

Minutes of Meeting

Document No CO-1424-07

Subject	CO Sub Group	Circulation	All members
Date	23 October 2007	Circulation Date	19 Nov 2007
Location	CoGDEM offices Hitchin	Circulation by	Website & email

Attendees

Jason Perrins - Dicon/BRK
Leigh Greenham - CoGDEM
Peter Walsh - HSE
John Sonley - JMS Consulting
Steve Lower - Sira Environmental
James Clark - CryoService
John Walsh - FireAngel
Bernard Thomas – Invensys Control
Ismail Mansoor – Invensys Control
Colin Mitchell - Ei Electronics
Mike Byrne - Ei Electronics
Tom Tonkins - Testo
Kevin Honner - Crowcon
Adrian Beasley - Crowcon
Stefan Kukula - Crowcon
Kevin Brown – e2v technologies
Angus Drummond – e2v technologies
Ron Webb – FM Approvals
Craig Anderson – Qtronics (guest)
Zoe Forman - PR Consultant

Apologies

John Saffell - Alphasense
Arthur Burnley - Alphasense
Andy Burnett - Kidde
Derrick Jepson - TSI
Nigel Lock - Analox
David Woods - General Monitors
Adrian Keats - Honeywell SF
Robert Kyle - MSA
Andrew Was - FM Global
John Wilson - MSA
Frank Dean - Ion Science
Jonathan Gilby - City Tech
Rob Poulsen - Sensotec 4-Warn
Alan Henderson - GasSensingSolutions
Mike Smith - GasSensingSolutions
Nick Ludlam - FM Global
Jonathan Kane - Kane Int.
Ken Dawson - Trolex
Noor Ali - CryoService
Paul Shields - CryoService

Agenda

- 1) Apologies
- 2) Approval of previous minutes and matters arising
- 3) CO Awareness Week review
- 4) All Party Parliamentary Gas Safety Group, CO in school buildings
- 5) Gas Industry Safety Group (GISG) and Industrial Liaison Group
- 6) Flue Gas Analysis and CO₂ (including BS7967 Part 5 update, and ESP usage)
- 7) CO Consumer Awareness Alliance (COCAA)
- 8) Standards review (including EN50291 becoming mandatory)
- 9) Black spots and non-compliant Chinese alarms
- 10) Boats and leisure vehicles (CO dispersion)
- 11) Publicity (Zoë Forman's project)
- 12) AOB (including WEEE by Jason Perrins, HSE update)
- 13) Dates of 2008 meetings

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1 Apologies

The above list of apologies was read out. We welcomed Craig Anderson from Qtronic as a guest, who was considering membership. Qtronic manufactures natural gas and CO detectors and shut-off systems for domestic and non-domestic applications, having UL and EN approvals. Post-meeting note: Qtronic has now become a full member of CoGDEM.

2 Review of last Minutes

The Minutes of the previous meeting (26 June 07) were read and accepted (Doc no. CO1423-07). Actions arising were covered during the rest of the agenda. .

3 CO-Awareness Week review

CoGDEM and some of its members attended many of the events held between 15 and 19 October, either as members of the COCAA Alliance events, or as invitees of Lynn Griffiths' CO-Awareness. The COCAA events received by far the best media coverage, especially those where Lord McKenzie and Barry Sheerman MP were involved. The storyline in Hollyoaks led to an increase in CO alarm sales (according to the manufacturers), and a great media story of how a viewer's life was saved when she recognised her own CO poisoning symptoms reflected in the storyline. CoGDEM members are asked to encourage their retail outlets to make more of a splash next year. The perpetual squabbling between the victim support groups was disappointing, but not unexpected. CoGDEM was interviewed on several regional TV/radio news programmes.

One of the doctors advising CO-Awareness talked of how low-level poisoning was a misnomer, any poisoning is bad. LG uses the 2007 UK Health Protection Agency data on toxicological effects of CO, which is downloadable from http://www.hpa.org.uk/chemicals/compendium/carbon_monoxide/default.htm along with other documents on CO incident management. As the HPA is an agency of the Dept of Health, this data would seem to be the most appropriate and authoritative to be quoted in the UK. The relevant exposure guidance has been extracted and was shown at the meeting and has been included in these Minutes as Appendix A.

4 All Party Parliamentary Gas Safety Group

The group of MPs led by Barry Sheerman met on 24 July 2007 and CoGDEM was represented by LG. This meeting was intended to focus on the skills of the workforce and their knowledge of CO, but half the meeting formed a review of progress with the COCAA industry initiative. CORGI were criticised for not having the victims' groups on the steering group, but this was deflected. The APPGSG were unaware of their "sister" group the All Party Parliamentary Building Services Engineering Group, who are also investigating skills within the plumbing/heating engineer sector.

