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For the attention of Kathryn McCartney,
Deputy Solicitor to the ICL Inquiry

The Right Honourable Lord Gill
The ICL Inquiry
3rd Floor,
Lothian Chambers,
59-63 George IV Bridge,
Edinburgh,
EH1 1RN

26th November 2008

Dear Lord Gill,

Further to my letter of 31st July 2008, I am pleased to present for your consideration the Institution of Gas Engineers and Managers' Closing Submission to the ICL Inquiry.

Yours sincerely,

John Williams

Chief Executive Officer

The ICL Inquiry

IGEM's Closing Submission (26th November 2008)

Submission made on behalf of:

The Institution of Gas Engineers and Managers (IGEM)
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LE11 3GH.

IGEM, licensed by the Engineering Council (EC_{UK}), is the Chartered independent body which serves a wide range of gas professionals in the UK and the international gas industry, through its membership and Standards.

IGEM has published industry standards since the 1960s, including those on gas mains and services. These standards are recognised by HSE as appropriate Standards in relevant ACoPs and Guidance, for example HS(L)81 to the Pipelines Safety Regulations 1996. In particular, IGEM publishes IGEM/TD/4, PE and Steel Gas Services and Service Pipework, which addresses both Natural Gas and LPG pipes. This Standard is widely adopted in the Natural Gas supply sector and recognised by many in the LPG sector.

This Submission is limited to commentary on the Conclusions and Recommendations contained in the Report for the ICL Inquiry, dated 9th September 2008, prepared by Rod Sylvester-Evans. Mr Sylvester-Evans' report provides a concise and informative summary of the regulatory and enforcement issues arising from his examination of the LPG industry and the ICL incident. IGEM has chosen not to comment at this late stage on cause and responsibility for the tragic accident. It does, however, wish to contribute to the consideration of steps to be taken to prevent such incidents happening again.

Mr Sylvester-Evans has emphasized (in para 8.8) his identification of recommendations "without recourse to substantive change in legislation". IGEM supports this position, believing that appropriate industry guidance should be sufficient to provide a prompt response to the risks highlighted by the Inquiry.

Before addressing the Recommendations, however, the current state of primary and secondary legislation, and the confusion it adds to this and other issues, should be mentioned.

Firstly, LPG itself is treated differently to Natural Gas, despite the hazards arising from their use being similar in many respects. For example, the Pipelines Safety Regulations (PSR) do not cover service pipework (LPG) but do cover service pipes (Natural Gas). Whereas, the Gas Safety (Installation and Use) Regulations (GS(I&U)R) do cover service pipework but not service pipes. In response to other gas-related incidents, with which the Procurator Fiscal and Mr Sylvester-Evans are familiar, the HSE has usefully applied the requirements of The Pipelines Safety Regulations 5, 8, 13 and 13(a). Under PSR 13 & 13(a) in particular, HSE has developed an enforcement policy based on pipeline operators undertaking a "reasonably practicable" risk-prioritised programme of pipe replacement, with each operators' programmes reviewed annually by HSE.

IGEM believes that consumer safety could benefit if service pipework (LPG) were to be captured by PSR, consistent with the Natural Gas Industry. However, if this were done, there would be significant complications in implementing some of the Recommendations, particularly in the identification of individual responsibilities.

Secondly, there is an anomaly whereby certain industrial premises (classified as factories within the meaning of the Factories Act) are excluded from GS(I&U)R. IGEM has always supported Natural Gas and LPG consumers installations being covered by one set of Regulations irrespective of premises type. Here again, introducing industrial premises to GS(I&U)R would have repercussions on other Recommendations, but would also seriously impact on the Natural Gas industry, where operatives working in such premises who are currently required to comply with HSC Approved Code of Practice CoP 20 Standards of Training in Safe Gas Installation with regards to competence would potentially be required to demonstrate competence through the ACS scheme designed and applied to installers working in domestic and commercial premises. This scheme is not designed to reflect the competencies required in the industrial sector.

Recommendation 1.

IGEM recognizes the benefits of reducing the number of interfaces between responsible parties. However, there will be circumstances where this will not be possible, given the commercial regime in place and the identified difficulty in allocating responsibility for pipework maintenance. In the Natural Gas supply industry, introduction of competition has meant a substantial increase in the actual and potential number of interfaces between parties involved in gas transportation through to its use. The safety framework that exists through secondary legislation (Regulations under the Health and Safety at Work, etc. Act, gas supplier licence conditions and comprehensive technical Standards) is generally considered sufficiently clear and robust to maintain required levels of safety.

Recommendation 2.

In IGEM's opinion, the requirements listed represent key requirements of relevant parties. Those requirements and others should be elaborated upon in industry-recognised Standards. To date, such Standards have existed although, for LPG, there have often been two, sometimes more, Standards in existence (UKLPG, IGEM and BSI, for example) that could be used. It is recommended that a more clear and comprehensive Standards framework be adopted; one in which there is only one recognized Standard for adoption in the UK in any particular situation.

Note: IGEM and UKLPG have agreed such a provisional framework which is available on request.

This leads us to the issue of competency, not directly addressed by the Recommendations. Presently, there are relatively few operatives formally qualified to work on LPG systems yet there are many operatives qualified to do the equivalent Natural Gas system work. The skills are similar and the flexibility should be introduced to allow main and service layers from the Natural Gas sector to cross to the LPG sector without the need for onerous training and demonstration of skills. This would release operatives with PE jointing competence, as used for Natural Gas, to contribute towards the replacement of steel pipes with PE pipes where considered appropriate.

