

Some Radioecological Aspects from Coal Power Plants

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Many types of lignite burned in Coal Power Plants (CPP) in several countries of Europe as also in USA contain radioactive nuclides, particularly of the uranium series. An enrichment of these nuclides is observed in produced fly ash by the loss of carbon during the combustion process. A large part of the above nuclides escapes from the stack of CPPs and discharges into the atmosphere as gases (vapor phase) or fine particles. Tracers of radium-226 as well as uranium-238 has been determined in soils, rainwaters and snow of CPP regions sometimes a little higher than normal levels. The Valley Model of atmospheric dispersion was applied to simulate our experimental results.

The contamination of soil in CPP region in which the refining of radium and uranium has been carried out for about 30 years of CPP activity has raised the question of the maximum permissible concentration of radium in soil on its uptake by cereals, vegetables, potatoes, sugar beets and various fruits.