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February 9, 2004

Dear Class 2 Competent Person,

## **Performance Monitoring System (PMS) for Class 2 Competent Person**

Thank you very much for your valuable comments/views offered during the consultation exercise for the proposed PMS conducted in November 2003. I am pleased to inform you that there is no in principle objection to the proposed system received from the listed Class 2 competent persons (CP).

With the completion of the consultation, we have seriously considered the comments provided by you and reviewed the draft document accordingly. As feedback information to you, the comments received can be broadly divided into three main concerns, namely (i) the scope of work of Class 2 CP with implementation of the PMS in statutory annual LPG notifiable gas installations (NGI) inspections, (ii) the acquisition/maintenance of NGI records and (iii) practical difficulties encountered in conducting inspections. I would respond to the main concerns in general as follows:

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### Scope of Work of Class 2 CP with PMS

- Some CP opined that the Inspection Requirements (IR) in the PMS require the CP to review the design and approval issues, which were beyond the scope of work of Class 2 CP. I would like to clarify that this is not our intention in forming the IR but in practice design and O&M issues are sometimes hardly separated. While this office maintains the responsibility to regulate the overall gas safety including design issues of LPG installations, we would require and remind via the IR the CP to note and report any unsafe or adverse conditions including operations with substandard hardware at LPG installations. We will then

undertake the follow up actions with the owner of the LPG NGI and the results will be properly recorded for reference in subsequently annual inspections.

- The Gas Safety (Gas Supply) Regulation 6B requires the owner of a NGI to maintain and operate the installation in a safe condition. The Gazette Notice issued under Regulation 6C also prescribes that the owner of an LPG NGI shall employ a competent person to carry out an annual inspection on the installation to ascertain whether the installation is maintained and operated in accordance with Regulation 6B. Obviously, the scope of work of a competent person, i.e. Class 2 CP in this case, is to assist the NGI owner to demonstrate his/her obligations under Regulation 6B are fulfilled.
- It has not been stipulated in the Regulations regarding the independent status of competent person. This office has however assessed those applicants and maintained a list of persons who are considered competent by virtue of their training and practical experience to carry out such inspections, so as to facilitate the owners of LPG NGI at their discretion to appoint them for conducting the annual inspections. The PMS is a quality assurance system to ensure satisfactory performance of those CP who are included in the list maintained by this office.
- To facilitate the conduction of inspection, we have prepared a list of tasks that are expected to be conducted by Class 2 CP during annual inspections on LPG NGI in Appendix I for reference. We have also reviewed the IR in respect of O&M and design issues. Again, in response to the comments, we have dropped the items/demerit points for those items which are mainly related to design and/or hardly defined. We would however maintain certain items as in the updated IR as reminders and for statistical purposes. The amendments to the draft PMS are highlighted in Appendix II.

#### Acquisition/Maintenance of NGI records

- Some CP opined that there were practical difficulties to obtain relevant documents and records from the owners of LPG NGI for conducting the inspections. As I have mentioned in the above paragraphs, it is the owners' responsibilities to conduct annual inspections as well as maintain records for their installations according to Regulations 6B & 6C. The responsibilities of our listed Class 2 CP are to inspect the installations and report abnormalities. If relevant documents cannot be obtained from the owners, CP should make a note in their inspection report for our follow up actions.

- According to our current practice, we shall issue reminders to owners reminding them of the annual inspections. To facilitate proper conduction of the inspections, we shall also remind the owners to provide relevant information such as certificates, maintenance records, previous inspection reports, etc. to the CP.

Practical Difficulties Encountered in conducting Inspections

- Some CP opined that inspections on certain installations/equipment were difficult if not impossible to carry out. Again, the responsibilities of CP are to inspect the installation and report abnormalities and this office will follow up with the owners. With the building up of records on inspection findings and mitigating measures, this kind of problem should be gradually resolved.