The APPGSG has been critical of Government departments not being "joined-up" on the issue of CO awareness, so it was interesting that CoGDEM and CORGI was invited to a joint meeting of the Departments of Health and Children, Schools & Families and the HSE to discuss the avoidance of poisoning from school boilers. The HSE representative (Julia Soave) was horrified to learn that there is currently no mandatory annual inspection requirement for school boilers. The DCSF representative agreed to highlight this, as well as the availability of suitable CO alarm systems.

5 Gas Industry Safety Group (GISG) and Industrial Liaison Group

We have informed the GISG that we believe the group is not proactive enough to help CoGDEM members, especially considering the budget that they have available. They are intending to demonstrate to us that they have a role to play (perhaps by following up on rogue CO alarms), so that they can justify our continuing membership. The ILG has served its purpose, now that the use of Flue Gas Analysers is covered in the ACS scheme.

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6 Flue Gas Analysis and CO₂ (including BS7967 Part 5 update and ESP usage)

CORGI continues to heavily promote the use of Flue Gas Analysers by its Registered Installers, as witnessed by the number of presentation sessions at their InstallerLive exhibition in September, and the attendance of most manufacturers. Two CoGDEM FGA products were nominated for safety innovation awards, and were highly commended.

The project being co-ordinated by Gordon Pool of Downstream Gas to develop Part 5 of BS7967 (non-domestic uses of FGAs) has made good progress, perhaps to 80% completion. The remaining work includes the determination of suitable CO/CO₂ ratios for non-domestic boiler installations, which is a difficult task.

Downstream Gas had also proposed another work item, this being the creation of a guide to BS7967 which manufacturers of Flue Gas Analysers could include with new units. Manufacturers decided not to support this work en-masse, as several had already produced such guides, and one CoGDEM member company wished to commission DG for a company-specific version.

BS 8494 (performance of handheld CO₂ instruments) was published by BSI during the summer, thanks to the endeavours of several CoGDEM members.

James Clark of CryoService pointed out that it was good to see FGAs featuring in the latest BG TV advert.

Good progress seems to have been made in the OFGEM meeting held on 18 Oct, in which the historic refusal of the gas Emergency Service Providers to carry CO detecting instruments was discussed. CoGDEM was represented by Eddie Quigley of TPI who reported that, by the end of the meeting, there was broad agreement that CO detectors of some kind should be given to ESP workers. It has been suggested that a working group will be formed to assess the most appropriate type of instrument to be used.

7 CO Consumer Awareness Alliance (COCAA)

The Alliance was launched at CORGI's InstallerLive show in September, at a CO Forum that was coordinated by CoGDEM with an introductory slide-show created by us. In the following Q&A session, alarms were at the top of everybody's list. CoGDEM is on the Steering Group for the Alliance, and is well-placed to ensure that the correct messages about audible alarms and Flue Gas Analysers are always being given out.



Since the Alliance was formed earlier this year, it has gained an impressive profile amongst the MPs and HSE Minister, and is now seen as the intended single voice of the fuels industry. A published Activity Report has just been issued (copies were distributed to CoGDEM members) which highlights the total list of activities which all members of the Alliance are conducting to raise awareness of the hazards of CO poisoning in the home.

An activity plan for 2008 is now being created, so that members of the Alliance can factor this into their PR budgets, and we are trying to ensure that CoGDEM members' contributions are given "in-kind".

8 Standards Review (including long term testing of CO alarms in EN50291)

John Sonley gave us a review of activities:

TC216:

Italy and Spain are jointly drafting a standard for the Committee on Carbon Monoxide in Car Parks - scheduled for June. There was good support from both UK and Germany and offers to help in drafting

EN 50271 Digital Technologies: Germany was preparing a 2nd draft, due by the Summer, we await its appearance.

EN 50194 - 1 Domestic Flammable Performance Std: Slight mods to incorporate 'replaceable sensors' and to separate from EN 50194 - 2 (Recreational Vehicles version, already published) then circulate under the Unique Acceptance Procedure.

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EN50291 - 1 CO in domestic premises Performance Std.: Project Leader, Tony Banfield (Sira Environmental). At last meeting, comments discussed, incorporated by Secretary and to be circulated for 6 month enquiry. Main problem to UK with EN50291 - 1 was that proposed Long Term Test (from CoGDEM & Peter Walsh) was rejected by other countries.

