Centre for Energy Research,
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NORM-al operation of the Hungarian coal power plants

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The mined coal contains natural radioacitve isotopes from the uranium-thorium chains. During the operation of the coal power plants the natural radioactive materials in the coal are enriched in the dust collected by the filters of the plant.

In 2009 the CER measured NORM in Hungarian coal-fired power plants: Mátra, Vértes, Lőrinc and Pécs with the Mobile laboratory.

At the ash repositories the dose rates were measured and also the natural radionuclides activity concentration were assessed by in-situ gamma spectrometry.

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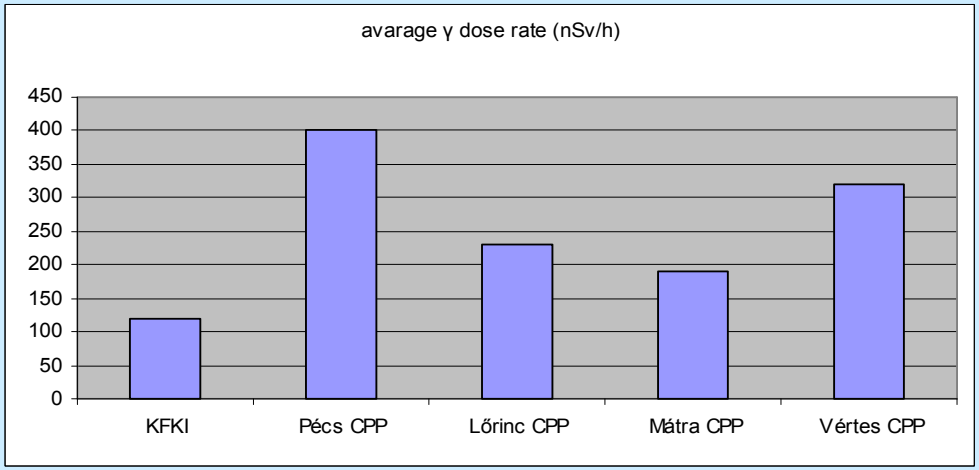
Coal PP Vs. Central Isotope Facility Dose rates

At the ash repository of the Coal PP near Pécs, the dose rate was about 500 nGy/h. The nautural background about 100-120 nGy/h at the KFKI campus. The dose rate inside the Central Isotope Repository equal with the ash repository value near Pécs.



	KFKI campus (reference point)	Pécs CPP	Lőrinc CPP	Mátra CPP
U-Ra chain (Bq/kg)	14,72	40,716	26,582	16,77
Th chain (Bq/kg)	15,25	29,184	17,811	21,97
^{40}K (Bq/kg)	254,28	729,88	328,187	439,73
^{137}Cs (Bq/cm^2)	0,209	0,035	0,076	0,116