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30 March 2012

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**SCCORS COMMENTS ON NDA Paper “EXOTIC FUELS AND NUCLEAR MATERIALS  
- DOUNREAY: CREDIBLE OPTIONS” OF FEBRUARY 2012.**

Set out below is the official commentary of the Scottish Councils' Committee on Radioactive Substances (SCCORS) on the Nuclear Decommissioning Authority's (NDA) Paper of February 2012 on Credible Options associated with the management of Exotic Fuels and Nuclear Materials at Dounreay [1]. SCCORS notes that this material, as categorised in this paper, includes unirradiated plutonium and high enriched uranium bearing fuels and certain irradiated fuels and material, all more fully described in the paper.

SCCORS thanks the NDA for agreement to accept this response after the official deadline for submissions, of 23 March and regrets the postponement of the meeting planned for 23 March at which NDA was to present its paper on Exotic Fuels and Nuclear materials. SCCORS understands that NDA considers that this is not a formal consultation.

SCCORS is an organisation which represents the Councils of Scotland on matters relating to radioactive substances at a strategic level. SCCORS therefore concerns itself with both radioactive materials and radioactive waste. Some member local authorities will have formulated more detailed views on the matters considered in the Options Paper and/or have raised issues which are of a more local nature. These views may have been transmitted to you in separate responses. This response by SCCORS does not seek to consolidate these views but rather to be a more generic response. This response therefore compliments any other responses by member councils.

SCCORS welcomes the commitment on page 3 that SLC's and the NDA will engage further, beyond March/April 2012, with planning authorities, among others, to understand their views and obtain any appropriate permissions to pursue a preferred strategy for management of the material discussed. In addition to such further engagement relating to planning matters SCCORS believes NDA should commit to ongoing engagement with all relevant local authorities in relation to emergency planning for transport incidents which could arise if the option of transporting the exotics to Sellafield for management was chosen. Further commentary is made on this point later in this response.

SCCORS notes that the NDA has carried out a high-level analysis of options but makes no recommendations as to the preferred option while noting that the option to transfer the 'exotics' considered in the paper from Dounreay to Sellafield offers many advantages. It

is noted that the paper does not discuss Dounreay Fast Reactor (DFR) breeder material, this having been dealt with in NDA's paper on Preferred and Credible options for this material of July 2011 [2] and on which SCCORS commented in its letter of 14 September 2011.

SCCORS notes that consideration has already been given to DFR Breeder material and to Natural and Depleted Uranic Material and so the paper of February 2012 focuses on the remaining category of Exotic and nuclear materials. In particular the paper notes that the preferred option for DFR Breeder Material has already been determined following the publication and engagement around the preferred options paper of July 2011. This could give the impression that the consideration of options for the material discussed in this February 2012 paper is entirely independent from that already undertaken for other material. However SCCORS would question such an interpretation noting that the July 2011 paper on DFR Breeder Material indicated, in section 2.4., a "dependency" that "reducing the long-term security costs at Dounreay by transferring higher category materials off site, is dependent on other materials being removed from site as well". It is therefore unclear to SCCORS how the decisions relating to the fate of Breeder Material can be effectively finalised when they are dependent on the fate of the material discussed in this paper of February 2012 and yet the option of the material remaining on the Dounreay site with consequent need for long term high security provisions remains open. SCCORS further notes that section 2.1 of the February 2012 paper indicates that it should be recognised that the principal benefit from moving materials from Dounreay would be a reduction in security classification of the Dounreay site, which can only be achieved if all these exotics leave the site. If indeed there is a definite 'dependency' linkage between how the two groups of materials are ultimately managed, then this raises an issue over how meaningful this exercise has been. If moving all materials, DFR breeder materials and exotics, is the NDA's preferred option, this should have been clearly stated in the paper.

SCCORS notes that the substances being considered in the paper of February 2012 are not classified as 'waste' and the consequent applicability of policy instruments in this respect. However SCCORS is of the view that the highest standard of 'management' of this material should be applied irrespective of its classification. Additionally SCCORS notes that the classification of substances and applicable policies can change with time and that on page 8 of the February 2012 paper it is noted that there is potential for a future Scottish Policy for Spent Fuels and Nuclear Materials, reinforcing this comment.

