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21 December 2007

Dear Class 1 Competent Person,

Performance Monitoring System (PMS) for Class 1 Competent Person

Thank you very much for your valuable comments/views offered during the consultation exercise conducted in November 2007 on the proposed PMS and our meeting conducted on 13 December 2007, attended by the enlisted Class 1 competent persons (CP1s) and representatives from the LPG industry. I am pleased to inform you that there is no in principle objection to the proposed system received from the listed CP1.

With the completion of the consultation, we have seriously considered the comments provided by you and reviewed the draft PMS document accordingly. Our feedback to your comments can broadly be divided into three main concerns, namely

- (i) The responsibilities of CP1 in the testing and certification of LPG cylinders, tanks, vaporisers and mains;
- (ii) Audit inspection arrangement under the PMS; and
- (iii) Technical issues in relation to the audit inspection under the PMS.

I would respond to the above concerns in general as follows: -

The responsibilities of CP1 in the testing and certification of LPG cylinders, tanks, vaporisers and mains

Some CP1s questioned if CP1 is required to supervise in person the testing and examination of cylinder, tanks, vaporisers and mains.

According to Annex (I) of the CP1 application form (EMSD/GSO/101/A1), the responsibilities of a CP1 in the testing and certification of LPG cylinders, tanks, vaporisers and mains are stated.

For the testing and examination of LPG cylinders, this Office accepted the view from LPG Safety and Technical Committee (LPGSTC) that all Registered Gas Supply Companies (RGSCs) have enough resources and expertise to carry out the testing and examination of LPG cylinders in its LPG terminal. If the CP1 is an employee of an RGSC, it is the CP1's duty to supervise the whole process, including the reviewing of the procedure, allocating sufficient resources, arranging training course(s) for the workers and conducting random checks on the testing etc. Since part of the work would be carried out by the CP1's subordinates and the CP1 would act as the supervisor, the CP1 would not be required to attend the full testing and examination in person but would be required to perform checks on the testing works. As such, CP1 is required to notify this Office upon his/her checking on the LPG cylinders testing and examination for our audit selection. For CP1 who is not an employee of a RGSC, the CP1 is required to attend the full testing and examination of LPG cylinders in person.

All CP1s are required to fully understand their responsibilities in the testing and certification of each type of LPG equipment. Further, these responsibilities shall remain the same irrespective whether a CP1 is working on behalf of the owner of a notifiable gas installation or as an independent CP1.

Arrangement of audit inspection

Different from the PMS for Class 2 competent person (CP2), this PMS required the audit inspection to be conducted during the testing and examination carried out by the CP1. Some CP1s opined that this arrangement as the equivalent of a 'practical examination'.

Unlike the statutory inspection carried out by CP2 where officer from the Gas Standards Office (GasSO) could verify the inspection at a later date, audit the testing and examination work conducted by CP1 at a later date will involve re-establishing the testing connections which is impracticable and will create unnecessary interruption to the LPG supply system. The only opportunity to audit the performance of a CP1 is during the testing and examination of the LPG equipment conducted by the CP1. Further, the PMS audit is aimed at raising the quality of testing and certification of LPG cylinders, tanks, vaporisers and mains and not to set a practical examination on the CP1.

Some CP1s mentioned his/her difficulties to fulfill the 5 days notification prior to the actual test date. After taking into consideration the practical difficulties raised by CP1 and the operational constraints within GasSO, the advance notice day to GasSO is revised to 3 working days (i.e. excluding Saturday, Sunday and Public Holidays).

The definition of emergency repair was also raised in the comments. In principle this PMS shall apply to all planned maintenance works. Emergency repair, which refers to emergency rectification work on gas incident, is not considered as planned maintenance by nature.

Technical issues in related to the audit inspections

Various technical issues were raised by CP1 including the requirement to calibrate the pressure gauge and criteria to test the pressure relief valve and tank fittings etc. These technical issues are considered minor in nature. Please refer to the responses to comments as listed in Appendix III of this document for details.

