

Minutes of Meeting

Document No CO-1443-14

Subject	CO Sub Group	Circulation	All members
Date	11 th February 2014	Circulation Date	3 rd March 2014
Location	CoGDEM offices Hitchin	Circulation by	Website & email

Attendees

Leigh Greenham - CoGDEM
Mike Byrne - Ei Electronics
Tom Gurd - City Tech
Arthur Burnley - Alphasense
Peter Philpott - TPI
Stephen Hawes - TPI
Peter Walsh - HSL/HSE
Graham McKay - BSI Global
Jonathan Kane - Kane International
Billy Mitchell - Smart Compliance
Scott Wallace - Smart Compliance
Tony Banfield - Chair EXL/31/1 etc
Adrian Keats - Honeywell Analytics
Richard King - Honeywell Analytics
Jane Howitt - Honeywell Analytics
Gavin Boorman - GfG
Hans Hubner - GfG
Damian Cairns - Anton
Andy Avenell - Crowcon
Kevin Honner - Draeger
Fraser Mathieson - GMI
Ken McDermott - GMI
John Turnbull - GMI
Zubair Haroon - GDS
Ian Ballinger - Sprue Safety
John Walsh - Sprue Safety
Jason Perrins - FireBlitz
Stephan Scheiper - ISC
Bernard Thomas - Kidde Safety
Andy Burnett - Kidde Safety
Mike Murley - Testo
Paul Jordan - Testo
Neil Perdell - Aico
Kevin Mileson - GES
Paul Walton - Shawcity
Alan Henderson - Gas Sensing Solutions

Apologies

Clive Tester - Sira
John Sonley - JMS Consultants
Jeff Regan - JMS Consultants
Kevin Brown - SGX Sensortech
Zoe Forman - Mandeville Marketing
Mike Hemingway - HSL/HSE
Ian Robertson - Analox
Matt Daniels - Scientific & Tech Gases
Jonathan Gilby - City Tech
Roger Davies - Senko Europe
Chris Nicholson - Testo
Colin Mitchell - Ei Electronics

Agenda

- 1) Apologies and member introductions (inc. several new members)
- 2) Approval of previous minutes and matters arising
- 3) Lobbying activities (inc. All Party Group, HHIC, CCC)
- 4) CO-Be Alarmed campaign and other publicity update
- 5) CO alarms standards review (inc. EN 50291-1 & -2, EN 50292 update, combined smoke/CO alarms, market surveillance testing)
- 6) Flue Gas Analysis (inc. new boiler testing & CoGDEM adverts, CO₂ effect on O₂ sensors, calibration consistency)
- 7) Non-compliant CO alarms update, inc. Black Spots
- 8) AOB (including updates from HSE, victims charities, helpline, CoGDEM's 40th)
- 9) Dates of next meetings – Tues 10 June 2014, Tues 14 Oct 2014

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1 Apologies and member introductions

The above list of apologies was read out, and members introduced themselves around the table. Since our last meeting, CoGDEM has been joined by three new members, Frontline Safety, a reseller of workplace gas detection apparatus, Senko Europe, the local sales/marketing arm of the Korean gas detector manufacturer and Smart Compliance, a Scottish company operating mainly in the domestic CO alarm sector, but with interests in commercial and workplace gas detection.

2 Approval of previous minutes and matters arising

The Minutes of the previous meeting (15th Oct 2013, CO1442-13) were read and accepted. Matters arising were covered during the rest of the agenda, with the exception of the Gas Appliance Directive update. Graham McKay of BSI told us that the suggested amendments to the guidance notes that sit alongside GAD had been rejected by the committee that oversees both documents. These amendments would have drawn attention to carbon monoxide risks from gas-fired appliances, mentioning the importance of servicing, flue gas analysers and CO alarms. The key UK person on that committee is Richard Harris of BIS who was apparently against the amendment proposals.

