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(For the attention of Mike Middleton)

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21st September 2015

Dear Mike

**Independent Peer Review of System Requirements for Alternative Nuclear Technologies -
Project Review Stage 3 - Full and Summary Project Reports**

As directed by the Energy Technologies Institute, Atkins has examined the System Requirements for Alternative Nuclear Technologies Project Summary Report (Revision E Aug 2015) and the Full Report (Revision E Aug 2015), prepared by Mott MacDonald. The whole reports have been reviewed, including the Appendices to the Full Report. Supporting Excel files provided by the ETI have not been examined in detail. The supporting references to the report have not been examined.

The examination was led by me, supported by a further 5 Atkins staff with good industry knowledge and experience. Together the team included expertise in technical issues (including knowledge of large nuclear power plants and developing SMR technology), technology development, energy systems (including electrical and heat distribution), siting, economic modelling, and cost assessment.

The approach for this Peer Review examination has been to review the assumptions, exclusions, methodologies, analysis and conclusions of the reports, in order to establish the extent to which the conclusions may be relied upon by the ETI.

This is third full review of these reports. At each stage our peer review comments have been categorised into the following categories:

- Category 1 – comments that undermine the conclusions of the reports.
- Category 2 – comments that do not undermine the conclusions of the reports, but do, nonetheless, challenge parts of the Full Project Report in terms of the scope, assumptions, exclusions, methodologies and analyses which support the conclusions.
- Category 3 - further comments, questions and observations which do not undermine the validity of the conclusions of the Full Project Report.

At the second and now at the third review we had the opportunity to review the authors' response to each of the comments that we made. In many cases the reports were revised to take account of our comments. In some cases further argument was provided as to why the report did not require amendment in response to our comment.

At the first review we provided comments in all 3 categories. At the second review all the Category 1 comments had been adequately addressed, but we provided some further Category 2/3 comments on the Full Report; some of which were also relevant to the Summary Report. At this third review we have reviewed the authors' response to these comments, and the associated changes that have been made to the reports.

We consider all Category 2 comments to have been adequately and appropriately addressed.

We have also undertaken a further overview of the final reports and consider that they are clearly structured to present the analysis that has been undertaken. We consider that the Summary Report provides a reasonable clear succinct summary of the Full Report.

There are now no Category 1 or 2 comments, questions or observations. For record we provide some final further detailed Category 3 observations which do not undermine the validity of the conclusions of the Report. These need not, in our view, preclude issue or publication of the Report, though a few minor changes should be made to improve accuracy. These are in the Appendices to this letter.

Yours Sincerely,

A handwritten signature in black ink, appearing to read 'A. L. McFarlane', with a stylized flourish at the end.

Andrew L McFarlane OBE CEng FIMechE FNucl
Technical Director

Appendices:

1. Category 3 observations on the full report.
2. Category 3 observations on the summary report