

عنوان مقاله:

Measurements of Radioactive Pollution in the Soil near the Power Generators

محل انتشار:

فصلنامه انرژی و محیط زیست ایران، دوره ۶، شماره ۴ (سال: ۱۳۹۴)

تعداد صفحات اصل مقاله: ۵

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خلاصه مقاله:

The aim of present work was to assess the impact of diesel power generators wastes on radon levels using solid state nuclear track detector CR-۳۹. Forty eight soil samples were collected from area around four power generators located in Al-Ghazalia region in Baghdad, Iraq. Twelve samples at depths of ۱۰-۳۰cm around each generator were taken, three in each direction (N, S, E and W) at different distances (۰، ۵، and ۱۰m). The value of radon concentrations ranged from ۳۵۸.۳Bq.m^{-۳} at distance ۵.۰m from G₂N to ۱۲۵۸.۶Bq.m^{-۳} at distance ۱۰.۰m for G₂S. The mean values of radon concentrations varied from the lowest value of ۶۰۴.۶ Bq.m^{-۳} to the highest value of ۶۹۴.۷Bq.m^{-۳} in the soil samples around G_۱ and G_۴, respectively. The mean value was ۶۳۶.۶ Bq.m^{-۳}. The values of radon level are higher than the international recommended value. Surface and mass exhalation rates were also calculated with average values of (۰.۳۵) Bq.m^{-۲}.h^{-۱} and (۰.۱۵) Bq.kg^{-۱}.h^{-۱}, respectively. These values are found to be .below the limit of the recommended values

کلمات کلیدی:

Radon sampling, Exhalation rate, Power generator, Soil pollution, Radioactive pollution

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