

## The Effect of Solid Wastes Disposal at Amokpala Dump Site in Orumba North Local Government Area, Anambra State

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**Abstract :** Solid waste disposal to the environment was investigated by analyzing the quality characteristics of waste, air quality, and heavy metal concentration in the soil. The characteristics of waste were analyzed by enumerating the number of houses, hostels, hotels, markets, schools, and industries with the type of waste being discharged or deposited into the dump site. The percentage of waste was estimated with organic ranking first for both wet and dry seasons, 54% and 44%, respectively. The ambient air quality was analyzed using the crown gas monitor analyzer. The analysis showed that the mean concentration of NO<sub>2</sub>, SO<sub>2</sub>, and Co is 0.74, 0.37, and 47.35 ppm for the wet season and 0.47, 0.35, and 37.65 ppm for the dry season, respectively, and do not conform with the USEPA standard. The chemical analysis of the groundwater sample indicates alkalinity ranging from 7.38 to 9.11. the heavy metals concentration in the soil of cadmium, iron, copper, calcium, and potassium with 0.053, 0.722, 0.227, 21.3, and 9.019, respectively, obtained from 0.3 m at the subsurface failed to conform to the NRC (2013) standard. Iron consent in the soil can be corrected using ascorbic acid and soda ash. The permanent reduction of effects is to try relocating people who live very close to the dumpsite, or the dumpsite should be sited elsewhere and replaced with a sanitary landfill.

**Keywords :** solid waste, groundwater, disposal, dumpsite

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