EN50291 – 2 CO in Recreational Vehicles Performance Std: Project Leader, Dieter Wenker. At last meeting, 1st draft discussed, well written; comments to be sent to Secretary for collation and discussion at Barcelona (Feb 08).

EN 50292 CO in Domestic Premises & Recreational Vehicles - Guide for Use. Project Leader, Tony Banfield. Comments received and discussed, UK to incorporate comments and Secretary to circulate to members as a Committee Document.

John Sonley will ensure that LG has latest versions of the EN50291/2 drafts; members can request copies or download them from the website.

ISO/TC188 CO for small boats. Manufacturers didn't like the proposal, based on UL2034. No other news.

At TC216, Jason Perrins put case for CO in Domestic Premises performance standard to include testing for low levels of CO - chronic conditions. Rejected by other countries, as cornerstone for such a standard needs to be medical evidence of concentration levels necessary to induce chronic attack - not available!

Date of Next Meetings of CENELEC : 26th & 27th Feb 2008 Barcelona

Date of next GEL/31/19 - to be decided, late Jan or early Feb 2008 to collate UK input, decide delegations.

Within BSI: as reported earlier in the Flue Gas Analyser section of these Minutes, BS 8494, covering the performance of portable CO₂ detectors, has now been published.

9 Black spots and non-compliant Chinese alarms

At our June 07 meeting we had a long discussion about black spot (or similar colour-change) CO detectors. Peter Walsh of the HSE had asked for guidance on whether CoGDEM felt that a performance standard could be developed, and he was subsequently informed of the negative outcome to this discussion. In the intervening months, the HSE's interest in these devices has waned, and there is no enthusiasm to commit time or resource to this project. Peter read us the latest FAQ data from the HSE website which only makes reference to audible alarms:

Does HSE recommend the use of carbon monoxide alarms?

HSE strongly recommends the use of audible carbon monoxide (CO) alarms as a useful back-up precaution but they must not be regarded as a substitute for proper installation and maintenance of gas appliances by a CORGI-registered installer. Before purchasing a CO alarm, always ensure it complies with British Standard EN 50291 and carries a British or European approval mark, such as a Kitemark. CO alarms should be installed, checked and serviced in line with the manufacturer's instructions.

You can be particularly at risk from CO poisoning when you are asleep, because you may not be aware of early CO symptoms until it is too late. Having an audible CO alarm could wake you and save your life.

Sira has developed a test protocol for a performance test for colour-change detectors, and is in confidential discussions with manufacturers about conducting some independent tests.

CoGDEM had a busy summer dealing with Trading Standards over the dangerous Proteam CO alarm, which would only alarm at flammable concentrations (12.5% vol) rather than toxic concentrations. A full recall and safety notice was issued. We have also been attempting to clarify whether the MKM device (aimed at the caravan market, but now being offered into retail applications by its importer One-4 Ltd) does indeed comply with EN50291. Our tests at Sira showed it didn't, but subsequent tests at Sira on newer units supplied by MKM surprisingly seemed to meet the alarm threshold requirements of the standard. If the supplier cannot supply proof of the claimed compliance, we will alert Trading Standards.

Post-meeting note: Asda has withdrawn their branded Garvan CO alarm because of complaints of false alarms. Thanks to Ei for conducting some quick tests on the unit

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10 Boats and leisure vehicles (CO dispersion)

The progress on standards for these sectors had been covered above.

Peter Walsh said that the Boat Safety Scheme project to assess the propagation of CO in boats had not been progressed; they had been sidetracked by the summer floods on inland waterways. Stefan Kukula of Crowcon showed a BSS leaflet on CO that had not been updated since 2004, so still referenced the obsolete BS7860.

It was pointed out that the National Caravan Council will only recommend alarms that are compliant to EN50291 and it is collating a list that is available to all of its member companies.

11 Publicity (Zoe Forman's project)

Zoe Forman continues to provide PR services (through Mandeville Marketing) to the sub-group of manufacturers of domestic CO alarms and FGAs. This project has been greatly enhanced by the existence of the COCAA Alliance, and a considerable proportion of her time is spent dealing with this. Two pop-up banners featuring the COCAA and CoGDEM logos have been produced, and these were well used during CO-Awareness Week and formed the backdrop for all of the photos with MPs being given domestic alarms and data. The pop-ups are now in demand for exhibition duties by Zoe's sub group. This group has separate PR meetings, and Zoe will be organising the next one for November.