In addition to the above, I have prepared a summary of amendments to the draft PMS document and statistical figures of the consultation exercise in Appendixes I & II respectively for your reference.

I would reiterate that the PMS is a quality assurance system and the system will be implemented on 28 December 2007. A review of the PMS will be conducted after 12 months' operations or as and when required. Meanwhile, an updated copy of the PMS document and the notification form specially designed for your future notification under the system are attached for your reference. Please note that relevant document related to the PMS will also be available on our web site <http://www.emsd.gov.hk> soon.

Once again, thank you for your comments and contribution to the development of the PMS. I am looking forward to our close collaboration and joint efforts to ensure safe operation of the LPG installations.

Yours faithfully,



Kent K. Y. FUNG
for the Gas Authority

Amendments to draft PMS, Critical Compliance List and Inspection Requirements (IR)

Amendments to draft PMS

- a. Section 1, 5th line, Page 1 - Added sentence '... and Clause 9.3.9 of the Code of Practice for Liquefied Petroleum Gas Filling Stations in Hong Kong require...'
- b. Section 3(b), Page 3 - Added point iv) 'Code of Practice for Liquefied Petroleum Gas Filling Stations in Hong Kong, November 2007 edition'.
- c. Section 3(c)(i), 2nd line, Page 3 - Amended to '.... 3 working days'.

Amendments to draft Critical Compliance List

- a. Item 4B - Deleted.
- b. Item 4C - Deleted.

Amendments to draft IR

- a. Items C2, FT3, T3, V2, & P1 - Deleted the words '... and checked...'
- b. Item FT4a - Added at the end of the sentence '.. (unless specified by the tank design code)'
- c. Item T3 - Added the Code of Practice Reference 'M1-10.2.12'
- d. Item V2 - Added the Code of Practice Reference 'M1-10.2.12'
- e. Item V3 - Amended to '.... F107'.
- f. Item P1 - Deleted the words '... /pneumatic..'
- g. Item P3a & P3c - Deleted the words '... /pressure..'
- h. Item P4 - Amended to 'Failed to check the LPG Pipe under test/examination is not adequately protected against corrosion' and revised the reference to 'F108'.
- i. Item P5 - Deleted.
- j. Item P7 - Deleted.

***** END *****

Appendix II

Statistical Figures of the November 2007 Consultation Exercise

Statistical figures of the consultation exercise for the proposed PMS on Class 1 competent persons (CP1) conducted are shown below: -

	CP number	Percentage
Number of CP issued with PMS consultation paper	35	100%
Number of CP acknowledged receipt received	25	71%
Number of CP did not acknowledge receipt	10	29%
Number of CP offered comments	4	11%
Number of CP attended the meeting held on 13 December 2007	11	31%

***** END *****

GasSO Responses to the Comments offered by Listed Class 1 Competent Persons

Item	Details of Comments	PMS Ref.	Responses to Comments
1.	<p>The PMS for CP 2 should not be applied to CP 1 in the same way. For CP 2 work, it is principally the annual safety inspection that the CP 2 must do it himself, without delegating anyone else to do it. For CP 1 work, a lot is pressure testing that takes longer time, from setting up preparations to restoring the system to use, and is always carried out by CP 4 / RGI; the CP 1's role is more on supervision, directing, witnessing critical stages and certification.</p> <p>The PMS for CP 2, as a good example, is more or less an audit of the RESULTS (the reports by the CP). What has been proposed under this PMS for CP 1 is, on the other hand, more or less watching the PROCESS of work by the CP 1. It will turn out to be almost a practical examination conducted when someone is applying for a licence. Having a GSO officer watching over the shoulders when the work is being carried out in a way creates undue pressure on the CP 1 and the RGI / CP4.</p> <p>A number of the so-called non-conformities listed are what the CP 4 and RGI should be responsible for. Putting the CP 1 responsible at testing stage is simply impractical.</p>	General	<p>Unlike the statutory inspection carried out by CP2 where officer from the Gas Standards Office (GasSO) could verify the inspection at a later date, audit the testing and examination work conducted by CP1 at a later date will involve re-establishing the testing connections which is impracticable and will create unnecessary interruption to the LPG supply system. The only opportunity to audit the performance of a CP1 is during the testing and examination of the LPG equipment conducted by the CP1. Further, the PMS audit is aimed at raising the quality of testing and certification of LPG cylinders, tanks, vaporisers and mains and not to set a practical examination on the CP1.</p>
2.	<p><u>5 days' advance notice to GSO</u></p> <p>Not quite practical as the tests are really part of the installation / testing / examination process which are under the control of the RGI or CP 4. In construction site situations, especially with underground pipeline works, the installation and testing usually have to be coordinated with other contractors' work and are subject to weather conditions. Often, only short notice of a few hours or at most one or two days will be available. I suggest if this scheme is to proceed as it is despite other objections, this can only be 24 hours' notice to be practical.</p>	3(c)(i)	<p>After taking into consideration the practical difficulties raised by CP1 and the operational constraints within GasSO, the advance notice day to GasSO is revised to 3 working days (i.e. excluding Saturday, Sunday and Public Holidays).</p>

