

化学

## 核设施运行及退役中的废物最小化技术

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**摘要** 核设施的运行及退役不可避免会产生放射性废物,废物管理的代价以及对公众、工作人员和对环境的危害取决于废物的数量及废物中所含的放射性核素,在核燃料循环过程中进行废物最小化管理是降低这些影响的一项必须的活动。在有些国家,废物最小化已作为一项国策。本文介绍了放射性废物最小化的环境效益及核设施运行和退役过程中废物最小化的方法,重点介绍了已研发的部分有效的废物最小化技术。通过总结美国等发达国家的放射性废物最小化的经验,提出了如何在我国实现放射性废物最小化的建议。

**关键词** [放射性废物](#) [废物最小化](#) [核设施运行](#) [核设施退役](#)

分类号

## Technologies for Minimization of Radioactive Waste During Operating and Decommissioning for Nuclear Facilities

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**Abstract** It is inevitable to generate a diverse range of radioactive waste which has to be managed in a safe manner to be acceptable to the public and the environment during operating and decommissioning for nuclear facilities. The cost of waste management, the risks to the public and employees, and the detriment to the environment are dependent on the quantity and radioactive content of the waste generated. Waste minimization is a necessary activity needed to reduce the impact from nuclear fuel cycle operations and it is included in the national policy in many a country. The environmental benefits and the methods for the radioactive waste minimization were introduced, and the resultful techniques that had been developed in the world were mainly presented. What's more, through summarizing the achievements and experiences of the radioactive waste minimization from U.S.A. and other developed countries, the paper puts forward how to bring about radioactive waste minimization in China.

**Key words** [radioactive waste](#) [waste minimization](#) [nuclear facility operation](#) [nuclear facility decommissioning](#)

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