

Draft Matters and Issues relating to Radioactive Waste

This document supplements the draft matters and issues dated 12 October 2016 and specifically deals with radioactive waste.

Matter 1a: Duty to Co-operate (DtC)

Issue: Has the DtC been met?

1. Please briefly explain how the DtC has been met with respect to the various nuclear authorities.

Matter 3 – Radioactive Waste Strategy

Issue: Whether the Plan provides sufficient opportunities for the management, treatment, safe storage and disposal of radioactive waste from all sources including nuclear fuel reprocessing, and decommissioning/demolition of nuclear licensed facilities.

High Level Waste

2. The Plan states that High Level Waste (HLW) only consists of waste that is generated from reprocessing spent nuclear fuel at Sellafield. The 2013 UK Radioactive Waste Inventory (RWI) indicates that future arisings will come from Magnox and oxide fuel reprocessing, which are scheduled to end in 2017 and around 2018 respectively. Does this mean that, if all goes to plan, there will be no new HLW generated from reprocessed spent fuel at Sellafield after these dates and, therefore, in the UK?
3. Is it likely that Sellafield will continue to accept and process new overseas spent fuel, thereby generating new HLW? Is this likely to continue throughout the Plan period and/or beyond? What quantities of overseas HLW are envisaged will be generated over the Plan period? For how long is it anticipated this HLW will be stored at Sellafield before being returned overseas?
4. For how long is the HLW stored as Highly Active Liquor (HAL)?
5. What is the current requirement for HAL storage and how is it likely to change over the Plan period in terms of facilities and land-take?
6. What is the current requirement for storage of vitrified glass blocks and how is it likely to change over the Plan period in terms of facilities and land-take?

7. The RWI forecasts that vitrification will cease in around 2021, albeit further vitrified HLW will arise from post operational clean out until about 2027. Does this mean that the generation of all HLW will have ceased before 2027?
8. On the understanding that there is no disposal route for this waste type at the current time, will the quantity of vitrified packages existing at that time be the maximum that will require long-term storage?
9. What are the forecast future arisings of new HLW?
10. What is the forecast quantity of total HLW requiring long term storage?
11. Is it envisaged that all of this long-term storage will occur at Sellafield, pending the location and preparation of an acceptable Geological Disposal Facility (GDF)?
12. What is the current capacity for storage at Sellafield?
13. Will there be any HLW waste generated from any other processes or operations such as decommissioning?

Intermediate Level Waste

14. What are the main waste streams constituting Intermediate Level Waste (ILW)?
15. The Plan/RWI indicates that as of 1 April 2013 the reported volume of UK ILW was 95,600m³ of which about 69,600m³ (73%) was stored at Sellafield. How much of the UK's total ILW is generated at Sellafield as opposed to being stored there? How much is imported from elsewhere both within Cumbria, such as the Low Level Waste Repository (LLWR), and from outside?
16. The RWI refers to conditioned ILW comprising various types of waste immobilised in cement or polymers in containers, and that about 88% (47,569 packages) of the UK total of such packages are in long-term storage at Sellafield. The Plan indicates that the 47,569 packages make up a 73% share of the total. Is there a discrepancy?
17. The RWI states that the quantity of conditioned ILW in stores is increasing. How much of the ILW at Sellafield is conditioned?
18. How is any unconditioned ILW managed at Sellafield and what type of waste is this?

19. The RWI/Plan forecasts future ILW waste arisings in the UK as being 190,000m³. Over what time period is this likely to be generated? Why is this forecast expressed as a finite figure?
20. The Plan indicates that about 59% of future arisings are forecast to come from Sellafield and about 0.3% from the LLWR. Over what time period is this ILW likely to be generated? How much is likely to be generated over Plan period?
21. What quantity of ILW is likely to be managed overall at Sellafield during the Plan period? How much of this is likely to be generated from Sellafield and the LLWR and how much is likely to come from outside Cumbria?
22. How much, if any, ILW is likely to be exported out of the County?
23. What is the current capacity for storage of ILW at Sellafield?
24. As there is currently no disposal route for ILW what additional long-term storage facilities are likely to be required for the ILW managed at Sellafield?