3 Lobbying (inc. All Party Group, HHIC, CCC)

All Party Parliamentary Carbon Monoxide Group (APPCOG):

As part of the APPCOG, CoGDEM is a co-sponsor of the Carbon Monoxide All Fuels Action Forum, which aims to coordinate industry activities related to domestic CO incidents and awareness, but across all fuels, not just gas. For the year Sep 13 to Aug 14, a total of £5k funding is being provided by 8 CoGDEM members, with Anton joining the previous year's sponsors (City Tech, Ei Electronics, FireBlitz, Honeywell, Kane, Kidde and Sprue).

LG attends quarterly Steering Group meetings and a whole series of activities and events are scheduled for 2014. The most important of these may be the review of the major inquiry that the group conducted in 2010/2011 which produced the Baroness Finlay report. A meeting on this subject will be held in April and LG will ensure that all the funders are invited.

The new manager of the group is Haley Bowcock (ex-Oxfam). Other changes include the creation of a new science and technology sub group to be chaired by Roland Wessling. Holiday safety, home MoTs, helplines and healthcare provision are all subjects that are moving forward. It is hoped that the winter's CO-Be Alarmed campaign can become a joint effort between Energy UK and the All Party Group in the future. APPCOG will also be busy with the Energy Bill amendments and the current DCLG consultation on the private rented sector.

The All Party Group are playing a major part in organising this year's IGEM CO conference, to be held in London rather than Derby. It will be held on Wednesday 9th July at the QE2 Conference Centre in Westminster, and is expected to attract twice the audience size of 2013, including some MPs and Lords from across the road. CoGDEM has asked for a presentation slot to represent the alarm and FGA community, but there will also be opportunities for individual companies to exhibit. All the gas distribution network companies have agreed to fund the conference, so that the audience are not charged to attend.

HHIC:

LG displayed the final version of the advert that was to be co-sponsored by CoGDEM and HHIC (the gas heating appliance manufacturers' trade association), drawing attention to Technical Bulletin TB143 covering the move to compulsory checking for CO in the flues of domestic gas boilers at point of installation and commissioning from April 2014. As it is a safety related message, HHIC has used its contacts to obtain free advertising in many of the trade press and their members, although the main ad in Registered Gas Engineer magazine will still have to be paid for.

A technical review and update on the Flues-in-Voids situation was held at HHIC on 19 November, attended by LG, it was mentioned that around 2000 void monitoring systems had been sold by Baxi.

Camping and Caravanning Club (CCC)

Following their positive change of guidance on using CO alarms when camping, the CCC recently put a new blog together, highlighting the benefits. However, they then blotted their copy book when the organisers of this summer's Kent VW Festival asked for leaflets to give to all campers following a near miss at last year's festival. CCC told them to print out their leaflet themselves rather than deplete the CCC stocks. Fortunately Gas Safe Register was more generous and sent several hundred copies of their own camping CO leaflet.

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Victims' charities

CO-Gas Safety held their annual prizegiving event in Westminster for their schools' poster competition, which was well attended.

LG continues to be in ongoing correspondence with Molly Maher who runs Consumer Safety International, they have recently sent negative letters to Parliamentarians and others about CO alarms, the need for gas testing and that they can't be relied upon due to their inherent unreliability. We have given them the facts, but they ignore these and have adopted a new approach of attacking the messenger instead of the message.

CO-Awareness (Lynn Griffiths) held a single event in Westminster to mark CO-Awareness Week in November, this was apparently well attended by victims but received little publicity. We have not heard whether she intends to run any similar events in 2014, or what is her current focus. Tony Brunton, her Chair of Trustees has health problems and now keeps a low-profile.

Stacey Rodgers runs the Dominic Rodgers Trust, her son would have reached his 21st birthday soon had he not been killed by CO from a neighbouring property when he was 10. Stacey aims to run some commemorative events and will keep us informed.

UK Fire & Rescue Services

Perhaps because of the Chief Fire Officers Association interest in CO, the various Fire & Rescue Services around the UK are much more interested and receptive to CO initiatives. There is a heavy FRS involvement with the Liverpool John Moores University project (more in section 8b of these minutes), CFOA has set up a CO advisory panel with RoSPA and the Gas Safe Charity and invited LG to attend its regular meetings. At the kick-off meeting in December (a second one is planned for March), updates were given on the Blue Watch scheme, such as RightMove publicising BW on the student pages of their website, 18 brigades formally signed-up, new contact at HSE (Matthew Penrose having taken over from Colin Connor). RoSPA announced they will be distributing 13,000 CO alarms over three years.

