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29 August 2018

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Unique ref: 2018/279526

Dear Ms Aubrey

### **Climate Change and Rising Sea Levels - Hinkley Point C**

Thank you for your letter of 30 July 2018 to our Chief Executive, Adrienne Kelbie. She has asked me to respond to your concerns raised about the effects of climate change and rising sea levels on the safety of the Hinkley Point C (HPC) site.

You asked if the Office for Nuclear Regulation (ONR) has revised and revisited its view on the future safety of the HPC site in light of recent higher estimates of sea level rise, and if the ONR is confident that the site will be suitable for the interim storage of spent fuel until at least the year 2140.

To answer these questions I will describe how the ONR consider sea level rise as part of flood risk for nuclear sites, and the safety case assessment of HPC.

### **Consideration of Sea Level Rise as Part of Flood Risk for Nuclear Sites**

ONR considers all flood risks to nuclear licenced sites in considerable detail and applies high standards to ensure that all sites are designed to be resilient to flooding. ONR's expectations are laid out in the published Safety Assessment Principles for Nuclear Facilities<sup>i</sup> (External and Internal Hazards – weather conditions and flooding), together with the supporting Nuclear Safety Technical Assessment Guide<sup>ii</sup> (External Hazards).

Detailed studies of the potential for flooding on nuclear licensed sites are carried out by the licensees, and robust engineered flood defences against these hazards are provided as necessary. The flooding hazard studies include an allowance for reasonably foreseeable sea level rise. Licensees will monitor this via Periodic Safety Reviews as required by ONR's site Licence Condition 15<sup>iii</sup>. If necessary, further pre-planned flood protection measures will be put in place through a managed approach.

## ONR's Safety Case Assessment of Hinkley Point C

ONR has assessed the safety case for HPC as part of the site licensing and permissioning of construction activities. This has included a detailed assessment of the coastal flooding safety case. The primary protection against coastal flooding for HPC is the height of the site platform (14m above sea level). The site characterisation has demonstrated that the platform is not vulnerable to a design basis coastal flood, including reasonably foreseeable climate change. The HPC site licensee (NNB GenCo) will monitor this hazard via Periodic Safety Reviews (including the interim spent fuel store) and if the assumptions in the safety case regarding climate change are shown to no longer be valid; they will be reconsidered. If necessary, further pre-planned flood protection measures will be put in place through a managed approach.

ONR acknowledges that climate change is a complex topic, subject to significant research. ONR maintains a constant review of scientific thinking on climate change, and is guided by relevant good practice. This includes UK and international guidance, UK Climate Projections 09 (UKCP09) and the Intergovernmental Panel on Climate Change (IPCC). To support efficient and effective regulation, ONR has established an independent expert panel on meteorological hazards to provide advice. ONR's expert panel is a collection of competent consultants with expertise in this technical area. This panel has provided advice on the HPC external flooding safety case and will continue to provide advice on the potential impacts of climate change.

ONR is content that a suitable managed adaptive approach can be adopted, in the event that sea level rise is more than predicted, as set out in the Principles for Flood and Coastal Erosion Risk Management<sup>iv</sup>.

### Conclusion

Based on the above, ONR is content that the safety case for HPC adequately considers climate change and its potential contribution to flooding, over the expected lifetime of HPC. Furthermore, ONR consider that suitable measures are available to monitor (and respond to) sea level rise as a consequence of climate change; as currently understood by the scientific community.

I trust that this provides a satisfactory response to your concerns, however do not hesitate to contact me again if you require anything further.

Yours sincerely



Dr Ian Hanley CEnv MEI  
Senior Policy Advisor

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<sup>i</sup> <http://www.onr.org.uk/saps/saps2014.pdf>

<sup>ii</sup> [http://www.onr.org.uk/operational/tech\\_asst\\_guides/ns-tast-gd-013.pdf](http://www.onr.org.uk/operational/tech_asst_guides/ns-tast-gd-013.pdf)

<sup>iii</sup> <http://www.onr.org.uk/documents/licence-condition-handbook.pdf>

<sup>iv</sup> <http://www.onr.org.uk/documents/2017/principles-for-flood-and-coastal-erosion-risk-management.pdf>