In addition to the above, I have prepared a summary of comments received and our responses to these comments in Appendixes III & IV for your reference. I would reiterate that the PMS is a quality assurance system and the system will be implemented on 16 February 2004. A review of the PMS will be conducted after 12 months' operations. Meanwhile, an updated copy of the PMS and revised Form 109 (revision 2/2004) 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,



Eddie K M PAK  
for the Gas Authority

**Tasks to be conducted by Class 2 CP  
during Annual Inspections of LPG NGI**

To serve as general guidelines for practicing CP, the following tasks are expected to be conducted during statutory annual LPG NGI inspections: -

- Check previous maintenance, repair and alteration records as provided by the NGI Owner or records shown within the installation. In this connection, CP shall check the continued compliance with the original design and whether there are any unauthorized modifications.
- Check all required maintenance tasks are conducted on-time and the results as shown in the maintenance records, where applicable, are satisfactory;
- Inspect the maintenance, repair and alteration works, if any, conducted since the last CP inspection, and check for outstanding defects or abnormalities;
- Inspect the NGI against the requirements under the Ordinance and current standards. Minor tasks such as lifting/opening of pits/covers/panels, slight turning of valves, etc. may be required to facilitate the inspection. During the course of the inspection, the CP is not expected to intervene the normal operations of the NGI;
- Identify and recommend necessary housekeeping, maintenance and enhancement works, if any, and provide an overall comment on the NGI;
- Report inspection findings in Form 109 and/or any additional sheets. This includes listing out the required maintenance records that are not made available by the NGI Owners but are necessary in verifying certain maintenance activities or listing out maintenance records with results which are questionable or unsatisfactory;
- Explain the inspection findings to and discuss with the NGI Owner on the recommended works, where possible. Remind the Owner to input a reasonable completion time frame for recommended remedial works;
- Forward the completed Form 109 to NGI Owner for his/her endorsement and

submission to GasSO;

- If in the opinion of the CP that the NGI is not safe for further operations, the CP shall inform the NGI Owner and GasSO immediately.

\*\*\*\*\* END \*\*\*\*\*

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

Amendments to draft PMS

The following typing errors will be rectified in the updated PMS document: -

- 2<sup>nd</sup> Line, Para. 2, Page 2 - Amended to '.... more systematic approach ....'.
- 1<sup>st</sup> Line, Para. 3(c)(iv), Page 3 - Amended to 'The performance of the CP is measured ....'

Changed the word 'vessel' to 'tank' in the entire document.

Changed the word 'vaporizer' to 'vaporiser' in the entire document.

Reference of Form 109 shall refer to Form 109 revision 2/2004.

Amendments to draft Critical Compliance List

- a. Item 4.E - Amended to 'Failed to check the availability of the following records from NGI Owners:
  - (i) Valid testing certificate/revalidation record of LPG tank(s);
  - (ii) Valid testing certificate/revalidation record of LPG vaporiser(s).

Amendments to draft IR

- b. Item 5.1c) - Amended to 'Failed to observe adverse site conditions, e.g. adverse conditions of structures/fitments within the LPG Compound/Store, new structures constructed that impaired ventilation of the LPG Compound/Store and /or introduced fixed sources of ignition within safety distances, etc.'.
- c. Item 5.1i) - Deleted 'with undersized wire mesh (<5mm).
- d. Item 5.1k) - Demerit points removed.
- e. Item 5.2a) - Amended to 'Failed to observe adverse external conditions of above ground tank including where applicable, severe corrosion/pittings and crack at the tank surface/paint blisters/damage or cracking of protection coating/leakage

- of LPG/severe corrosion of bolts and nuts/adverse conditions of tank support/inadequate expansion and contraction allowance of tank mounting arrangement/adverse conditions of support plinth structures, etc.’.
- f. Item 5.2c) - 1<sup>st</sup> sentence amended to ‘Failed to observe, where applicable, adverse conditions of the following safety devices: -’.
  - g. Item 5.2d) - Amended to ‘Failed to observe that pigtailed without self-closing valves are being used on LPG cylinder manifold (Ref. COP Module 1 Clause 4.3.2.4).’.
  - h. Item 5.2f) - Amended to ‘Failed to observe the provision/adverse conditions of tank chamber accessories e.g. rain caps, chamber covers, etc.’.
  - i. Item 5.2g) - Amended to ‘Failed to observe adverse conditions of earthing/bonding connection.’.
  - j. Item 5.3b) - Amended to ‘Failed to observe that a vaporiser is defective or malfunctioned including heating elements not operational/LPG leakage or heavy end dripping at vaporiser connecting pipework/excessive pressure at vaporiser outlet, etc. or a defective or malfunctioned vaporiser is not properly isolated from the system either electrically or mechanically.’.
  - k. Item 5.3c) - Amended to ‘Failed to observe adverse conditions of vaporiser e.g. water leakage/broken water level sight glass/mounting & body panel seriously corroded or broken/defective insulation/malfunctioned thermometer, etc.’.
  - l. Item 5.4a) - Amended to ‘Failed to identify that underground LPG pipework is overdue for re-testing.’.
  - m. Item 5.4c) - Amended to ‘Failed to observe that the active/monitor regulators are defective or malfunctioned including LPG leakage or heavy end dripping at connecting pipework/LPG venting from regulator relief aperture/abnormal noise during actuation/abnormal regulator outlet pressure, etc.’.
  - n. Item 5.4f) - Amended to ‘Failed to observe that the LPG pipework in the valve pit (within LPG Compound/Store) is seriously corroded/immersed in water ingress.’.

