

## **The HIFAR Level 1+ PSA: Its Update and Extension**

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### ***Abstract.***

In 1998, PLG delivered their probabilistic safety assessment of the Australian HIFAR reactor to the Commonwealth government. The study was a 'Level 1+' assessment of the likelihood of reactor core damage together with consideration of the reliability of the containment function. As part of their assessment, PLG made a number of recommendations for improvement in the operation of HIFAR which were adopted by ANSTO. In discussion with the regulator, ARPANSA, ANSTO agreed to update the results of the PSA and extend it to the estimate of risks to offsite persons.

This paper considers the actions carried out as a result of their recommendations, the subsequent changes to core damage frequency and the likelihood of core damage together with failure of the containment. It also details the results of the simple Level 2/3 study carried out to conservatively estimate the risks to offsite persons.