CFOA wants to see legislation for rented properties to be equipped with smoke and CO alarms, so they are keen to see a positive conclusion to the current DCLG consultation on amendments to the Energy Bill. LG has been asked to attend a meeting at Cheshire FRS HQ to discuss the basis of CFOA's response to the consultation, and he will report to the CO alarm manufacturers after the meeting.

They have also highlighted the importance of a recent Coroners Rule 28 letter following a CO fatality in Manchester, possibly as the result of an FRS error when dealing with the emergency call. This letter calls for a formal response from HSE, GSR and DCLG within 55 days

Europe

A follow-up CO Roundtable event was to be held in Brussels in February, chaired by Linda McAvan MEP, CoGDEN will receive a report in due course. Such events tend to involve the sharing of best practice from European nations, and Chris Bielby (our guest speaker after lunch today) plays a key role within the UK delegation. He will be asked to mention that the lack of an equivalent to the UK's Gas Safe Register means that most other nations have no ability to carry out the large scale recommended improvements to gas appliances as they have no installation/competence assessment or registration schemes (see 8f below for more).

A comment made by our German attendees today was that since some domestic incidents a couple of years ago when emergency response staff were exposed to CO, German FRS are typically carrying gas detectors and are now discovering more domestic CO incidents than were previously thought to occur.

4 CO-Be Alarmed campaign and other publicity

Zoe Forman could not attend today, so she sent in the following list of bullet points that were briefly discussed:

- CO Be Alarmed Campaign, good media coverage and a photo event with MPs in Parliament
- APPCOG - holiday, landlords & rented property, public awareness & education
- HSE - Lunch & Learn CO talks for larger companies and local Wiltshire Womens' Institute, Police and Rotary Club presentations
- European Parliament - UK CO activities update at the Roundtable event.
- Kirklees Council - advice and presentations
- CCC & Boat Safety Scheme, use of CO alarms in recreational activities.
- COGDEM CO sub-site - www.carbonmonoxidenewsuk.wordpress.com & COGDEM CO Facebook page.

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Zoe hopes to rework the CoGDEM CO leaflet soon, she has updated the CO section of the CoGDEM website and encourages members to visit this and give her feedback. If it is liked, Zoe could update the rest of the website to adopt the same style.

A Daily Mail health feature about CO was published in January, this had CoGDEM input and quotes.

Gas Safety Week will run from 15-21 Sept this year, CoGDEM will be supportive.

LG has been asked to attend a meeting at the Marine Accident Investigation Branch of the Dept for Transport at their Southampton HQ in March to discuss the recommendations that will be put into the final report of the double CO fatality on the Lake District boat last Easter. The report will be well-publicised and is expected to conclude that suitable alarms meeting EN 50291-2 should be fitted to all similar boats. The Boat Safety Scheme representatives will also be in attendance, so we can hopefully discuss ways to make this mandatory and maximise the publicity. A recent double CO fatality on a small trawler moored in Whitby harbour has demonstrated there is a need for workplace gas detectors on small working boats that have cooking and sleeping accommodation (domestic CO alarms are not certified for such usage).

Following the recent reports of fatalities from CO poisoning caused by fumes from portable generators and pumps during the storms in the UK, LG worked with Energy UK on a press release about the dangers.

5 CO alarms Standards review (including EN 50291-1 & -2, EN 50292 update, combined smoke/CO alarms, market surveillance testing)

Tony Banfield who chairs the EXL/31/1 and TC216 committees received some good news just prior to the meeting, the EU is asking CENELEC to add EN 50291 to mandate M109, so that compliance with that standard becomes mandatory before CO alarms can carry the CE mark, demonstrating that they meet the Construction Products Regulations. Jason Perrins pointed out that for third party certification to be necessary (rather than just a Manufacturer's Declaration of Conformity) CO alarms must be listed at the 'higher attestation level'. As this is important fresh news, further details may come from the forthcoming TC 216 meeting in March.