- o. Item 5.4g) - Amended to 'Failed to observe that the underground valve pit (within LPG Compound/Store) is not properly sealed.'
- p. Item 5.4h) - Demerit points removed.
- q. Item 5.4l) - Amended to 'Failed to observe that the indicator or changeover function of the automatic changeover device in a cylinder store is not functioning properly.'
- r. Item 5.4n) - Amended to 'Failed to observe that LPG pipework is not properly protected against corrosion and/or is seriously corroded (particularly at the underside of LPG pipe/mounting support point).'
- s. Item 5.4p) - Amended to 'Failed to observe adverse conditions of PRV vent pipes.'
- t. Item 5.4q) - Amended to 'Failed to observe that the identification labels or tags for LPG pipework/valve earthing terminals are faded, missing, damaged or broken.'
- u. Item 5.5a) - Amended to 'Failed to check the availability of the following records from NGI Owners:
  - (i) Valid testing certificate on underground LPG pipework;
  - (ii) The last 2 valid testing records/reports on LPG tank cathodic protection system;
  - (iii) Valid maintenance certificate on the fire fighting facilities/fire extinguishers/gas detection system installed;
  - (iv) Valid testing report on bonding & earthing connection continuity.'
- v. Item 5.5d) - Amended to 'Failed to complete a legible Annual Inspection Report.'
- w. Item 5.5e)(vi) - Amended to 'Date of underground LPG pipework pressure test;'
- x. Item 5.5e)(vii) - Deleted.
- y. Item 5.5e)(viii) - Deleted.
- z. Item 5.5e)(ix) - Deleted.
- aa. Item 5.5e)(x) - Deleted.

\*\*\*\*\* END \*\*\*\*\*



Statistical Figures of Consultation Exercise

Some statistical figures of the consultation exercise for the proposed PMS on Class 2 competent persons (CP) conducted during 27<sup>th</sup> October to 30<sup>th</sup> November 2003 are shown below: -

	CP number	Percentage
Number of CP issued with PMS consultation paper	23	100%
Number of CP acknowledged receipt	20	87%
Number of CP did not acknowledge receipt	3	13%
Number of CP offered comments	8	35%