12 AOB

UL2034. LG pointed out that UL (Underwriters Laboratory) had co-sponsored Lynn Griffith's CO-Awareness Week by providing PR through their UK agency (Colbear). Colbear had not declared this when they spoke to LG and ZF in the summer seeking information about the UK market for CO alarms. LG and ZF both questioned the UL representative (John Drengenberg) at the CO Awareness events about the mixed messages that would be given to the UK consumer if one of the victims' support groups was advocating UL-marked product, due to this sponsorship. Despite some CoGDEM members importing UL marked product, there was a consistent view that we should only recommend consumers to buy EN50291 compliant product, as this is the appropriate standard for all European countries. BSI has already been asked to petition for this standard to be listed in the Official Journal of the EU, so that independent proof of compliance to the standard must be available before a CO alarm can carry the mandatory CE mark. It is hoped that this will be in place by the summer of 2008.

Honeywell SF and Ei Electronics have produced a table of key comparisons between the UL and EN standards, and this is attached to these Minutes as Appendix B.

13 Dates of 2008 Meetings: Tuesday 29 January 2008, 10:30am, Hitchin.
Tuesday 24 June 2008
Tuesday 21 October 2008

Appendix A

Acute Exposure Guideline Levels (AEGLs)

HPA Compendium of Chemical Hazards, Carbon Monoxide
Prepared by S Bull CHAPD HQ, HPA 2007
Version2

	ppm				
	10 min	30 min	60 min	4 hr	8 hr
AEGL-1[†]	-	-	-	-	-
AEGL-2^{††}	420	150	83	33	27
AEGL-3^{†††}	1700	600	330	150	130

[†] The level of the chemical in air at or above which the general population could experience notable discomfort.

^{††} The level of the chemical in air at or above which there may be irreversible or other serious long-lasting effects or impaired ability to escape.

^{†††} The level of the chemical in air at or above which the general population could experience life-threatening health effects or death.

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Appendix B

Key comparisons - EN50291 vs UL2034

	EN50291	UL2034
Alarm Threshold	<p>at 30ppm the alarm must not sound (the standard requires an exposure test for 120 mins)</p> <p>at 50ppm an alarm must not be given before 60 minutes but must be given before 90 minutes</p> <p>at 100ppm an alarm must not be given before 10 minutes but must be given before 40 minutes</p> <p>at 300ppm an alarm must be given within 3 mins</p>	<p>at 30ppm the alarm must not sound (the standard requires an exposure test for 30 days)</p> <p>at 70ppm (+/- 5ppm) an alarm must not be given before 60 minutes but must be given before 240 minutes</p> <p>at 150ppm (+/- 5ppm) an alarm must not be given within 10 minutes but must be given before 50 mins</p> <p>at 400ppm (+/- 10ppm) an alarm must not be given within 4 minutes but must be given within 15 mins</p>
Humidity for alarm threshold	RH between 30%RH and 70%RH (+/- 10%)	50%RH (+/- 20%)
Temperature for alarm threshold	Between 15C and 25C (+/- 2C)	23C (+/- 3C)
CO over-range test	<p>Unit is exposed to 5000ppm for 15 mins & it must sound alarm during this exposure</p> <p>Unit then allowed to recover in clean air for 1 hour</p> <p>Unit then tested at 55ppm (+/- 5ppm) and must not give an alarm before 60 minutes but must give an alarm before 90 minutes</p>	<p>Unit must sound an alarm for at least 12 hours at 600ppm</p> <p>No re-testing of the unit at lower CO levels is done after this test</p> <p>No requirements for units to work at very high concentrations eg. 5000ppm</p>
Long term reliability	Assesses sensitivity stability over 3 months in 10ppm CO - no alarm must be given	Assesses sensitivity stability over 3 years
Battery Life	Requirement is for a minimum of 12 months Sealed, long life units OK	Requirement is for a minimum of 2 years Batteries must be replaceable
Alarm signal	Chosen by manufacturers (allows differentiation from other alarms)	Alarm signal set by UL for all units (same as smoke alarms)
Re-testing of samples	Every year (each year BSI take 2 sample units to test to confirm ongoing approval to standard)	No retesting of samples at all
EMC Tests	As per the European requirements in EN50270. eg tested from 30 to 1000Mhz	USA EMC tests. eg, just tested at a few discrete frequencies ie. 27, 150, 450, 866 & 910 Mhz. These tests may not be fully adequate for CE marking.
Summary	EN imposes extremely strict alarm requirements. Where performance requirements differ, EN is clearly a tougher standard	UL has the most relaxed alarm thresholds and no high level recovery test. The EMC tests are very limited and may not even allow units to pass European CE mark requirements It does have demanding humidity requirements and the more extensive resistance tests to interference vapours/gases.