CORE

Cumbrians Opposed to a Radioactive Environment

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Consultation on the management of overseas origin nuclear fuels held in the UK.

A written submission to the Department of Energy & Climate Change (DECC) from CORE [Cumbrians Opposed to a Radioactive Environment]

Whilst the volume of overseas spent fuel subject to consultation is, at ~ 30 tonnes, insignificant in comparison to the overall volume of overseas spent fuel contracted for reprocessing in Sellafield's Thermal Oxide Reprocessing Plant (THORP), the proposal to employ virtual reprocessing represents a significant U-turn in Government policy.

CORE has advocated virtual reprocessing for many years – as a spent fuel management policy that would bring forward an end to spent oxide fuel reprocessing at the earliest possible opportunity. Indeed, unlike DECC's belated recognition that ***'the international nuclear landscape has changed considerably since those contracts were signed'***, CORE and others had pointed out in the early 1990's (the opening of THORP) and subsequently that the rationale for reprocessing had long since evaporated.

On subsequent occasions, notably the increasing rejection by overseas customers (particularly from German utilities following the change to their country's Atomic Law which allowed on-site storage) – and the assessment by the NDA of whether or not to re-open THORP after its INS Level 3 accident on 2005, CORE called for virtual reprocessing to be employed. The NDA's response to the latter – that ***'virtual reprocessing would represent a departure from current government policy, and the terms of the reprocessing contracts'*** simply mirrored successive Governments' outright and routine rejection of virtual reprocessing which, if employed, would dishonour Inter Government agreements). It is also noted that, whilst historically defending the terms of the reprocessing contracts as being 'sacrosanct' and non-negotiable, the terms of the contracts have been consistently watered down over the years by successive Governments - via the implementation of waste substitution, advance allocation and most recently by the flag-swapping of overseas plutonium stocks.

Given that there is patently nothing sacrosanct about the terms of THORP's overseas reprocessing contracts, CORE therefore considers it particularly galling that, faced with the unquantified costs of managing ~ 30 tonnes of 'difficult' overseas fuel, the Government/NDA is now keen to embrace the very policy that it has repeatedly rejected in the past. Further, CORE considers this to be policy-making 'on the hoof' and a failure by Government to provide (independently of the management of ~ 30 tonnes of overseas fuel) the fullest public consultation that such a major change of policy warrants.

Whilst the expected approval of virtual reprocessing 'by the back door' is to be deplored, the flip side of any such approval means that it will now be incumbent on Government to provide good cause why virtual reprocessing cannot now be extended to cover other existing THORP overseas contracts – particularly those from German utilities which are known to comprise the majority of outstanding overseas fuel awaiting reprocessing in THORP.

This would not only hasten an end to spent oxide fuel reprocessing but would also provide the benefit of ensuring the overdue reduction in the Sellafield site's overall radioactive discharges to the marine environment. The continuation of such discharges from THORP operations and from the reprocessing of magnox fuel in plant B205 – to the plants' currently scheduled closure dates of 2018 and ~2020 respectively – will almost certainly result in the UK's failure to meet the OSPAR target of concentrations in the marine environment being 'close to zero' (above historic levels) by 2020.

In terms of the consultation document itself, CORE considers it to be a poorly drafted document containing factual errors and ambiguities. Further, the unnecessary omission of some detail has proved a hindrance to consultees in coming to a more informed view of the future management of these materials. For example, Footnote 1 on page 8 incorrectly refers to there being 300 tonnes of overseas origin spent fuel remaining to be reprocessed. This overestimated figure (repeated in Appendix 1, Page 22 at Para 3) is clearly wrong and therefore misleading, having first appeared in an NDA document in 2012 (NDA Oxide fuel Preferred Option paper) – the subsequent inference being that no overseas fuel has been reprocessed in THORP since 2012. From questions raised annually by CORE at local stakeholder meetings this is clearly not the case and, at a meeting arranged by CORE with the NDA on 26th March this year to discuss the flaws in theconsultation document, the NDA confirmed that the 300 tonne outstanding figure was incorrect and amended it downwards.

