protection of the environment and of safety and health
- Planning, design, construction, verification, commissioning, decommissioning, and reinstatement of fuel facilities
- Competence, instruction and training of operators
- Road tanker loading and unloading: Procedure for fuel delivery, including driver-controlled deliveries
- Procedure for dispensing of fuel, including operation of dispensers by young people and dispensing into containers
- Certification and maintenance of dispensing control equipment and electrical installations
- Fire prevention precautions. [Examples of such precautions could include prohibition of smoking and ignition sources, accessibility of fire extinguishers, storage of containers, marking of hazardous zones, placing of warning notices]
- Wet stock inventory and management procedures
- Venting, drainage, containment
- Emergency procedures

2.3 Enforcement structure

• Recommendations

The Report states that the options for streamlining current enforcement systems should be considered, and that in this regard, account should be taken of the nature of the primary risks involved i.e. public safety and the environment, and other factors. The consultants state that an optimal approach would be to leave enforcement with local authorities. The recommendations to support this approach include putting in place a national support network comprising the relevant bodies, with a suitable local authority or other network member assuming a lead role, and formal empowerment and encouragement to local authorities to pool their resources and co-ordinate enforcement activities. In summary, the Report points to the need for clarity in the structure of enforcement and related enforcement powers, and a consistent and co-ordinated enforcement effort.

- **Consideration**

Responsibility for enforcement should be clear and appropriate to the public policy objectives of fire safety, public safety and environmental protection, and adequate enforcement provisions should be included. The nature of the main risk associated with the storage and handling of petrol and like fuels – risk to public safety from fire or environmental damage – leads to the consultants' consideration that local authorities should be responsible for enforcement activities.

- **Possible Ways Forward**

Following the spirit of the consultants' recommendations, competence would lie with local authorities. Under this arrangement, neither harbour authorities nor the Health and Safety Authority would have any direct involvement in enforcement. However, given the respective remits of harbour authorities and the Health and Safety Authority under other legislation, the need to avoid any unnecessary cost to operators, and the need to make best use of public resources, they could co-operate and co-ordinate, as appropriate, as part of the support network recommended in the Report.

2.4 Codes of Practice

- **Recommendations**

The Report strongly advocates the introduction of Codes of Practice to support the risk assessment approach and underpin a future regulatory regime. 10 of the 30 recommendations of the consultants relate to Codes of Practice, covering such issues as technical specifications of equipment, handling of fuel, fire safety standards, involving all stakeholders and taking account of recent recommendations arising from the investigation of incidents.

The Report refers to existing industry agreed guidance [The "Blue Book" on the Design, Construction, Modification, Maintenance and Decommissioning of Filling Stations], developed and published by the Association for Petroleum and Explosives Administration¹ (APEA), and the Energy Institute, London, which is applied in other countries and which would be suitable for consideration for adoption as recognised standards or Codes of Practice in Ireland. Some Irish companies and local authorities already take account of the Blue Book in the safe operation of petrol stations.

- **Consideration**

¹ UK based organisation with membership including government regulators, oil companies, equipment manufacturers, suppliers & installers.

Given the strength of the consultants' advocacy of the development and implementation of codes of practice, stakeholders need to seriously consider this approach. Consideration needs to be given by the relevant authorities to the development of Codes of Practice in areas such as Fire Safety and Environmental Protection. It is the case that Dublin City Fire Services is already represented on the Irish Branch of APEA. It should be clear that all stakeholders would be part of the process of developing all Codes of Practice.

- **Possible Ways forward**

It is appropriate to consider whether or not Codes of Practice would need to be developed, which could support a risk assessment approach to regulation. If so, it is appropriate to consider if relevant authorities, industry bodies and other stakeholders would launch and coordinate the development of appropriate Irish guidelines or Codes of Practice in this area.

2.5 Scope

- **Recommendations**

The existing legislation applies to one degree or another to the various Classes of petrol and to liquid petroleum gas. The Report recommends the incorporation of alternative and new fuels into any new regulatory system, accompanied by appropriate codes of practice.

- **Consideration**

The existing Regulations do not take account of the current availability of several new types of engine fuel, prompted particularly by environmental concerns, which should be regulated. The new regulatory regime could aim to regulate all known types of engine fuel and ideally provide for the advent of any future new fuels. The existing Regulations are outdated as regards technical specifications for equipment used for these new fuels.

The Dangerous Substances Acts and the Regulations are directed towards the protection of persons and property albeit, for instance, the provisions applying to containment of spillages and the condition of underground tanks have more implications for the environment than the existing scope implies. The question therefore arises as to using the wider regulatory framework to address these public policy objectives of public safety, including fire safety, and safety of the environment.

