



The Decommissioning of Trino Nuclear Power Plant: Environmental Radiological Impact of Liquid and Gaseous effluents

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Abstract: Radiological effects to the environment around Trino Nuclear Power Plant (Trino NPP) are analyzed. The impact of decommissioning activities is considered using both environmental radiological monitoring data and doses estimated by mathematical models. The environmental monitoring shows no increase of radiological level near the plant. The effects of radioactive effluents coming from the plant can be included in the statistical fluctuation of natural background dose rate. Estimated annual effective dose for the public is less than the 1% of the annual public dose limit recommended by the ICRP. Effluents are discharged from a 100 m high chimney, with continuous monitoring of radioactivity. Liquid effluents are discharged in batch mode and radioactivity concentrations are measured for each discharge. Decommissioning strategy may bring 2 $\mu\text{Sv/y}$ due to gaseous release and 8 $\mu\text{Sv/y}$ due to liquid to the critical group. The environmental effects due to the decommissioning of the NPP are found insignificant.

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