Notes LFG Group Meeting

4th July, 2018,

Viridor Ardley EfW site

Present

Ian Harvey	B9 Energy
David Reay	CLP industries
James Lloyd	Enitial
Sam Dean	Enitial
Steve Shaw (Chair)	Honace
Daniel Pargeter	Limejump
Arthur Beattie	Limejump
Gaynor Hartnell	REA
Andy Leech	Renewable Power Systems
Don Wootton	Spectro
Chris Charge.	Suez
John Cove.	Suez
Jon Bailey	Veolia

Apologies

Stuart Markham (EDL) and Pierre Dorel (Viridor) now not able to attend. Noted that this meeting closely coincided with the Landfill Gas Implementation Group (LGIG) meeting, which had date booked first and had not been held for some time. **Action, Steve Shaw (SS) to propose the idea of holding LGIG and REA LFG meeting on same day with some of the agenda overlapping. SS to liaise with Andrew Leeding.**

Minutes and actions from previous meeting

Discussed the challenge of getting the public domain trace gas and emission data from the EA to understand potential future issues across industry and why this has not been made available, despite previous requests. Concluded that it was unlikely the EA had the data consolidated and so it would be challenging for them to provide. Acknowledged that if REA to seek the data from industry directly it would be time consuming (for both REA and industry) and would not provide a full picture across the sector. Agree that members would need to have a very clear idea of the benefits of sharing data. It was agreed that it is an action more appropriate for the LGIG. It was worth putting more effort finding out what EA has and what prepared to give. **SS to discuss with Andrew Leeding and David Browell.**

Noted that Chris Parry's previous analysis suggested lots of sites wouldn't comply with forthcoming Sox limits under MCPD. SS suggested it would be a good idea to talk to Chris Parry about what data he has previously collected from people, to see whether any of it should be passed to REA.

Review of training course

GH reported on the existing training course. There was an appetite among the new attendees to send delegates (Enitial, Suez) to the LFG technician course. GH noted that it cannot be subcontracted to C & P Environmental Ltd (which has EU skills accreditation as a provider) again. Either the REA could seek to become accredited as an EU skills provider itself or run the course without EU skills accreditation. It was felt that the REA badge itself was sufficient for industry's needs, but perhaps the REA could investigate CPD (cheaper & more widely-known). GH to find a way to put the course on again, and test the market.

Proposed new training courses

The following potential courses were discussed.

- LFG engine / equipment operation and maintenance;
- Leachate and/or Landfill Gas Management;
- Landfill Environmental Risk Management;
- Landfill Aftercare management.

All were felt to have merit, and GH was encouraged to develop them further. Engine maintenance course (which could incorporate other machinery at sites that needs maintaining, e.g. blowers, leachate treatment etc.) was felt to be particularly desirable, even where Clarke Energy are providing O&M some operators wish to provide a more knowledgeable overseeing role. When moving over to an O&M contract based on time and expenses generators will want to be able to do more of the routine maintenance themselves. Potential lecturers to be considered alongside Patrick Poynter.

The Leachate course should also cover the financial implications of non-compliance events.

It might be helpful to think about the learning outcomes desired and then work back from there.

Various other training course suggestions were discussed and all were felt worth progressing. Comments made include:-

- Desirable to integrate leachate management with gas management.
- There were lots of other functions those doing this could also undertake and some companies were also getting these staff to be able to apply Weed killer and pesticides, operate strimmers etc.
- A course on Engine maintenance would be very desirable. It could be integrated with others.

There was potential interest in a modular landfill aftercare course as staff are likely to become more multi-disciplinary in the future.

There was a lengthy discussion triggered by the proposal to run an engine maintenance course, and the realisation that it would be difficult to compete with the OEM's provision. Clarke Energy Limited (CEL) and Jenbacher require specific authorised courses to allow access to engine control systems. There was significant frustration with CEL in particular and members stated charges of £20k for a 2 day course (after which delegates get the codes to make changes to the control systems). Strategies to address this were discussed, including

- Inviting CEL / Jenbacher in to give a presentation and then putting them on the spot as to why (once an engine had been fully purchased) were the owners not allowed to do what they wished with it;
- Seeking a legal opinion on open market competition;
- Engaging a consultant to establish a collaborative position. Chris Parry's name was suggested.

SS to draft some text to set out the groups thoughts, which GH could be used to encourage people to join a conference call to decide on a course of action. It was noted that some companies would be wary of this for fear of antagonising CEL given their monopoly position.

A separate suggestion to come out of the discussion was the idea of inviting Stuart Wilson from Infinis to talk about the facility they are developing for training engineers to work on Caterpillar engines. **REA to invite Stuart to speak at the next meeting.**

Engine maintenance collaboration

The idea of a collaborative forum for part swapping / sales, engine swaps, information queries, ideas etc. was felt to be very good. A WhatsApp group was not felt to be the right platform. **Action REA to set up a new LinkedIn group instead and try it out.**

There was a suggestion that it would be a good idea to have an open document in google docs, where companies could set out what spare parts they have that are likely to be surplus to their requirements, and what parts or engines they need. **GH to give some thought as to how those offering those and requesting parts might be matched up together.**

Guest speakers

- Don Wootton, Lubricants and contaminant trends in LFG engines
- Daniel Pargeter, Lime jump - Selling LFG output at peak prices
- Ian Harvey, LFG for transport and dual fuelling with biogas at LFG sites

These talks triggered lots of debate. The slides (pdf form) to be sent out.