- **Possible ways forward**

The regulatory regime could include requirements as to the types and quantities of engine fuel to be regulated, to cover all types of storage and activities. It would be desirable to avoid any overlaps or gaps with other legislation such as the Regulations implementing the EU Directive on the control of major accident hazards involving dangerous substances [so-called “Seveso” Directive].

3. Other

While the Report does not make recommendations as to more general regulatory features, it is appropriate to consider in this public consultation, the question of including a general duty on operators to operate safely. Other elements of an updated regulatory regime could include:

Duties of persons responsible for a fuel store or an oil jetty

These could include duties

- to manage stores and jetties so as to prevent fire, injury to the public or damage to the environment;
- and to ensure that
- stores are designed and maintained in a safe condition,
 - there are safe means of access and egress, and
 - plant, machinery and systems of work are safe.

Competent persons

Reflecting other legislation, there could be an obligation placed on persons responsible for engine fuel stores and oil jetties to engage the services of competent persons to help them to meet any regulatory requirements as regards design, construction, modification, maintenance or decommissioning.

Instruction, training and supervision

In addition to obliging persons responsible for the operation of fuel stores and oil jetties to instruct, train and supervise persons working there, there could be an obligation to provide for the setting up an appropriate FETAC- recognised qualification for persons who work at operating petrol stations or who work on an oil jetty on a day-to-day basis.

Reporting unsafe conditions

There could be a requirement on suppliers and on persons employed at a fuel store or oil jetty to report unsafe conditions to the enforcement authority.

Action in emergencies

There could be an obligation to have in place certain procedures and actions to be followed in the case of emergency, including, for example, evacuation in the event of specified incidents, notifying the emergency services, securing equipment, using available protection measures, and giving first-aid.

Display of notices and keeping records

There could be a requirement for appropriate warning and safety notices to be displayed and appropriate records to be kept regarding the operation of a store or oil jetty, including of particular incidents which involve fire, injury to persons or damage to the environment, and that the enforcement authority be informed.

4. Deadline for submissions

Taking account of the ARUP Report recommendations and the considerations outlined above, the Department of Enterprise, Trade and Employment invites views on the possible ways forward for updating the regulatory regime.

Submissions should be sent by email to: chemicals@entemp.ie to arrive no later than 31 March 2009. Please note that all submissions will be published.

Appendix I

Existing legislation under review

Dangerous Substances Act 1972 (No. 10 of 1972)
<http://www.irishstatutebook.ie/1972/en/act/pub/0010/index.html>

Dangerous Substances (Amendment) Act 1979 (No. 21 of 1979)
<http://www.irishstatutebook.ie/1979/en/act/pub/0021/index.html>

The Dangerous Substances (Retail and Private Petroleum Stores) Regulations 1979 (S.I. No 311 of 1979)
<http://www.irishstatutebook.ie/1979/en/si/0311.html>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 1988 (S.I. No. 303 of 1988)
<http://www.irishstatutebook.ie/1988/en/si/0303.html>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 1999 (S.I. No. 424 of 1999)
<http://www.irishstatutebook.ie/1999/en/si/0424.html>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 2002 (S.I. No. 624 of 2002)
<http://www.entemp.ie/publications/sis/2002/si624.pdf>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 2004 (S.I. No. 860 of 2004)
<http://www.irishstatutebook.ie/2004/en/si/0860.html>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 2006 (S.I. No 630 of 2006)
<http://www.entemp.ie/publications/sis/2006/si630.pdf>

The Dangerous Substances (Retail and Private Petroleum Stores) (Amendment) Regulations, 2008 (S.I. No 593 of 2008)
<http://www.entemp.ie/publications/sis/2008/si593.pdf>

The Dangerous Substances (Oil Jetties) Regulations 1979 (S.I. No. 312 of 1979)
<http://www.irishstatutebook.ie/1979/en/si/0312.html>

The Dangerous Substances (Petroleum Bulk Stores) Regulations, 1979 (S.I. No 313 of 1979) <http://www.irishstatutebook.ie/1979/en/si/0313.html>

The Dangerous Substances (Storage of Liquefied Petroleum Gas) Regulations, 1990 (S.I. No. 201 of 1990)
<http://www.irishstatutebook.ie/1990/en/si/0201.html>

Appendix II

Recommendations on Licensing & alternatives, including Risk Assessment [refer to paragraphs 2.1 and 2.2]

Rec. 9. The requirement for operators of retail and private petroleum stores to hold a valid **licence** should be reconsidered.

Rec. 10. A national **database** of retail and private petroleum stores should be maintained

Rec. 1. Legislation should contain an obligation to have an up to date **risk assessment** [for retail and private petroleum stores] and to demonstrate to the competent authority that any measures required by the risk assessment have been taken.

Rec. 2. It should be possible to retain the operation of kerbside stores within the **risk assessment** approach subject to a risk assessment demonstrating that the facility achieves acceptable levels of safety.

