عنوان مقاله:

Measurements of Radioactive Pollution in the Soil near the Power Generators

محل انتشار:

فصلنامه انرژی و محیط زیست ایران, دوره 6, شماره 4 (سال: 1394)

تعداد صفحات اصل مقاله: 5

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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-39. 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 10-30cm around each generator were taken, three in each direction (N, S, E and W) at different distances (0, 5, and 10m). The value of radon concentrations ranged from 358.3Bq.m-3 at distance 5.0m from G2N to 1258.6Bq.m-3 at distance 10.0m for G2S. The mean values of radon concentrations varied from the lowest value of 604.6 Bq.m-3 to the highest value of 694.7Bq.m-3 in the soil samples around G1 and G4, respectively. The mean value was 636.6 Bq.m-3. The values of radon level are higher than the international recommended value. Surface and mass exhalation rates were also calculated with average values of (0.35) Bq.m-2.h-1 and (0.15) Bq.kg-1.h-1, 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