In its response to the paper of July 2011 SCCORS noted that the proposal was to move away from the previous intention of immobilising DFR Breeder material in grout or polymer at Dounreay and store the product prior to disposal. SCCORS further commented that had this process continued to be intended then SCCORS would have favoured near site, near surface management of the waste produced [and that] among other aspects this approach would minimise potential hazards associated with transport of the radioactive substances and indeed the impact of transport operations and facilitate retrievability of the waste. SCCORS would take this opportunity to comment that in its compilation of responses to the July 2011 paper both the Caithness Partnership and SCCORS are indicated as commenting that 'movement of material and reduction in hazard at Dounreay is supported' and that this summary does not accurately reflect the response made by SCCORS.

In assessing the impact of the credible options listed in section 2.2 SCCORS notes that, in section 4, NDA indicates that for the 'transport to Sellafield for management' option something in the region of 30-60 journeys during a 6 year period is likely. – implying that this metric will be a measure of the environmental impact and hence a measure of the concern of stakeholders. However, many of the local authorities who are members of SCCORS will be concerned to ensure that the planning for possible transport incidents in

their areas has been adequately considered. Where necessary, additional arrangements may need to be put in place to allow these local authorities to adequately plan for and carry out their functions in respect of a potential transport incident involving radioactive substances. This matter does not appear to be addressed in the Options Paper.

SCCORS notes that in analysis of the credible options in the table on page 9 of the February 2012 paper NDA indicates there to be “no meaningful difference between options” and this does not appear to be consistent with other comments on the socioeconomic impacts of the two options recorded in the same table. SCCORS believes that this comment should be reconsidered and a full analysis of the socioeconomic impacts be carried out.

Whilst not advocating transport by sea SCCORS notes from section 4 that this option appears to be excluded only for irradiated fuels on security grounds and wonders why such an apparently less secure transportation method would be suitable in that case for unirradiated material.

SCCORS notes the wide range of materials cited as being in group 2 of the materials listed on page 4 of the paper of February 2012 but further notes that this is at deviance from the description for such materials given on page 12 of the paper.

SCCORS notes that one of the two identified credible options is ‘transport to Sellafield for management’ and that in the analysis summary in section 3.1 no environmental detriment is attributed to their management by recycling there. The corresponding analysis of ‘manage the exotics at Dounreay’ indicates an environmental detriment arising from there being ‘no recycle opportunity at Dounreay’ implying such recycling may take place if the material were transported to Sellafield. SCCORS is of the view that if recycling takes place at Sellafield then those operations should be carried out in such a way that emissions of radioactive substances to the environment are minimised. Monitoring of the Scottish environment [3] shows that while the highest doses received by members of the Scottish public from radioactive waste discharges are small in absolute terms these occur in South-west Scotland as a result of the impact of discharges from Sellafield. SCCORS would therefore encourage NDA to continue to explore whether discharges from Sellafield can be reduced further. SCCORS notes that in response to a similar comment on possible reprocessing of DFR Breeder material at Sellafield the NDA responded indicating that “discharges from Sellafield are closely monitored and tightly regulated” and that “any increase due to reprocessing of this [DFR Breeder] material would be insignificant most likely unmeasurable”. SCCORS is of the view that unless potential discharges and impacts are quantified such comments cannot be substantiated and that environmental impacts of the options should be considered more fully.

Both the executive summary and the conclusion of the paper indicate that the Energy Act(2004) requires NDA ‘to have a strategy to safely and securely manage exotics in the most practical and cost effective way’. The section of the Energy Act which refers to provisions for ‘exotics’ should be referenced or the provisions which lead to requirements in respect of ‘exotics’ be more clearly stated.

In conclusion SCCORS would wish that its members are given opportunity to interact with the NDA, in particular on consideration of transport incidents. Should the option of transport of material to Sellafield become the preferred option SCCORS would encourage NDA to investigate if discharges from Sellafield can be reduced further by any practicable means and to more fully and holistically consider the socioeconomic and environmental impacts of the options.

SCCORS is grateful for being alerted to this paper by NDA and would like to be alerted to any further relevant consultations by NDA of whatever scale. SCCORS is concerned that the approach to ‘consultation’ taken by the NDA on this occasion has failed to recognise

the importance of this issue to the Scottish public and to the wider local government community, particularly in relation to the issue of transportation, and as such could have been undertaken in a more formal, fuller manner.

Again, SCCORS is grateful for your agreement to extension of the deadline for submissions of comments and we hope that you find these comments helpful.

Yours faithfully

Derek Miller  
SCCORS Secretariat

References:

1. Exotic Fuels and Nucle(r)3(i)-MaaterialS