Department for Business, Energy & Industrial Strategy

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# Government Chemist Programme Expert Group Meeting

Monday 1 November 2021

Via MS Teams

Attendees:

| PEG | BEIS |
|---|---|
| Paul Berryman *(Chair)* | Sarah Davies |
| Robbie Beattie | Maria Turner |
| Simon Branch | Karen Greengrass |
| Keneth Chinyama | |
| David Franklin | LGC |
| Jonathon Griffin | Julian Braybrook |
| Kasia Kazimierczak | John Black |
| Chelvi Leonard | Malcolm Burns |
| Brenda McRory | Paula Domann |
| Declan Naughton | Philip Dunn |
| David Pickering | Selvarani Elahi |
| Sophie Rollinson | Kirstin Gray |
| Diane Turner | Paul Hancock |
| Roger Wood | Dmitriy Malinovskiy |
| | Caroline Pritchard |
| Observers | Bob Oswald *(Minutes)* |
| Jenna Watts | |

Apologies: None

## 1. Minutes/Actions

1.1 The Chair welcomed all attendees and reminded all those present of the usual housekeeping rules. He also reminded PEG members to make any necessary declarations of interest in relation to particular topics discussed.

1.2 Minutes from previous meeting (12 May 2021) were approved with no corrections.

1.3 All actions from the previous meeting were completed and closed:

- ***Action 1*** *(item 1.4) re: making corrections to the October 2020 minutes and uploading the non-attributive version to the GC website.* Action completed and closed.
- ***Action 2*** *(item 8.4) re: circulating a summary of topics for the PEG to consider as additional projects within the current programme, along with a scoresheet.* Action completed and closed. Two new projects were approved and have been added to the programme ('inorganic arsenic in rice products' and 'titanium dioxide nanoparticles in food'). It was noted that titanium dioxide was discussed by the FSA's Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT) at their September meeting.
- ***Action 3*** *(Item 10.1) re: Doodle Poll for the Autumn 2021 meeting.* Action completed and closed.

## 2. BEIS Update

2.1 Maria began by introducing Karen Greengrass, who joined the team on 4 October. Karen has a background in oil and gas and will be responsible for the LGC and NEL contracts. The Chair welcomed Karen to the PEG.

2.2 The BEIS update (slides were circulated with these minutes) summarised the following:

- Publication process for the UK Measurement Strategy is currently underway. Delivery Plan and review of metrics to follow.
- Detailed allocations following the Budget announcement on 27 October will follow in the coming weeks and months.
- UK Innovation Strategy was published in July 2021, setting out four key pillars (business, people, institutions/places and missions/technologies) which will support the establishment of the UK as a global hub for innovation.
- New Science and Innovation Minister George Freeman was appointed in September 2021.
- COP26 will be taking place from 31 October – 12 November.

2.3 There were no comments or questions from PEG members on the update, although a number of PEG members commented favourably on the news that the Spending Review would be a three-year proposition this time.

## 3. Government Chemist Update

3.1 It was recalled that at the last meeting (as mentioned under 1.3 above), an approach had been agreed for addressing any continuation of the low referee case numbers being seen through the pandemic. PEG members were thanked for their prioritization and lively debate over the project areas that were being considered. However, since the agreement of those two projects, referee cases have increased significantly, albeit mainly around GM food testing. These will affect the necessity or speed at which identified additional research priorities will be undertaken.

3.2 October saw three of the CSAs visit LGC and the GC and NML teams - Paul Monks (BEIS), and jointly Gideon Henderson (Defra) and Robin May (FSA). There was an opportunity to follow up the discussions around Net Zero that came through at the GC Conference earlier this year and it was agreed with the CSAs that we would engage further on these topics in light of the outcome of the Government CSR. Through our lead representation on ISO documentary standards for biotechnology, we have been working closely with both CSAs and their departments to achieve changes to draft ISO gene editing vocabulary standard (which, it was announced, had just been approved for publication in a form acceptable to the UK).

3.3 An update was given on our two key publications promoting a ‘weight of evidence’ approach for assisting with honey authenticity assessment. The Nature Portfolio Journal *Science of Food* will shortly publish the accepted manuscripts.

