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Our Reference: 2016/460404  
Unique Number: REG-HGNE-0157N

General Manager, Licensing, Nuclear Power Project  
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**25 November 2016**

**Closure of Regulatory Observation - RO-ABWR-068 - Civil Engineering Step 3 Closeout Queries  
– Seismic Analysis**

I refer to Regulatory Observation RO-ABWR-0068 issued 3 June 2016.

I am writing to confirm that:

- You have submitted the information committed within your Resolution Plan as follows:
  - Seismic Design Methodology Report (JE-GD-0160)
  - Seismic Design Validation Report (JE-GD-0161)
  
- The submitted information informs that:
  - The main building structures are now being analysed using 3D finite element models (FEM) and the use of lumped mass on beam models (LMBM) is now limited to the analysis of secondary structures
  - The requirement to demonstrate that LMBM represents relevant good practice in calculating accurate and detailed seismic responses in all areas of the of the civil structures has become largely obsolete
  - Although the detailed assessment continues, no findings have yet been reported that would undermine the viability of the approach, as presented in the submitted documents

On this basis, ONR confirms closure of RO-ABWR-0068.

During the ongoing detailed assessments of the analyses and designs of the UKABWR civil structures for Step 4 GDA, ONR will require evidence that all Regulatory Queries have been closed out.

Yours sincerely