Tony was able to update the meeting on the status of EN 50291 and EN 50292 following the EXL/31/1 meeting that had taken place at the beginning of February, his notes are reproduced below

EN 50291-1 – *Note that Ciaran Costelloe is the convenor, not Fergal Finn.*

Although prEN 50291-1 was sent for enquiry in November 2013, there was a concern over missing drawings. This appears to have been resolved (they must be provided before the end of the enquiry), but we are still awaiting translation and the official CLC enquiry.

Mr Price raised his concern that if the fitting of CO alarms is made compulsory, landlords will be forced to fit hard-wired CO alarms in rental accommodation. The Chair pointed out that EN 50291-1 allows both mains powered and battery powered alarms (typically represented by Type A and B respectively where Type A provides a visual and audible alarm and an executive action in the form of an output signal that can be used to actuate directly or indirectly a ventilation or other ancillary device, and Type B provides a visual and audible alarm only) to be used in domestic accommodation, and others pointed out that with sealed-for-life 10-year-battery alarms becoming available it would be practical to fit that type of alarm unit in rental accommodation.

Stop Press: CLC announced the November draft for Enquiry on 7th February, in English and French. Deadline for comments is 11 July 2014 – probably a couple of weeks earlier for BSI.

EN 50292 – *This was published in November 2013. It was also noted that the normal BSI procedure of notification to committee members and the option to download a complimentary copy has not occurred.*

Mr Price asked whether this standard could be displayed (in full or in part) on the National Landlords Association website. The committee pointed out that this was specifically prohibited by BSI.

Since the previous CoGDEM meeting's discussion of **combined smoke/CO alarms**, the US company Nest Labs launched a combined unit carrying the BSI Kitemark for both the smoke and CO performance standards. This is the first time such certification has been applied to a combined alarm, and LG suggested that this would be the appropriate route for all other combined alarm manufacturers to follow, until such time as a single standard appeared. Google recently purchased Nest Labs for \$3.2 billion!

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The single standard should emerge from a Working Group put together by the two relevant CENELEC committees TC216 (gas detectors) and TC72 (smoke detectors) who had a scoping meeting at BSI in January, agreeing that there is a need for experts to come together to create an appropriate standard.

BSI has been awarded the 'Prosafe' testing contract to conduct the pan-European **market surveillance of CO alarms**. Graham McKay of BSI updated us that nine EU countries were involved (not including UK), being coordinated by the Prosafe organisation, representing Trading Standards organisations from across Europe. By pooling resources, BSI will be sent 3 samples of 25 different alarms from retailers in those nine countries. Testing will start soon. BSI will use their experience during the testing; they won the bid due to their technical proposal and experience.

6 Flue Gas Analysis (inc. new boiler testing and adverts, CO₂ effect on O₂ sensors, calibration consistency)

Standards

The new European Technical Specification **TS 50612** was published in December covering the use of FGAs for the combustion testing of gas fired central heating boilers. CENELEC is looking to expand the scope of this TS to also cover independent space heaters, water heaters, cooking appliances and gas-fired air heaters. This will require the European gas detection committee TC 216 working with the relevant Technical Committees for the other (non-boiler) heating/cooking appliances.

There will also be some additional text added to the UK version of the standard (BS TS 50612) which makes it clear that BS 7967 takes precedence.

The Working Group for BS7967 met in December. Kevin Milesen keeps us informed of relevant changes and has reported that it appears CO₂ testing is being taken out of CMDDA1 on 1st April this year, as room build-up testing within BS 7967 does not include the monitoring of CO₂. This is unfortunate, some modern high efficiency appliances might not generate CO, so if they spill their products of combustion into the room, monitoring for CO will not spot it, whereas monitoring for an increase in the normal ambient CO₂ concentration might. This point is to be made to GST/IGEM for the project that they are funding at HSL to investigate sealed properties (see also 8a below).