Recommendation 3.

UKLPG currently publishes guidance on such issues as ownership, responsibilities and duties. Pursuant to IGEM's comments under 1 above, it would be better if such guidance, by whomsoever issued, be given greater authority. For example, in the Natural Gas metering industry, Ofgem publishes appropriate requirements and guidance. Also for Natural Gas, services to be adopted by a gas transporter have to be installed by a utility infrastructure provider that is registered under the Gas Industry Registration Scheme. The Scheme rules equally give guidance on such issues.

Recommendation 4.

IGEM supports the principle of retention of the listed information. However, the work identified by Recommendation 1 would be needed to inform which party should be responsible for arranging, carrying out, recording and retaining information.

Recommendation 5.

IGEM's experience in managing the risks arising from ageing metallic pipes suggests that the resources required to complete a physical inspection of all buried service pipework are likely to be disproportionate to the risks to be controlled. This is particularly the case where the pipes are of diameters less than 50mm (2"), operate at low pressure (<75mbar) and have no history of failure. The benefits to be gained from the retrospective application of cathodic protection (CP) are also difficult to demonstrate, as the effectiveness of CP systems relies highly on the overall quality of any protective wrapping applied to the pipe.

The Natural Gas Distribution Network Operators currently operate a policy to replace buried steel pipework of 50mm diameter & less with a polyethylene pipe at the time that the pipe is worked on (or as soon as reasonably practicable thereafter). Such pipes may be worked on as a consequence of adjacent maintenance work, or in response to an escape caused by a failure of the pipe material. HSE regards polyethylene as a "suitable" material for the transportation of natural gas (see PSR 8), and its competent installation can virtually eliminate the risk of failure as a consequence of unseen ground conditions.

It should be possible to establish a hierarchy of service pipework to be replaced, based on assessed risk from the pipe's age, material, operating pressure, proximity to poorly-ventilated spaces and any information available on coatings, jointing and buried environment etc. IGEM would recommend that service pipework operating at higher pressures, having a history of repairs to corrosion or damage defects and laid in proximity to poorly-ventilated spaces should form the immediate priority for replacement, pending the assessment of risk arising from other pipe types.

IGEM recognises that wherever the responsibility is allocated, the costs of a service pipework replacement programme will create a burden for the undertaker and, ultimately, the LPG user. By following a logical approach to the identification of key risk factors and assessing the reasonable practicability of any proposed maintenance and/or replacement programme, the burden imposed on the industry will be limited to an amount that is proportionate to the benefit to be derived through improved public safety.

Recommendations 6 and 7

A verification scheme is not the only solution (depending upon the definition of "verification"). Adoption of a renewal policy (see 5 above) of existing higher-risk installations would reduce the most onerous and difficult to manage aspects of verification. Thereafter, for new installations designed and installed in accordance with a more comprehensive standard, an ongoing maintenance strategy should be developed using principles given in IGEM standards TD/3 and TD/4. IGEM would also recommend looking at the Gas Industry Registration Scheme (GIRS) in place for Natural Gas mains and services. With so few competent LPG mains and service pipework layers and verifiers available, the promotion of training and cross-skilling should be encouraged (see under Recommendation 2 above).

Recommendation 8

While IGEM understands the sentiments of the recommendation for existing installations, it should be noted that current standards do not require LPG entries into buildings to be above ground and it is unclear why this recommendation is being made. However, current standards do encourage any material transition to be above ground.

Recommendation 9

It should be noted that there are five separate Approved Codes of Practice and Guidance made under DSEAR (HS(L)138, 137, 136, 135 and 134). These cover many requirements placed upon the I&C consumer and any "practical advice" would need to be considered with these documents in mind.

Recommendation 10

IGEM supports this recommendation in principle but would question whether the personnel fulfilling these inspection and enforcement roles have the necessary competence to undertake detailed LPG risk assessments.

Recommendations 11, 12 and 13

IGEM supports these recommendations.

Recommendations 14 and 15.

IGEM has no specific comments on these recommendations.

Recommendation 16

IGEM supports in principle the recommendation that the LPG industry collate data on incidents and actively learn lessons from failures and incidents. Measures should be taken to ensure that key information regarding failures and incidents is shared between the natural gas and LPG industry.

Recommendation 17 and 18

Further to IGEM's comments on Recommendation 5, this recommendation is supported.

Recommendation 19

IGEM has no specific comments on this recommendation.

Recommendation 20

As under Recommendations 6 and 7, IGEM does not support a verification scheme. To implement such a recommendation will lead to further complexity that is not necessary if a renewal policy is adopted.

Recommendation 21

IGEM has no specific comments on this recommendation.

Examination of the issues raised by the Inquiry.

As the Chartered body for gas industry professionals, and drawing representation from both the Natural Gas and LPG industries, IGEM believes that it is uniquely qualified to participate in any Working Group set up to examine the issues raised by the ICL Inquiry. IGEM would welcome contact from the ICL Inquiry Team to discuss how IGEM may be able to support the Inquiry's findings and contribute to improvements both to public safety and public confidence in gas as a clean and safe source of energy. Contact with the Institution should be addressed to John Williams, Chief Executive Officer of IGEM.

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