

Development of Tritium Inventory Management Code for Tritium Storage and Delivery System

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Recently, in Korea, a study on the tritium storage and delivery system (TSDS) for the recycle of tritium, which is collected by Wolsong Tritium Removal Facility (WTRF), is in progress. To commercialize tritium, the management of tritium inventory is required. Generally for the inventory management, the establishment of the appropriate inventory model is important. In this study, for the safe and efficient management of TSDS, the inventory model is suggested. Based on the suggested model, the tritium inventory management code for TSDS is developed. In the management code, the calculation functions for the tritium inventory of the storage tanks of TSDS in real time and the reorder point (ROP) of tritium from WTRF for the seamless supply to a customer are included. Additionally, the reporting function about the tritium movement is included in the developed code. The developed code can be applied as the estimation of the source term for occupational exposure, the modeling for the decontamination of the decommissioning waste of TSDS, and the management for the minimization of the loss of tritium resource and that of the stable supply to customers