

عنوان مقاله:

Dispersion Simulation of Cesium 137 Released from a Hypothetical Accident at the Bushehr Nuclear Power Plant in Persian Gulf

محل انتشار:

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خلاصه مقاله:

The nuclear disasters in Chernobyl and Fukushima have shown that such nuclear incidents are causing serious and undesirable long-term damage to the environment and the health of living beings, including humans. So that they should be taken very seriously. Considering the importance of the subject, in this paper, the simulation of the transmission and emission of cesium 137 nuclear abandoned from the contingency incident of Bushehr Power Plant in the Persian Gulf using the CROM (Código de cRiba para evaluaciÓn de iMpacto) code has been discussed. We assumed that the incident took place on July ۱, ۲۰۱۸, and the most dangerous and an important nucleus of the abandoned is cesium 137 . The simulation results show that the Cs- 137 released from the incident is moved to the west and northwest of Persian Gulf and approach the head of the Persian Gulf after fifteen days. Then driven by the discharge of the Arvandrood River to the south coast and center of the Gulf moves forward and leads to the bottom. About two months later (late August) it will leave the Strait of Hormuz and will advance the Oman Sea and the Indian Ocean. Now, if this happens on January ۱, after about ۳۰ days, cesium 137 reaches the head of the Persian Gulf, and four months later (late March) will leave the Strait of Hormuz. The results of this study can be used under the same conditions in the nuclear emergency of Bushehr Power Plant.

کلمات کلیدی:

Cesium- 137 , Dispersion, CROM Model, Bushehr Nuclear Power Plant, Persian Gulf

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