Rec. 3. It is recommended that the operation of an unattended self-service site should be preceded by a **risk assessment** of the site. Operation of such stores should be possible subject to appropriate control measures being implemented and acceptable levels of safety achieved.

Rec. 4. A site **risk assessment** should be considered as a basis for deciding whether or not a site should be obliged to close to the public during fuel delivery.

Rec. 21. Legislation should contain an obligation to have an up to date **risk assessment** [for bulk stores] and to demonstrate to the competent authority that any measures required by the risk assessment have been taken.

Recommendations concerning Enforcement Structure
[refer to paragraph 2.3]

Rec. 11. A national support network should be put in place for local authorities and other bodies to help ensure consistent and high levels of enforcement of regulations with a suitable local authority or other network member assuming a lead role.

Rec. 12. Local authorities should be formally empowered and encouraged to pool their resources and coordinate enforcement activities.

Rec. 13. Consideration should be given to relieving harbour authorities of the authority to licence retail and private petroleum stores as currently granted under SI 311 of 1979.

Rec. 14. Any new regulatory regime should be clear as to enforcement powers and enforcement structures.

Rec. 20. Consideration should be given to relieving harbour authorities of the authority to licence bulk stores as currently granted under SI 313 of 1979.

Rec. 29. Consideration should be given to amending the existing Regulations to stipulate a competent authority for marina refuelling depots.

Recommendations concerning Codes of Practice
[refer to paragraph 2.4]

Rec. 5. A code of practice should be adopted for the safe filling of small containers with petrol.

Rec. 8. Most of the technical requirements for retail and private petroleum stores should be removed from the Regulations and included in approved codes of practice.

Rec. 17. Given that dispensing of petrol/ethanol blends proceeds unregulated at retail and private petroleum stores and petroleum bulk stores, it is recommended that the most expedient means to ensure unloading, storage and dispensing takes place in accordance with appropriate technical measures, is to adopt APEA/IP "*Guidance on storage and dispensing of high blend ethanol fuels including E85 at filling stations*".

Rec. 18. A Code of Practice for Compressed Natural Gas, approved by the Minister, should be implemented. This could be an existing Code of Practice or a new document. A new document could adapt as appropriate elements of relevant international standards.

Rec. 19. A Code of Practice for Hydrogen, approved by the Minister, should be implemented. This could be an existing Code of Practice or a new document. A new document could adapt as appropriate elements of relevant international standards.

Rec. 23. Consideration should be given to the implementation [for bulk stores] of an appropriate existing fire safety standard or Code of Practice approved by the Minister or development of a new standard/Code of Practice. A new document could adapt as appropriate elements of NFPA, Institute of Petroleum [IP] or BS documents.

Rec. 24. Development of any standard/Code of Practice [for bulk stores] should be compiled in consultation with the sectors it will directly impact and should include the chief fire officers, petroleum suppliers and equipment manufacturers.

Recommendations concerning Codes of Practice [cont'd]

Rec. 25. The recommendations provided in the Buncefield Standards Task Group Final Report could be taken into account (for application to upper tier Seveso sites) in any bulk stores standard/Code of Practice.

Rec. 27. Consideration should be given to the development and implementation of an appropriate fire safety standard or Code of Practice for jetties handling hazardous liquids that are approved by the Minister. This document could be based on appropriate elements of existing relevant standards.

Rec. 28. Each [oil jetty] standard should be compiled in consultation with the sectors on which it will directly impact. Those sectors should include the chief fire officers, harbour masters, petroleum product suppliers and equipment manufacturers.

Recommendations concerning Scope [refer to paragraph 2.5]

Rec. 15. The definitions of the different classes of petroleum in the current Regulations should be replaced with the classification criteria for flammable substances in the Classification, Packaging and Labelling Regulations.

Rec. 16. Consideration should be given to incorporation of alternative fuels into the retail and private petroleum stores regulatory system. This could include allowing the competent authority to take cognisance of risk assessments carried out with respect to the introduction of alternative fuels to the site.

Rec. 22. Consideration should be given to removing Seveso bulk stores from the DSA licensing system.

Rec. 26. Consideration should be given to extending the written consent procedure [under the Oil Jetties Regs] to other dangerous substances in addition to petroleum products.

Rec. 30. Consideration should be given to removing LPG storage facilities that are subject to the Seveso Regulations from the DSA licensing system.

Other Recommendations [refer to paragraph 3]

Rec. 6. A **prohibition on advertising around petrol pumps** should be considered. While no linkage has been established in this review between accidents at retail stores and advertising near petrol pumps, it is considered that there may be grounds for a prohibition.

Rec. 7. Imposition of a **requirement on fuel suppliers to report unsafe conditions** to a competent authority could be considered in light of the safety measures currently employed by petroleum suppliers, the current legislation in this area and perceived difficulties with such a system.