Item	Details of Comments	PMS Ref.	Responses to Comments
3.	<p><u>Audit inspection by GSO officer during the testing / examination</u> As mentioned above, I believe this is not the way that an audit system should be. After all, the RGI / CP 4 / CP 1 have all been pre-qualified by GSO and the performance monitoring should not resemble practical examination by an examiner.</p>	3(c)(ii)	Please refer to the responses in Item 1.
4.	<p><u>AD/GGL decision to be final</u> With other Ordinances, there is usually an Appeal Disciplinary Board comprising of industry representatives to consider cases of appeal. Aware that this is the same as in the PMS for CP 2, something that we have overlooked. This is an opportunity to put it right.</p>	3(c)(iii)	The PMS is a quality assurance system on those CPs who are assessed and included in the list maintained by the GasSO. Officer at Assistant Director level is considered adequate to handle appeals under the PMS.
5.	<p><u>Failed to supervise in person the testing and examination of cylinders, tanks, vaporizers & mains</u> The interpretation of this non-conformity is doubtful. Is it to be full time from set up to finish? Is it for every single cylinder being tested in a terminal environment where hundreds of cylinders are tested a day? Is it for every length of underground mains being tested? It may not be practicable and subject to mis-interpretation or abuse.</p>	4.A	<p>According to Annex (I) of the CP1 application form (EMSD/GSO/101/A1), the responsibilities of a CP1 in the testing and certification of LPG cylinders, tanks, vaporisers and mains are stated.</p> <p>For the testing and examination of LPG cylinders, this Office accepted the view from LPG Safety and Technical Committee (LPGSTC) that all Registered Gas Supply Companies (RGSCs) have enough resources and expertise in carry out the testing and examination of LPG cylinders in its LPG terminal. If the CP1 is an employee of an RGSC, it is the CP1's duty to supervise the whole process, including the reviewing of the procedure, allocating sufficient resources, arranging training course(s) for the workers and conducting random checks on the testing etc. Since part of the work would be carried out by the CP1's subordinates and the CP1 would act as the supervisor, the CP1 would not be required to attend the full testing and examination in person but would be required to perform checks on the testing works. As such, CP1 is required to notify this Office upon his/her checking on the LPG cylinders testing and examination for our audit selection. For CP1 who is not an employee of a RGSC, the CP1 is required to attend the full testing and examination of LPG cylinders in person.</p>
6.	<p><u>Precautions to protect persons.</u> This is another grey area. Putting all the onus on the CP 1 when the responsibility actually also falls on the CP 4 is unfair.</p>	4.B	This item is deleted.