\*\*\*\*\* END \*\*\*\*\*

**GasSO Responses to the Comments offered by Listed Class 2 Competent Persons**

Item	Details of Comments	PMS Ref.	Responses to Comments
1.	Whether the Form 109 is a statutory form.	General	The Gazette (G.N. 5722 of 50/1996) given under Regulation 6C(1) of the Gas Safety (Gas Supply) Regulations contains the key content of the existing Form 109. The Form 109 itself is however not a gazetted document.
2.	The scheme seems to have the same apparent pitfall as the licensed drivers' demerit system: drivers who don't regularly drive tend to have a clean record while the regular drivers stand to be more liable to get caught, but it does not mean that the occasional drivers are more 'competent' than the regular drivers. This seems to be a pitfall common to most demerit systems.	General	According to the current system, the name of a competent person who ceases to practice in the gas industry for 12 months may be removed from the list. Besides, the performance of an inactive competent person will be monitored under the same system once he conducts an inspection. Please refer to 3(c)(ii) of the draft PMS.
3.	Some installations were approved for construction before COP Module 1 is in place and there may be practical difficulties for retroactivity of the COP requirements. Consensus may have been reached between GSO and the NGI owners on grandfathering of such "non-complying items". If GSO's responsible engineers/inspectors are not aware of the history of such installations, the Competent Person may be penalized for failure to observe/report.	General	Please refer to responses to the main concerns in the covering letter. The responsibilities of CP are to inspect the installations against the current standards, etc. and report abnormalities. Building up of inspection records would help.
4.	The Competent Person only records the status of the installation at the time of his inspection in the inspection report. He should not be penalized for any non-complying items caused by others after his inspection.	General	Noted and agreed. If any NC on IR is found during an audit inspection, for which there are reasons to believe such items/event took place after the CP annual inspection, the CP should not be penalized for such items.
5.	We, CP2, are very often hired by the owner of the NGI to inspect their site in an ad hoc basis and may not know what was happening in the past about such NGI. The owner may provide some signed Form 109 issued by other CP2 with nil recommendations over years. When we stepped in and found lots of problems on the system, the owner may challenge why a "new" CP2 had pointed out so many recommendations which in previous CP2's eyes were "NIL". I heard from maintenance contractors that NGI owners also criticized CP2 by comparing past recommendations issued by other CP2 or Gas Inspectors from your office to those raised by the new "CP2".	General	The problem highlighted is one reason that a systematic PMS is considered necessary. With the PMS properly implemented, the problem should be gradually resolved. Please also refer to 3(a) of the draft PMS.
6.	I had received Form 108 signed by CP1 in 08/03 but printed that test was witnessed by his colleague. Shall we extend PMS to cover CP1 and other specialist such as Cathodic Protection Specialists.	General	The nature/scope of work of CP in various classes is different. PMS will be considered if necessary.
7.	Do you have plan to apply similar PMS to other classes of CP? The class 2 CPs will consider this is not fair to them if Government is going to impose control only on them.	General	Please refer to responses in Item 6.
8.	For the review against CoP, I have the impression that the Modules are always used as reference for improvement despite the basic idea as highlighted in the modules. From the inspection requirements in your letter, I have reinforced the view that you have drafted the list using new standard to be applied on installation built before effective date of the modules. This is always an area of dispute but the decision by AD/CGL alone will not be convincing unless the issues are assessed by a panel consisting of industry members.	General	Please refer to responses in Item 3. The PMS is a quality assurance system on those CP who are assessed and included in the list maintained by the GasSO. Interpretation of COP in respect of its applicability is a separate issue. Officer at Assistant Director level is considered adequate to handle appeals under the PMS.

9.	This is essential to have review to assess the effectiveness after implementation but you may also need to seek views from owner, gas supply company etc before implementation.	General	Please refer to 6 of the draft PMS. The PMS is considered as a quality assurance system on those CP who are assessed and included in the list maintained by the GasSO.
10.	For old installations, some of the inspection requirements (IR) or non-compliance (NC) as stipulated by the codes are inevitably disputable, or questionable when applied in special or odd circumstances with grey areas. Before final appeal to the Director of EMSD, and to ensure a better understanding and acceptance of any discrepancies being established in the reported F109, those cases of NC or IR being noted and spot-checked by EMSD engineers and inspectors, should firstly be brought up in memos as "allegations", addressed to the CP2 concerned for his attention, giving him an opportunity to feedback and explain, being interviewed and get thing clarified before conclusion or final judgement by your department is made. Such approach is more or less the standard protocol and established procedures adopted by most management operational audits and investigations. This would ascertain a more established and sound findings, on any discrepancies or non-compliance, while eliminating any misunderstandings and gaining full support and acceptance of the findings by the CP2.	General	Please refer to responses in Item 8. As to the concerned PMS procedures, please refer to 3(c)(ii), 3(c)(vi) and 3(c)(vii) of the draft PMS. The comments offered have been considered during the development stage and the draft PMS aimed to balance the benefits of CP and administrative efforts in view of the numbers of inspections involved. According to the procedures, the owner of the LPG NGI concerned and the CP responsible for the annual inspection will be informed on the audit inspection in advance. The concerned CP is encouraged to attend the audit inspection so that he/she can respond to questionable or disputable issues during the audit inspection. CP will then be notified in writing on the NC and demerit points within 14 working days from the date of inspection and they will have 14 working days from the notification to launch an appeal. The time for actions is considered adequate.
11.	Typo with 'PC' in 3(c)(iv).	3(c)(iv)	Amended.
12.	Would like to know the rationale for the demerit points assigned for different items.	3(c)(iv)	Please refer to 3(c)(v) of the draft PMS.
13.	Please clarify how to prevent the personal factor in assessing the performance so that it can be conducted in a fair manner. According to item 3.(iv)(a)&(b), you mentioned "in the opinion of GS2's Engineer/Inspector" to determine the failure of CP and this is better to avoid subjective way to do so.	3(c)(iv)	Please refer to 3(c)(ii) of the draft PMS. It is GasSO's intention to deploy different GS2 Engineers/Inspectors as far as possible to conduct different level of audit inspections per 3(c)(ix) of the draft PMS. Selection of audit inspections will be endorsed by the senior engineer, SE/GS2. Any appeals arising will be handled by the assistant director, AD/GGL.
14.	Under the Critical Compliance List B, it is possible that an Owner has an LPG vessel/mini-tank in overdue condition but with the system still in operation, under such condition if a CP is called to carry out an inspection and subsequently in the opinion of the CP the system is safe for on going operation and an Annual Inspection Report is also followed to the Gas Authority immediately, under such scenario if the Owner decides to continue to operate the system without notifying the CP, please clarify whether the CP will receive a N/C	4.B	Please refer to responses under Scope of Work of Class 2 CP with PMS in the covering letter. If the CP has identified and reported the overdue of revalidation. This office will undertake the follow up actions. There is no NC committed by the CP under this scenario.