3.4 Finally, it was reported that a UKRI-EPSRC ‘Analytical Big Idea’ initiative was being developed, which aims to change current perceptions around analytical measurement science from being just ‘an enabler’ to a position where it is seen as ‘the solution’. PEG

members may feed in any comments they have on this through the Government Chemist. There may be a workshop early in 2022 which interested PEG members could get involved with.

## 4. Referee Cases Update

4.1 The Referee Analyst's presentation (slides circulated with these minutes) focused on seven GMO in rice/rice products from China which have been referred to the GC since August 2021. He also covered a case on pesticide residue in peanuts and one on aflatoxin in dried figs, as well as summarising some of the other enquiries received by the GC in the last six months. One of these enquiries was from an OCL on sampling and analysis of rice from China for GMOs and the reoccurring issue of only two-part samples being taken as REU Regulation 625/2017 was noted.

4.2 There was some discussion around the sampling issue:

- An offer was made by the FSA to issue some advice on this issue if needed.
- It was reported that at Felixstowe they take the full sample and ask the PA to split it into three portions, and the PEG member in question said they would check to make sure that was happening.
- A question was asked regarding sampling for GMOs; whether the sample was classed as inhomogenous, or was it more like mycotoxins where a good mix is needed? The Referee Analyst replied that this was somewhat dependent on the product – with rice, there could be a single GM grain in a consignment whereas with a rice product one would expect the GMOs to be spread throughout.
- It was noted that GMO, along with pesticides, was an area that was low in UK enforcement capability.
- A further comment was made that, with the UK now being outside the EU, there were options for the UK to consider its own methodology, which could potentially speed things up. However, it was understood that the EU is reviewing the process and ideally the UK would try to work in parallel with them. It was also noted that the other methods that exist would need validating so there is no quick fix; they all have their pros and cons.

4.3 A PEG member asked via the Chat function if rice samples are only taken at ports or whether they are also taken by LAs and non-compliant samples not identified? It was confirmed that 100% of consignments of rice and certain rice products from China must be sampled at the point of import. The high-risk non-animal origin food and feed products which are subject to formal sampling at the border are listed on the Suffolk Coastal Port Health Authority website . Most of the percentages are listed in Annexes I and II of Reg 2019/1793. The organic products that must be sampled at the border are listed here. These are sent for pesticides analysis. The rice products from China are laid down in Decision 2013/287.

4.4 Another PEG member asked if the rice GMO cases represent a particular kind of modification or a range? The Referee Analyst replied that it is mostly the Cry1Ab/1Ac gene but there are instances of P-35S and TNOS as well. A member of the Government Chemist team has spoken to colleagues in NRLs in Belgium, Italy and France who have reported a similar picture there over the last 3 months or so as well. This was also

reinforced through five RASFF alerts (Rapid Alert System for Food and Feed) being published in this period regarding the detection of unauthorized GMOs in rice/rice products in the EU.

## 5. Programme Progress Update

5.1 The Programme Update (slides circulated with these minutes) gave an operational update in light of the changing COVID-19 situation, then summarised the current status of each project in the programme.

5.2 There were no specific questions from the PEG, but a number of PEG members commented that it was good to see lots of progress being made.

## 6. Isotope Tracers to Support food Security in a Global Market

6.1 The presentation (circulated with these minutes) started with an introduction to stable isotopes and isotope ratio analyses before describing the background to the CB1 project ('Isotope tracers to support food security in a global market') and summarising the preliminary results.

6.2 One PEG member asked, via the Chat function, about the establishment of databases, specifically if the team anticipated establishing some isoscapes of their own and maintaining these over time, or did they think it would be more a case of building contemporaneous databases as issues arise that need investigating? The reply was that the establishment of standard methods that can be applied in any lab which result in the same isotope ratio being reported for the same sample is most useful, as more than one lab can then contribute to the database. Currently various commercial isotope ratio labs have their own databases of various foodstuffs but they aren't accessible.