Item	Details of Comments	PMS Ref.	Responses to Comments
7.	<p><u>Failed to reduce to ZERO the pressure in the gas pipes.</u> I realize that this is the exact wording in the Gas Safety (Gas Supply) Regulation 20 (3). But I think it is technically incorrectly stated. It is not ZERO pressure in the live gas pipes; there is always the residual working pressure in the system as long as there is gas inside and the pressure has to be high enough for distribution.</p>	4.C	This item is deleted.
8.	<p><u>F07</u> Typo. Should be F 107.</p>	IR 5.V3	Amended.
9.	<p><u>Failed to ensure that the internal pipe section under test is clean, free from construction debris and foreign matter (new mains).</u> This is related more to installation than testing. It is the responsibility of the persons installing the pipes rather than the person witnessing the testing. Again this shows the disparity of ignoring the existence of RGI and CP 4.</p>	IR 5.P4	This item is deleted.
10.	<p><u>Failed to inspect the LPG mains. (existing mains)</u> I am unable to interpret this statement. How can the CP 1 inspect the existing LPG mains which are mostly buried underground ?</p>	IR 5.P5	This item is deleted.
11.	<p><u>Failed to report any LPG pipe under test / examination is not adequately protected against corrosion (new & existing mains)</u> I understand that in most installations, the CP 4 has the responsibility for ensuring the protection against corrosion is adequately applied. The CP 1 is not involved until testing. For existing mains, it is impossible to verify the conditions of the corrosion protection unless there is a leak leading to test failure and unless the pipes are subsequently exposed for inspection.</p>	IR 5.P7	Noted. This item is revised to new LPG mains only.
12.	<p><u>Failed to indicate ... location of the LPG installation and details of the section of the pipe under test</u> The present F 108 does not allow for details of the section of the pipe under test to be indicated. In real life, the CP 1 has to forcibly add his own wordings, and the " All Pipework..... " wording in the F 108 is not conducive to letting one specify the sections of pipe.</p>	IR 5.P9.i)	CP1 could attach a sketch or part plan indicating the routing or details of the pipe under test for easy reference.
13.	<p><u>5 Days Prior Notice to GSO</u> As far as validation works on taxi/mini bus LPG fuel tanks are</p>	3(c)(i)	Please refer to the responses in Item 2.

Item	Details of Comments	PMS Ref.	Responses to Comments
	<p>concerned, 5 days prior notice to GSO would create reporting difficulties due to the following operational/logistic reasons:- Under normal circumstances the minimum order for each fuel tank validation job is 15 pieces for the reasons of operational efficiency and economy of scales. Depots have to make special arrangements to deploy technicians from their normal duties to carry out the revalidation works. As this is not their core business it is ranked as a low priority job among other plant routines. Tank validation exercise would not be carried out if the minimum order is not met unless it is an emergency case or on special request.</p> <p>Fuel tanks are to be collected from various workshops which are located all over Hong Kong and it is time consuming to pick up just one or two tanks from each individual workshop. Collection orders usually come only on short notice as most taxis are operating on 24 hours basis. Individual taxi owners want to have their fuel tank validation's turn around time as short as possible for obvious economic reasons. Hence the order would arrive on short notice and long term planning is impractical. Furthermore by this time, the majority of the taxi fuel tanks on the road had already been re-validated, the orders for re-validation comes in a less frequent manner and not comes as a lot like in the past when this exercise was first started two years ago.</p> <p>5 days prior notice is too early and impractical to predict whether the minimum order can be met as there are many uncertainties involved that is beyond the control of CPs. 3 working days (<i>i.e. excluding Saturday, Sunday and Public Holidays</i>) prior notice would be more realistic as far as plant operational logistic planning and tanks collection scheduling is concerned.</p>		
14.	<p>Regularly Calibrated Pressure Gauges The Competent Person does not own the gauges and the gauges are set up and owned by the respective depots. As they are fixed instruments and are already covered by the routine maintenance schedules according to the depot's standing instructions. The Competent Person has no control of the conditions of these instruments as they are the responsibilities of the depots' maintenance personnel and management.</p>	IR 5.C2	The pressure gauge used for conducting hydraulic test of LPG cylinders, tanks, vaporisers and mains shall be regularly calibrated. CP1 is to check the relevant records so as to ensure that such pressure gauge is calibrated annually or at interval in accordance with the manufacturer instructions except for new gauge.
15.	In general, an independent CP may not be able to comment fully on	General	CP1 is reminded of his/her responsibilities in the testing and