Whilst the main thrust of the consultation document is the seeking of approval for the virtual reprocessing of ~30 tonnes of 'difficult' fuels held at Sellafield and Dounreay, Chapter 2 on page 11, Para 17 suggests that there are in fact two options available to the NDA – normal reprocessing as per contract or virtual reprocessing. Consultees will wonder why the normal reprocessing option remains subject to debate given that a likely extension to THORP operations beyond 2018 and the additional costs incurred have already been cited as reasons why virtual reprocessing is now necessary. This confusion of options available to the NDA is repeated on Page 18 at Para 42, and is further heightened in respect of three of Dounreay's outstanding contracts which 'cannot be reprocessed' (ie there is no option for the NDA) as stated on Page 23 of the consultation document at Para 12.

Of the three outstanding Dounreay contracts referred to above, it would have been helpful to know (i) why the customers for these contracts were not prepared to close them out on an Advance Allocation basis, (ii) their views on virtual reprocessing and (iii) what further options they were considering.

CORE also regrets that DECC/NDA felt the need to deliberately withhold from consultees further detail on the 'make up' of the ~30 tonnes of difficult fuel subject to consultation. For whilst commercial confidentiality might legitimately restrict information on individual ownership of the material, there can be no good reason why more details of the fuel itself could not have been divulged. Despite this, what is referred to in broad terms (Page 22, Para 4) as prototype, experimental and MOX fuel, and materials from research programmes, it is known from a THORP reprocessing schedule in CORE's possession that a majority of these THORP 28-tonne contracts is the 25 tonnes of spent MOX fuel imported from Germany's Unterweser power station. That this spent MOX fuel is now considered 'difficult' to reprocess should provide a salutary lesson to deter any future proposal to manage the UK's plutonium stockpile via MOX fabrication given the attendant reprocessing difficulties and well documented disposal problems.

On the Dounreay materials, CORE also notes that, at the time of Dounreay's closure, 2.1 tonnes of overseas customer material remained at the site (Page 23, Para 8) and that the NDA subsequently assumed the rights and liabilities to this material from the United Kingdom Atomic Energy Authority (Page 23, Para 11). The clear inference to be drawn from this statement is that the 2.1 tonnes of material, broken down into 16 individual contracts, accounts for all outstanding overseas material currently held at Dounreay.

Yet this is not the case, as divulged by the NDA at its March meeting with CORE when it was confirmed that the Highly Enriched Uranium (HEU) fuel assemblies imported in 1998 by Dounreay from the then Soviet Union's Institute of Physics IRT-M research reactor in Tbilisi, Georgia do not lie within NDA ownership or control and remain destined to be independently shipped to the US Savannah River site by NAC International with US NRC approval. A reference by DECC/NDA to the existence of this individual contract as being outside the Dounreay material subject to consultation would have been helpful to consultees in providing some confidence that the consultation was being conducted with the fullest fully openness and transparency.

In summary, whilst CORE remains an advocate of virtual reprocessing in terms of its use as a means of ending oxide fuel reprocessing and THORP's closure at the earliest possible opportunity, we deplore the way in which such a major shift in UK policy is being implemented via the back door, without the fullest consultation that such a U-turn warrants, and for a truly insignificant volume of materials that now somewhat belatedly present cost and operational difficulties to THORP, Dounreay, NDA and Government.

Further, the poorly drafted consultation document smacks of an indifference by NDA and Government towards providing consultees with an honest, open and transparent process whose outcome (the Government is 'minded to agree' with the NDA's proposal for virtual reprocessing) is almost certainly already decided. That being the case, CORE now calls on Government and NDA to extend the use of virtual reprocessing to the remainder of overseas owned fuel awaiting reprocessing in THORP – and to provide good evidence as to why this spent fuel cannot now also be virtually reprocessed.

28th May 2014.