6.3 Another question, via the Chat function, was whether there was a risk that agrochemicals (pesticides/fertilisers, etc) might confound the method, as particular inorganic components (N, P, S for instance) might have come from different geographical origins? It was agreed that this was a risk – by simply looking at bulk material then the isotope ratio that is measured reflects all components within that food - including pesticides, etc. Those components may also vary between locations for different reasons to the same isotope ratio varying between locations (e.g., 15N/14N ratios can reflect fertilisation process). These are certainly important considerations when it comes to drafting the sample preparation standard methods within CEN/TC 460 WG6.

6.4 Another PEG member asked, via the Chat function, what the confidence or error is now in confirming a country of origin in foods? Could it move forward to a point you could take a food and identify its origin by isotope ratio, rather than just confirming (or disputing) its declared origin? The reply was that isotope ratio analysis might be able to confirm that an unknown sample is consistent with certain possible origins, but the (un)certainty associated with such an interpretation will depend on how comprehensive the database is, how many different isotope ratios are considered, etc. It was also noted that databases for particular foods keep growing.

6.5 A further comment came, via the Chat function, from a PEG member who appreciated the way the CBS/cannabinoid analysis project had progressed and been handled from an OCL perspective. He reported that, since the trial, the method had now been validated in-house, a cross lab check had been successfully carried out on a cosmetic sample and good z scores achieved in the last LGC proficiency test. The laboratory in question is now going for full UKAS accreditation but has been analysing enforcement samples since May.

## 7. Government Chemist Collaborations and International Outreach

7.1 This presentation (circulated with these minutes) summarised collaborative and international outreach work being undertaken through five platforms:

- Joint Knowledge Transfer Framework for Food Standards and Food Safety Analysis
- Advisory project on CBD and controlled cannabinoids in consumer products
- Food Authenticity Network
- National and International standardisation: GC and NML staff sit on a number of national and international committees, contributing to the development of new policy, standards and legislation to ensure that they are based on sound measurement science. The list of committees is available on the GC website.
- European Metrology Network on Food Safety

7.2 Future collaborations were then discussed, noting that this had already been touched upon (under 3.2 above) when talking about a closer working realtionship with the CSAs. Some of the areas discussed were:

- Providing advice regarding gene editing measurement challenges
- Engaging with the newly formed Office for Science and Technology Strategy to ensure that measurement science is considered as an important part of the equation.
- Continuing to work with government on honey:
    - Producing eSeminars
    - GC staff to leading on a framework for database interrogation and protocol for the collection of authentic samples
    - GC staff to Chair Defra group on Weight of Evidence
- UK capability/infrastructure:
    - The role of the GC in identifying gaps
    - GMO in rice from China – a meeting has been scheduled with FSA
    - Basmati rice capability to determine varieties listed in the 2017 CoP
    - Considering how to counteract the impact of LAs cherry picking ‘cheaper’ tests as they have done for many years.
    - Discussing how the GC can input into the cross-government sampling group on UK capability with FSA and how this is complimentary to the APA Officer role and the role of NRLs.

7.3 One PEG member asked, via the Chat function, whether there was a location breakdown of the labs that took part in the CBD trial based on the four nations of the UK? ***Post meeting note:*** This information was not available during the meeting but the PEG member in question was emailed the following day to confirm that, of the 16 UK labs that took part in the CBD trial, the breakdown was:

- 14 from England
- 1 from Scotland
- 1 from Wales
- 0 from Northern Ireland

A link was also provided to the final report.

**8. Feedback and Questions (Paul Berryman)**

8.1 It was recalled that, around 10 years ago, a decision was made to try and increase the impact of the work of the Government Chemist through strategic collaborations aimed at solving national and international measurements issues. The slides presented under Item 7 demonstrated the outputs of some of the outreach work and do the GC PEG were asked if (a) it was content with the outreach work being undertaken and (b) whether there were any areas of collaboration the GC should be considering for the future, given emerging government priorities such as net zero.

8.2 One PEG member commented that the outreach work has been excellent and congratulated Selvarani and the rest of the team on an excellent job.

**9. Next meeting**

9.1 **ACTION 1: Bob Oswald** to send a Doodle Poll for the Spring 2022 meeting.