15.	<p>The original intent of F109 inspection by competent person is to check in-situ the plant conditions and status, maintenance conditions, compliance with the codes and if unauthorized modifications to the plant have been carried out. F109 annual inspection, by the codes, has to ascertain that certain essential plant equipment has been promptly revalidated to the codes requirements (like the vapourisor, HPRV, PRV, Fire Fighting equipment, tanks, pigtails etc.), at intervals or frequency as required, and with their last inspection dates posted in-situ as reminder (so that F109 can report them if they are not done, or expired), but not to get these devices revalidated along with F109 inspection (afterall, some revalidations need to be done by CP1). Also, these devices such as tank and vaporisor in your proposal paragraph 4E, and pipework (for fixed, unconcealed-i.e. surface run and aboveground steel pipework, they need only leak tests, and I have been doing it every year along with my F109 inspection), cathodic protection test, fire system tests in your proposal paragraph 5.5a, their revalidations are, by the codes, at different intervals, mostly NOT annually, and therefore, they will not be done in the F109 inspections, and they, more often than not, are done by other competent persons.</p> <p>It is therefore more appropriate for CP2, in their F109 inspections, to check and ascertain through the plant owner records that these revalidations have been duly carried out, if they have been done, but NOT to see if they have been properly done. It is impractical and unreasonable for CP2/F109 to go to the plant owner's office, digging into their past revalidation work reports to review the report contents, their previous test procedures, methodologies, and correctness, and get liable for the work quality in revalidations done by others. Those CPs carrying out these revalidation exercises should be treated separately, and they should be accountable and liable for the correctness of their tests and for any non-compliance.</p>	4.E	Fully agreed. There is a misunderstanding in the requirements specified in Item 4.E and Item 5.5a) in the draft PMS. To clarify, Item 4.E and Item 5.5a) are amended as indicated in Item (a) and Item (u) in Appendix II respectively.
16.	My view is such scope is out of our discipline. Had any professional electrical engineer been listed as CP2?	IR 5.1a)	<p>There are several disciplines involved in the design and O&amp;M of LPG installations. The scope of work of Class 2 CP is to inspect the installation against the requirements under the Gas Safety Ordinance and current standards as well as report abnormalities. Please refer to responses under Scope of Work of Class 2 CP with PMS in the covering letter.</p> <p>It has been a part of the requirements for Class 2 CP to fully understand the Gas Safety Ordinance and subsidiary regulations and the design codes and standards pertaining to LPG compounds and cylinder stores. In fact, Section 6 of COP Module 1 stipulated clearly the related electrical requirements. Class 2 CP should be able to identify the classification of hazardous area and check if the electrical equipment installed is of the appropriate classification. If in doubt, Class 2 CP should be able to check with the owner of the LPG NGI and/or seek advice from the professionals/manufacturers.</p> <p>One of the aims of the PMS is to identify those under-performed Class 2 CP. If the 'Class 2 CP' is proved to be ineffective to substantially complete statutory annual inspections for the owners of LPG NGI, a re-assessment of the class is worth it.</p>
17.	We, CP2, may not have the knowledge on civil structures or ground settlement. Without the aid of historic records or professional knowledge, shall we point to the owner that the building crack or ground settlement exceeding specified design.	IR 5.1c)	This item is amended as indicated in Item (b) in Appendix II. This is an existing requirement but now with a more clearly defined scope. The aim of this requirement is for CP to observe, assess by engineering knowledge and exercise judgment on site conditions from O&M point of view and report if considered