Low Level Waste

25. What are the main types of Low Level Waste (LLW)?
26. What options are there for the management/disposal of LLW?
27. Is all non-recyclable LLW able to be disposed of or does some need to be stored?
28. The Plan/RWI indicates that as of 1 April 2013 the UK's total LLW was about 66,700m³ and that about 5% (3,450m³) was stored at Sellafield. How much was generated at Sellafield? Where was this managed/disposed of?
29. The RWI indicates that about 32,800m³ of LLW was stored at the LLWR. Was any LLW generated at the LLWR? Where did the rest of this waste originate from?
30. The RWI/Plan gives a figure of 1,300,000m³ for the future generation of UK LLW, of which 291,000m³ (about 22%) is estimated to come from Sellafield. Over what time period is this likely to be generated? Why is this forecast expressed as a finite figure? How much is likely to be generated over the Plan period?

31. Is any LLW likely to arise from the LLWR?
32. How much of the future forecast LLW is likely to be managed/disposed of at Sellafield?
33. What is the current capacity to manage/dispose of LLW at Sellafield?
34. How much of the future forecast LLW is likely to be managed/disposed of at the LLWR?
35. What is the current capacity to manage/dispose of LLW at the LLWR?
36. Overall, what are the figures likely to be for imports of LLW into the County and exports of LLW from the County over the Plan period?

Very Low Level Waste

37. The RWI/Plan indicates that as of 1 April 2013 most Very Low Level Waste (VLLW) generated in the UK came from Sellafield and all was in temporary storage awaiting disposal to landfill. What is the current position and what, if anything has happened to this VLLW?
38. What is the current capacity to deal with such waste in the County?
39. The RWI/Plan forecasts future UK arisings of VLLW as being about 2,840,000m³, about 97% (2,760,000m³) of which is likely to come from Sellafield. Taking account of the uncertainties over how much (about 70%) may not actually fall under radioactive waste regulatory control due to its low levels of radioactivity, what additional capacity is likely to be required?
40. How much VLLW is likely to be exported out of the County over the Plan period?
41. How much VLLW is likely to be imported into the County over the Plan period?

All Radioactive Wastes

42. Paragraph 4.19 of the MWLP refers to various techniques. For radioactive waste generated or managed in Cumbria, at what facilities do these techniques take place? Do they have sufficient capacity to accommodate forecasted waste arisings over the Plan period?

43. How does the MWLP apply the waste hierarchy to the various categories of radioactive waste?
44. Does the MWLP reflect the Nuclear Decommissioning Authority's Nuclear Waste Strategy of April 2016? Briefly explain how the main elements of the Strategy have been taken into account.
45. Briefly explain how the main elements of other strategies referred to in paragraph 4.24 of the MWLP have been taken into account. (If any of these strategies are not within the Exam library, please have them uploaded).
46. In Policy SP4, as amended in the submission version, what is meant by "the national strategy for managing radioactive wastes"?
47. What is the current position with the planning application at the LLWR referred to at paragraph 4.31 of the MWLP? Please give more details of what it is for.
48. What are the alternatives to disposal at Lillyhall landfill should the operator decide not to continue with the facility. With reference to paragraph 4.34 of the MWLP, is there any reason to suspect that the operator might not want to continue?
49. In broad terms, what are the critical path activities that are likely to occur when carrying out decommissioning at Sellafield and what are the likely timescales involved? How is it envisaged the various waste types will be managed/disposed of?
50. Should the finding and hosting of a GDF site within the Plan period trigger a review of any part of the Plan?
51. What is the current position on the Government's consideration of sites for interim storage of ILW from decommissioned nuclear powered submarines (as referred to in paragraph 4.54 of the MWLP)?
52. Explain how the MWLP is sufficiently flexible to accommodate the uncertainties surrounding generation of radioactive waste and its management, storage and disposal.

Matter 7 – Site Allocations Policies

Issue: Whether sufficient land is allocated or designated in appropriate locations to meet objectively assessed need and to provide choice and flexibility.

53. Are the sites allocated in Policy SAP3 the most appropriate for providing additional radioactive waste capacity?
54. What capacity is it envisaged they will provide and for what type of radioactive waste management options?
55. What categories of radioactive waste are envisaged will be managed at these sites?
56. Will the sites provide sufficient capacity for the right type of waste, at the right time and in the right place?
57. Do any of these sites have any significant planning constraints?

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28 October 2016