Compulsory Combustion Testing

As mentioned above with reference to HHIC, the move to a mandatory use of FGAs to commission new gas-fired condensing boilers is welcomed, and CoGDEM members agreed on the need for a co-funded advertising campaign with HHIC to publicise this. After finding a suitably anonymous picture and agreeing the bullet points, the advert will appear in various trade magazines. HHIC managed to persuade most journals to include it free of charge due to it being a safety-related message, although Registered Gas Engineer magazine will still make a charge which will be funded 50:50 by HHIC and CoGDEM. We will contact the European trade body EHI (HHIC are members) to broaden the message across Europe as much as possible (see item 8f in AOB below for more on Europe).

CO₂ effect on O₂ sensors

As reported at previous meetings of the FGA manufacturers/suppliers, Alphasense and City Technology would undertake suitable tests to identify any effect of high CO₂ backgrounds causing an enhancement of the conventional lead-anode oxygen sensor output signal. Just prior to today's meeting both companies released their results which LG circulated for discussion. In summary, both sets of results showed that at 10% vol CO₂, the oxygen sensor's sensitivity will be increased by approx 5% of its normal sensitivity. Therefore, in a flue condition of 10% CO₂ and 5% O₂ an uncompensated O₂ sensor would give an apparent reading of 5.25% to 5.3%. The other key finding of the tests was that this effect did not change throughout the life of the sensor.

Other CO sensors used in FGAs are made by Dr Gambert and DD Scientific, users of these sensors should contact the manufacturers to ask whether the effect may be similar. JK pointed out that Alphasense and City Tech had only tested one of their range of O₂ sensor products.

Some related comments were made about FGA compliance with EN 50379 if the performance of IR sensors for the direct measurement of CO₂ (and calculation of O₂) was to deteriorate over time. LG commented that the tests in EN 50379 needed to take this into account, if it was felt that the standard was not sufficiently onerous in this regard then it should be strengthened.

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Calibration

As discussed previously, with the more widespread use of FGAs for mandatory appliance testing, the stated requirement for annual recalibration is very topical. So that all FGAs undergo a more consistent procedure to the annual calibration process, it was agreed that CoGDEM would produce a statement of minimum requirements. Jonathan Kane produced a draft briefing note but some CoGDEM members felt this to be too detailed, so Kevin Milesen produced a précis which has been well-received, with some additional suggestions from Testo and TPI. All other FGA members were encouraged to submit comments so that the statement could be completed.

7 Non-compliant CO alarms update, inc. Black Spots

As reported at the previous meeting, the non-compliant CO alarm with a blue LCD continues to appear on the market occasionally, albeit in different moulding designs, sometimes (but not always) accompanied by false claims of compliance to EN 50291. It has now appeared under a 'Carbon Check' brand, and LG was sent a TuV Rheinland Poland certificate of compliance by the UK supplier (Corporate Jungle), but this appears dubious and TuV's own website shows this as having been invalidated. BSI has volunteered to perform a couple of quick tests on samples, following a test by Ei that showed up some performance deficiencies.

Post meeting note: after CoGDEM's communications, the Carbon Check website has been taken down and products removed from sale by Corporate Jungle until the EN 50291 compliance is thoroughly checked.

Other models under the brand names Hispec, Winston and Channel have been seen since our previous meeting and investigated.

Post meeting note: Kevin Milesen spotted that 'Toys R Us' specialist outlet 'Babies R Us' are selling UniCom black spots, so LG has contacted them and received an unsatisfactory response, more pressure has been applied.

8 AOB (including updates from HSE, helpline)

a) HSE

Peter Walsh mentioned the IGEM/Gas Safety Trust project that HSL is conducting on sealed homes and the impact on CO production. JK asked if it was not too late to include CO₂ monitoring, as perfectly combusting appliances with leaky flues could potentially produce no CO but plenty of CO₂.