Item	Details of Comments	PMS Ref.	Responses to Comments
	this paper as the Competent Persons of the owner have provided their control measures towards the maintenance schedule and scope of testing in their contractual arrangement with external CPs.		certification of LPG cylinders, tanks, vaporisers and mains as stated in the CP1 application form (EMSD/GSO/101/A1).
16.	Please note that the maintenance schedule is not normally under the control of CP1 and the owner/maintenance contractor of the installation should be notified about this requirement. Also, please also define the scope related to emergency repair.	3(c)(i)	In principle this PMS shall apply to all planned maintenance works. Emergency repair, which refers to emergency rectification work on gas incident, is not considered as planned maintenance by nature.
17.	The construction of underground pipe may not be completed in relative short period of time. Please note that the CP1 is not a site supervisor and may not be able to report the conditions of internal pipe section under test. The clause 5.1.4 of Module 2 should be under the responsibility of CP 4 & 5.	IR 5.P4	Please refer to the responses in Item 9.
18.	It is not feasible to allow 5-days prior notice before test of LPG vaporisers and mains, because most of our NGL owners have no spare vaporisers or alternative mains to maintain continuous LPG supply. Regular maintenance of vaporisers or mains requires pressure-test for leak after disconnecting certain accessories or pipe fittings from vaporisers or mains. This test must be performed as soon as practicable before the vaporisers or mains are put in operation again. As for emergency repair, please clarify who is qualified to determine whether it is of emergency repair or not.	3(c)(i)	Please refer to the responses in Item 2 and Item 16.
19.	Audit inspections should be conducted at a fixed interval while demerit points will be accorded to a CP within a specified period.	3(c)(iii)	<p>Audit inspection under PMS is to be conducted in an open and fair manner without being bias to any party or CP1 involved. Additional audit inspection will be conducted as and when required.</p> <p>The audit inspection is to be selected at random and having the inspection to be conducted under a fixed interval is considered inappropriate.</p>
20.	Please clarify the meaning of "regularly" in terms of years. In practice, we rely on the manufacturers of measuring instruments on the accuracy test. Seldom CP or contractors can carry out calibration or test for pressure gauges, due to lack of test equipment or recognized laboratory.	IR 5.T3	Please refer to the responses in Item 14.

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21.	Similar to the above, we always rely on the manufacturers of pressure relief valve (PRV) listed by Underwriters Laboratories (UL). Repeated test on PRV by CP involves additional cost. Suggest to waive this requirement if a new PRV of the same model and capacity is adopted.	IR 5.T5	Test on PRV is applied to re-conditioned PRV. For a replacement PRV of different model, CP1 shall verify that the setting pressure and flow capacity of the PRV is complied with relevant COP requirements.
22.	Tank fittings include excess flow valve, check valve, filler valve, pressure gauge, liquid-level gauge, etc. In practice, test results of the tank fittings may not be available from the manufacturers after purchase. Please clarify what kind of tests is required in this respect. For example, leak test, endurance test, accuracy test, sensitivity test, fire-resistant test, etc.	IR 5.T6.v)	Visual inspection and function test shall be required. For replacement valves of different model, CP1 shall verify that the specification and capacity of the valve is complied with relevant COP requirements.
23.	Same as item T5	IR 5.V1	Please refer to the responses in Item 21.
24.	Same as item T3	IR 5.V2	Please refer to the responses in Item 14.
25.	Same as item T3	IR 5.P1	Please refer to the responses in Item 14.
26.	Please clarify the meaning of "adequately protected against corrosion", so as to minimize possible gray area.	IR 5.P7	Please refer to relevant Sections of the following Code of Practice for Hong Kong LPG Industry a) Module 1 – LPG Compounds and Cylinder stores; b) Module 2 - Underground LPG Pipework.

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