Defra landfill aftercare update

SS talked through the Defra aftercare project (but due to lack of time he was unable to go through his slides). He described the models undertaken, and noted that the

overall conclusion of the various approaches to the various techniques to shorten life of site (e.g. aeration, recirculation and others) was that there was no ideal solution. The objective of the study was for Defra and the EA to consider what the options were for accelerating waste stabilisation in aftercare, the potential risk of aftercare requirements (predominantly leachate for contained sites) continuing beyond the current financial provision and a review of the current permit surrender criteria. The final report has been issued to Defra and it is understood to be under ministerial review.

Codes of practice - new and reviews of exiting

It was agreed that whilst many of the existing codes could do with updating, and some new ones would be helpful, it would take a lot of resource to produce new ones. Agreed this is an issue to discuss with the LGIG. [*Subsequent to this meeting David Browell has indicated to SS that the EA is working with the Landfill Regulation Group (LRG) to finalise the decision tree originally drafted by AL/SS tree as to when LFG generation plant can cease on a permitted site. DB suggested that this will be issued as an ICoP*]

MCPD update

Jon Cove summarised the LGIG coverage of this as that there is a lot happening right now that the people need to be reading up on and understanding. Action. Get guidance, circulate it and see if we can circulate the minutes from the LGIG meeting.

SS subsequently obtained an update from David Browell regarding the implementation with regards to SOx limits, definition of new and existing plant and the Compliance Allowance. This is shown below;

> **SS question to David Browell (EA - Senior Advisor Landfill Gas):**
>
> *Any updates on the EA position on MCPD and the relocation of generation plant and how this would be implemented and the compliance allowance. The group had a particular concern around engines from abroad which may have been commissioned under Table A and how would these be treated.*
>
> **David Browell Response:**
>
> *This is quite complicated and involves two bits of legislation, MCPD and Specified Generator regs. In summary;*
>
> *Medium Combustion Plant Directive*
>
> *Come into force on 1/1/19. All new plant will need to comply with the new emission limit values in MCPD. New plant is defined as being operated after 1/1/19. Existing plant will be plant, meaning the engine itself, that was in operation prior to 1/1/19. Important to note that MCPD will apply to the individual engines with no aggregation of capacity. So, engines can be moved between sites and still classed as existing plan providing it can be*

proved that they were in operation before 1 Jan 2019. Existing plant >5MW thermal input will need to meet MCPD elv by 2025. MCPD plant >1MW by 2030.

Important for you to consider and perhaps reflect on is that the EA at the moment doesn't consider LFG to be a biogas as it is a waste. ***This means the tighter SOX elv of 15 mg/m3 @15% oxygen will apply****. NOx elv will be 190 mg/m3 @15% oxygen which is ~ 500 mg/m3 @5% oxygen.* ***Key point is that there is no compliance uncertainty under MCPD.***

In terms of the Type A engines, and generally, we don't feel that MCPD will bite until 2030 for the majority of the 1 MWe engines. Given that ROC ends in 2027 there is time for you to manage your engine fleets to deal with this.

Refurbishment of engines will copy the combustion sector such that an existing engine ***can be refurbished up to 50% of the value of a new engine before it is considered to be a new engine.***

Specified Generator Regulations

A lot more complicated! Applies to all engines with a capacity contract. Broken down into two tranches A & B. The generator regs will apply to the site so there will be aggregation of thermal capacity. The MCPD elv will apply when the site is permitted under these regulations.

Any generators that are part of a Chapter 2 IED permit (ie operational landfills or sites re-permitted under LfD) are excluded. However, these regs will apply to any engines on closed landfills that had wml licences (now EP Waste permits)

Tranche A are existing plant. If the installation meets all the following criteria it will need to be permitted this year; >5MWth and in operation for more than 50hrs/yr and >500 mg/m3 NOx @ 15% oxygen (note oxygen reference content!). If this doesn't apply then the site will continue until caught by MCPD (I think!)

Tranche B are new plant and those plant with peak balancing capacity contracts. These will need to be permitted this year to be able to operate from 1 Jan 2019. My understanding is that there aren't likely to be any LFG engines in this tranche?

In terms of how we permit under MCPD and Specified Generator regs. There are a suite of permits available under the Gen Regs ranging from bespoke (~£6.6K) Simple bespoke (~£2K) and standard rules (~£400).

In terms of those sites associated with a landfill I anticipate the activity will be added to the list of activities under the permit and if necessary a new permit condition imposing the elv will be added/amended. Quite how this works ie

EA initiated, minor tech variation etc hasn't been sorted yet but I think most of these sites won't come into play until 2030 so we have a bit of time.

Updates from members (e.g. DNO clawback of generation capacity, business rates)

No significant comments raised although limited time to discuss.

AOB

None raised

Date of next meeting

SS to establish date of next LGIG and see if we can align, as proposed.