Peter also updated the meeting on the work HSE undertook looking at the evolution of CO & CO₂ from the storage of wood chips and wood pellets. Results showed little problem from pellets, but a potential problem from the large-scale storage of wood chips, particularly when damp. Workers may need protection when entering wood chip storage facilities, HSE feels more research needs to be done, it is hoped this will be taken into account by Cranfield University in the GST funded work that they are about to conduct.

b) Research projects

Liverpool John Moores University has kicked off the third phase of its project to investigate the prevalence of low levels of CO in domestic dwellings, working with six Fire & Rescue Services to gather data: Merseyside, West Midlands, Oxfordshire, Bedfordshire, Yorkshire and Cornwall. Although the Gas Safety Trust is the major funder, CoGDEM had agreed to help fund the project by paying for a suite of CO dataloggers to be purchased from Lascar, and by donating domestic CO alarms. LG will be contacting the alarm manufacturers to get their agreement so that equipment can be in the field during March. Dr Andy Shaw is the key contact again.

Cranfield University has started its own research project with major funding from GST. They will be concentrating on scientific research into the production of CO from certain fuels and materials that might be useful in the filtering or removal of CO from atmospheres into which it is emitted. Due to Cranfield's Dr Roland Wessling's incident, there is also a camping/barbecue element to the research.

The Health & Safety Laboratory in Buxton is conducting two projects on CO, the home ventilation assessment project mentioned in 8a above, and the GISG funded work on Flues in Voids, in particular looking at horizontal flue pipes and their integrity.

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c) **GASG**

The next meeting of the Gas Analysis and Sensing Group will be titled 'Optical Methods in Gas Sensing' and will be held on Thursday 3rd April 2014 at Southampton University.

d) **CoGDEM's CO Helpline**

LG mentioned some of the calls received in the last few months, including the Christmas period when some other fuel-industry 'emergency' helplines were closed. Calls related to CO emissions from solid-fuel and oil-fired appliances and a candle arrangement were received. We continue to receive many calls relating to multifuel stoves, and LG was told by Cornwall FRS of the risks from hot ash-buckets being left beside stoves when the weather stops people from disposing of them outdoors. There was also a call related to a motorhome battery being dangerously overcharged and the resultant hydrogen setting off the CO alarm.

e) **CoGDEM's 40th Anniversary**

As 2014 marks the 40th anniversary of CoGDEM's formation, we will be encouraging all members to attend the WWEM 2014 Gala Dinner on 5th November 2014 in Telford, to which all CoGDEM member companies will be invited. Members of the CO subgroup might be interested to tour the exhibition in the afternoon to see the types of equipment and technology offered by their colleagues from the Industrial Sub Group. We hope to have at least one of the founding members of CoGDEM as a special guest. Members were also informed that attendees to the CoGDEM AGM during our meetings on 10th June would receive a unique commemorative gift.

f) **Presentation by Chris Bielby MBE, Scotia Gas Networks, Gas Industry Safety Group & Gas Safety Trust**

At the beginning of the afternoon ISG meeting, Chris gave a presentation focussing mainly on the carbon monoxide activities with which he is involved, but also mentioning the multigas portable gas detectors that Scotia issued to its field staff several years ago. CO Sub Group members stayed on for this presentation.

Chris also outlined the Gas Safety Trust's recent awards of research funding to Cranfield University, Liverpool John Moores University, HSL (ventilation in new homes and effects on CO), and GP surgeries, and the GST aspiration to set up a national 'portal' for all CO incident databases.

GISG is funding other work at HSL on the dangers of combustion gas leaks from Flues-in-Voids. GISG is starting to play a bigger role in Europe, not just on domestic CO issues. A current topic of concern is the variation of piped natural gas coming from all global sources. It is expected that the fuel gas's Wobbe Index (the amount of combustion energy from a unit volume) that the UK controls tightly will be allowed to slip to wider tolerances as a result of European standardisation, and this could have combustion safety implications. LG is attending a Workshop event in Brussels at the end of February to discuss this subject, concentrating on the ability of current gas sensing techniques to measure the component parts of natural gas.

It was pointed out that many European countries could improve their own gas safety conditions if heating engineers had a similar requirement to be registered as in the UK with Gas Safe Register, and if regular appliance servicing was encouraged.

Chris's CO Powerpoint presentation can be forwarded to CoGDEM members on request.

9 **Dates of 2014 CoGDEM meetings – Tues 10 June 2014 and Tues 14 Oct 2014**