ENVIRONMENTAL HEALTH SCIENCES SERIES

Coal Ash Triggers an Elevated Temperature Landfill Development: Lessons from the Bristol Virginia Solid Waste Landfill Neighboring Community



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Solid waste landfills are designed to comply with regulations to prevent environmental contamination. After 30 to 50 years, significant investment is needed for new sites. This talk will examine the unexpected development of elevated temperature landfills (ETLFs) in Bristol, Virginia, highlighting the role of coal ash.

Despite their increasing frequency, ETLFs' environmental issues are not well understood. The study analyzes emissions of sulfur compounds, ammonia, VOCs, methane-to-carbon dioxide ratios, gas well head temperatures, and coal ash deposition rates. Coal ash should have initiated the ETLF creation in Bristol, causing high temperatures, low methane emissions, high leachate production, land subsidence, and high organic compound production. Residents suffer from intolerable odors and poor air quality. Recommendations for monitoring ETLFs and developing strategies to mitigate their environmental impacts and public health risks will be provided.

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