			necessary.
18.	Under the Inspection Requirements (IR)'s Demerit Points 5-1c), since the CP is normally not in a qualified position to comment on the structural design of the condition of the structures/fitments /vessel chamber, unless there is a very obvious structural defect taken place that can be judged by common sense and yet missed out by the CP, otherwise the CP should not be penalized to receive 5 demerit points.	IR 5.1c)	Please refer to responses in Item 17.
19.	Under item no. 5-2a) the external condition of above ground vessel covers a wide scope, it is possible that missing out of a minor observation will receive 15 demerit points, the penalty is consider too heavy and not in line with other items.	IR 5.2a)	This item is amended as indicated in Item (e) in Appendix II with a more clearly defined scope. The demerit points assigned are regarded as appropriate in view of the relatively high risk posed by above ground tanks.
20.	It seems to me that those labels not always available.	IR 5.2c)	This item is amended as indicated in Item (f) in Appendix II. Class 2 CP who fully understands design codes and standards pertaining to LPG compounds and cylinder stores should be able to identify the provision of the safety devices without much difficulty.
21.	Shall we disconnect pigtails and inspect? My understanding is maintenance contractor/qualified fitters shall take the responsibility whenever they do their check or replacement.	IR 5.2d)	Class 2 CP and operation and maintenance contractors hold different responsibility. This item is however amended as indicated in Item (g) in Appendix II to address more clearly the concern. If in doubt, Class 2 CP should clarify with O&M agents/owners of LPG NGI.
22.	Please instruct owner or maintenance contractor to reposition data plate or marking in an easy and accessible locations for our inspections. You may not aware that some tanks having their data plates at the bottom of the vessel chamber since they installed and do you expect us to get onto the chamber with high risk potential to our personal safety.	IR 5.2h)	Please refer to responses in Item 3.
23.	Some Japanese PRVs do not have stamping on body for inspection	IR 5.3a)	Please refer to responses in Item 3.
24.	Under item no. 5-3b) to verify whether a vaporizer is functioning properly requires to observe its performance under different gas flow condition and it may not be possible for a CP to check the performance of the vaporizer at all the gas flow condition if the operation of the system does not allow.	IR 5.3b)	This item is amended as indicated in Item (j) in Appendix II.
25.	Similarly to 5-3b), item no. 5-4c) may have the same problem that the functioning of the gas regulators can not be properly evaluated if a full range of gas flow condition can not be tested due to operational restriction.	IR 5.4c)	This item is amended as indicated in Item (m) in Appendix II.
26.	Shall the owner or Class 2 competent person operate the valve/equipment and check its operation without interrupting gas supply?	IR 5.4d)	In conducting the annual inspection, the Class 2 CP shall coordinate with the owner and O&M agents of the LPG NGI. Interruption of gas supply should be avoided as far as possible.
27.	I had spent half hour to remove coating on 4 nos. of those fittings installed on a new NGI in use for just one year to assure they conform to the standard. Shall some measures be taken into account during construction or testing and commissioning of the system before put in use?	IR 5.4h)	This is an existing requirement but now with a more clearly defined scope. The aim of this requirement is for CP to observe, assess by engineering knowledge and exercise judgment in respect of pipework conditions and report if considered necessary. In response to the comment, this item is amended as indicated in Item (p) in Appendix II. It is however recommended that CP should pay attention to the use of any substandard pipework after routine maintenance.
28.	Shall the owner or Class 2 competent person operate the valve/equipment and check its operation without interrupting gas supply?	IR 5.4j) & 5.4i)	Please refer to responses in Item 26.

