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反应堆工程

中国先进研究堆严重事故辐射后果研究

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摘要 针对高功率研究堆建在大城市远郊区的特殊情况，提出了中国先进研究堆（CARR）严重事故辐射后果的验收准则。为进行CARR严重事故排放方案的设计，研究了不同事故排放方案下，CARR发生严重事故时的环境辐射后果。最终推荐提高反应堆大厅密封性并优化事故后密闭与排风组合排放方案，实现了CARR工程无场外应急的安全设计目标。

关键词 中国先进研究堆；严重事故；辐射后果；场外应急

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Research on Radiological Consequences of Severe Accident of China Advanced Research Reactor

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Abstract Aimed at a special situation of a research reactor with high power to be constructed in the suburb of a big city, the acceptance criteria on the radiological consequences of severe accidents in China Advanced Research Reactor (CARR) were put forward. In order to carry through the design of discharging scheme of CARR's severe accidents, the environmental radiological consequences under various accidental discharging schemes were researched when a severe accident probably occurs in CARR. A combination scheme of accidental discharging was recommended by improving the airtight of reactor hall and optimizing the starting time and period of obturation and ventilation. The target of CARR project safety design that there is no off site emergency situation is realized.

Key words China Advanced Research Reactor severe accident radiological consequence off site emergency

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