
RADIOACTIVITY IN FOOD MONITORING UPDATE

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1 SUMMARY

1.1 The Food Standards Agency operates a programme to monitor levels of radionuclides in food. The results are used to assess the radiological dose, and hence potential risk, to consumers from eating this food.

1.2 The Board is asked to:

- **Note:** the successful introduction of the optimised radioactivity in food monitoring programme and the publication on 28 October 2015 of results covering the first full year of the new programme; and
- **Note:** that the new programme has been delivered at an annual saving of £0.9m, when compared to the 2012 baseline cost.

2 INTRODUCTION

2.1 The FSA manages a programme around all nuclear sites in England and Wales to monitor for levels of radionuclides in food (a map of sites is given as Figure 1 in Annexe A). A further component of this programme takes background monitoring in food across England, Wales and Northern Ireland at locations away from nuclear sites.

2.2 In June 2013 the Board was asked to decide on the future monitoring approach and agreed to the implementation of an optimised risk-based monitoring programme for radioactivity in food¹. As part of the discussion, the Board asked for an update after the first full year of the new programme.

2.3 The optimised programme was introduced from January 2014 and the results were published on the 28 October 2015, together with results of environmental monitoring from the Environment Agency, the Northern Ireland Environment Agency, the Scottish Environment Protection Agency (SEPA) and Food Standards Scotland. This provides a comprehensive picture for people who live close to nuclear sites and eat locally produced food. At the time of publication, the FSA asked recipients of the report for feedback on the changes that have been implemented.

2.4 Our conclusion is that the optimised monitoring programme remains proportionate to the very low risk and we are not therefore proposing any substantive changes or additional monitoring. The programme continues to be in line with current international best practice guidance and meets legal and international commitments. Levels of artificial radionuclides in food across the UK remain very low and are not a risk to food safety.

3 STRATEGIC AIMS

- 3.1 Food is safe – consumers have the right to be protected from unacceptable levels of risk.

4 EVIDENCE

- 4.1 In the UK, the average dose to consumers from all sources of radiation is 2.7 millisieverts per year (mSv/y), mostly from natural background radiationⁱⁱ. Exposure to natural environmental radioactivity is mostly unavoidable but it is possible to minimise additional exposure from man-made (artificial) sources. The European Basic Safety Standards (BSS) Directiveⁱⁱⁱ imposes a limit of 1 mSv/y for members of the public for artificially produced radiation from controlled exposures (i.e. over and above that received from the natural background).

5 DISCUSSION

- 5.1 The Radioactivity in Food and the Environment (RIFE) report published on 28 October 2015 combines data on both food and environmental monitoring to calculate the exposure to radioactivity (termed 'dose' and measured in millisieverts, mSv) to members of the public. The report shows that, in 2014, the total dose from artificial sources remained below the European Union annual dose limit of 1 mSv/y.
- 5.2 In 2014 the highest doses the public received from artificial sources were around Sellafield (0.22mSv), Capenhurst (0.17mSv) and Amersham (0.14mSv), as opposed to the previous year when the location with the highest dose was Amersham (0.22mSv). The increase in the ranking of Sellafield compared to last year was established following a re-assessment of exposure pathways in 2014, including increased seafood consumption. The doses received around Amersham and Capenhurst are mainly the result of direct radiation from sources on the sites and not from the consumption of food.
- 5.3 The FSA has identified a small number of cases where the reduction in the number of samples as a result of changes to our monitoring programme has limited the range of food types which are being monitored. While the absence of these samples does not have a noticeable effect on the dose calculation, it is appropriate to make a small number of year-on-year substitutions in sample selection to ensure a full picture of the levels of radioactivity in food is achieved. Minor changes will therefore be made to the 2016 programme taking into account the latest information on local food production around the nuclear sites. These amendments will not alter the total number of samples collected.

6 IMPACT AND RESOURCE IMPLICATIONS

- 6.1 In 2014, the programme cost a total of £1.26m. The majority of the costs for the programme are recovered from the nuclear industry and so the net cost to

the FSA was £0.26m. This represents a total saving of £0.9m from the 2012 baseline figure of £2.16m, comprising £0.67m saving to industry and £0.23m saving to the FSA.

7 DEVOLUTION IMPLICATIONS

- 7.1 The scope of the FSA's programme extends to all nuclear sites in England and Wales. In Scotland, food and environment monitoring is carried out by the Scottish Environment Protection Agency (SEPA) with advice from Food Standards Scotland. There are no nuclear sites in Northern Ireland but the FSA programme there includes milk samples collected and reported under the requirements of the Euratom Treaty.

8 CONSUMER ENGAGEMENT

- 8.1 At the time of publication of RIFE 2014, the FSA asked recipients of the report for feedback on the changes that have been implemented. The request for feedback was included in the publication notification letter sent to over 2000 individuals, organisations and other interested parties and was included in the news story on the FSA website^{iv}.

- 8.2 The following two questions were asked:

- Based on the information in this RIFE report, do you consider that the FSA has successfully implemented changes in monitoring after the risk-based review conducted in 2013?
- Have you found any unforeseen consequences or impacts as a result of the implemented changes in the monitoring that were not considered in the FSA's consultation?

- 8.3 Feedback was requested by the 30 November 2015 but there have been no responses as of the date of preparation of this Board Paper (3 February 2016).

9 CONCLUSION

- 9.1 The Board is asked to:

- **Note:** the successful introduction of the optimised radioactivity in food monitoring programme and the publication on 28 October 2015 of results covering the first full year of the new programme; and
- **Note:** that the new programme has been delivered at an annual saving of £0.9m, when compared to the 2012 baseline cost.

Annexe A: Map of UK nuclear sites^v:



REFERENCES

- ⁱ Radioactivity In Food Monitoring – Board Paper (FSA 13/06/04)
<http://www.food.gov.uk/sites/default/files/multimedia/pdfs/board/board-papers-2013/fsa-130604.pdf>
- ⁱⁱ Public Health England website:
<https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons/ionising-radiation-dose-comparisons>
- ⁱⁱⁱ *Council Directive 96/29/Euratom of 13 May 1996 laying down basic safety standards for the protection of the health of workers and the general public against the dangers arising from ionising radiation. OJ. 1996, 39(L159): 1 – 114.*
<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CONSLEG:1996L0029:20000513:EN:PDF>
- ^{iv} “Radioactivity report published” – news story on the FSA website:
<http://www.food.gov.uk/news-updates/news/2015/14555/radioactivity-report-published>
- ^v Environment Agency, Food Standards Agency, Northern Ireland Environment Agency and Scottish Environment Protection Agency. 2015. *Radioactivity in Food and the Environment, 2014.*
<http://www.food.gov.uk/science/research/surveillance/radiosurv/rife/>