29.	"Excessive vibration" shall be resolved when the system was put in use.	IR 5.4n)	This item is amended as indicated in Item (r) in Appendix II.
30.	"Vent pipe" might be buried partially underground.	IR 5.4p)	This item is amended as indicated in Item (s) in Appendix II. For inspection of the pipework, CP is required to visually inspect the above ground sections and sections within underground pits where applicable. For the underground sections where visual inspection is impossible, CP should pay attention to the ground surface for signs of ground settlement, which may impair the integrity of the underground sections.
31.	Not all CLASS 2 COMPTENT PERSON knowing what does the report mean or what is the acceptance criteria. However, I had found tank without tank cable connected to the anodes but CP specialist stating that the tank was protected since installation. Another case is pittings found on tank after first 10 years service with "full" cathodic protection and "good" reports. I think other parties involved in the industry shall also be monitored by your office the same manner as CLASS 2 COMPTENT PERSON.	IR 5.5a)(ii)	Item 5.5a) is amended as indicated in Item (u) in Appendix II. Please also note responses in Item 6.
32.	Can you elaborate the term "fire services installation".	IR 5.5a)(iii)	Item 5.5a) is amended as indicated in Item (u) in Appendix II.
33.	Owner or maintenance contractor may not be able to provide last report for inspection.	IR 5.5b)	Keeping the inspection reports for the service life of the installation is one of the requirements for the owner stipulated in the Gazette (G.N. 5722) given under Regulation 6C(1) of the Gas Safety (Gas Supply) Regulations. Please also refer to responses under Acquisition/Maintenance of NGI records in the covering letter.
34.	Under item 5-5c) if the Owner has not reported to the CP for any alternation carried out on his system, it may not be always possible for a CP to observe such alternation.	IR 5.5c)	In conducting the annual inspection, the Class 2 CP shall coordinate with the owner and O&M agents of the LPG NGI. Please also refer to responses to the main concerns in the covering letter.
35.	Please instruct owner or maintenance contractor to reposition data plate or marking in an easy and accessible locations for our inspections. You may not aware that some tanks having their data plates at the bottom of the vessel chamber since they installed and do you expect us to get onto the chamber with high risk potential to our personal safety.	IR 5.5e)(i)	Please refer to responses in Item 3.
36.	Some valves are not installed on reasonably accessible positions and the stamping on valve is too small to be read. For the precise date and quantity of HPRV, I found one NGI having 5 nos coming from 5 different batches and exwork dates.	IR 5.5e)(ii) & 5.5e)(vii)	Please refer to responses in Item 3. In conducting the annual inspection, the Class 2 CP shall coordinate with the owner and O&M agents of the LPG NGI. Besides, this is the reason why HPRV replacement date and quantity have to be identified to enable replacement and testing as necessary. Nevertheless, reporting of quantities and date for replacement of HPRV are dropped as indicated in Item (x) of Appendix II.
37.	For very complicated site such as auto-gas filling station, the more chances for CP2 to make mistakes leading to mark deduction since there may be more than 50 nos of HPRVs, 24 nos of hoses, ....., to be checked and recorded.	IR 5.5e)(vii)	Please refer to responses in Item 36. Besides, guidelines are yet to be issued for those listed Class 2 CP assessed for conducting inspection on LPG compounds/stores to conduct inspections on auto-LPG filling stations. Audit inspections under this PMS will not be conducted at LPG filling stations for the time being.
38.	Comment 14 - IR 5-1c), 4d), 4f)& 4g) are new to me and may need to understand more about the situation before comment. Items 1k), 4l) & 4q) seem to be areas that may create dispute.	IR 5.1c) IR 5.4d) IR 5.4f) IR 5.4g) IR 5.1k) IR 5.4l)	Please refer to the amendments highlighted in Appendix II. Basically, the items are not new but now with a more clearly defined scope.

39.	<p>While some of the contents here, by implied terms, or directly, call for the CP2, in his course conducting annual inspection, to look into and review the detailed original designs and construction approval of the NGIs, checking against the original design drawings, as approved by the Authority, held by the NGI plant owner at their office (if they are still available while, very often, by our experience, some of them are always missing), I am afraid that this is not the original intent of getting CP2 to conduct annual F109 inspections on LPG compounds and NGIs. While most of those check elements in Para. 5.1 -- 5.4 can still be found and checked in-situ by CP2, quite a few of them in your IRs require and call for detailed review of the original and approved designs, checking against the complete set of original design drawings. This may not be practical and reasonable for CP2 to include the work in their original F109 annual inspections.</p> <p>As mentioned above, the basic intent of F109 annual inspection is to ascertain that the current plant conditions and status are healthy, check the housekeeping and in-situ plant conditions, confirm that minimum maintenance work has been performed, and there is continued compliance to the original design and provisions without any unauthorised modifications. I do not agree that the F109 inspection is a re-visit or review of the original design basis for plant upgrading and enhancement, (noting that in practice, small and low level, non-high risk discrepancies have to be tolerable).</p>	IR 5.1 to IR 5.4	The general scope of work mentioned in the 2 <sup>nd</sup> paragraph is basically agreed. Please refer to responses to the main concerns in the covering letter.
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\*\*\*\*\* END \*\*\*\*\*