

DISTINGUISHING SITE RELATED PAHS FROM BACKGROUND PAHS

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Polycyclic Aromatic Hydrocarbons (PAH) are present in crude oils and petroleum products. If there is a release or suspected release of oil or petroleum products, subsequent environmental investigations usually require testing for PAH. PAH are also present in combustion emissions and in various, common materials such as, for example, creosote-treated telephone poles and railroad ties, and coal tar-based asphalt sealants. Consequently, PAH are ubiquitous in the environment and urban and suburban background levels in soils and sediments can exceed screening levels established by regulatory agencies. If screening levels are exceeded and the PAH are thought to be associated with the release of oil, then further investigation or remediation is often required. By comparing site PAH data to several sets of background PAH determinations produced by state agencies and in the peer reviewed literature, the site measurements of PAH can be assessed with regard to their magnitude and whether they exceed background levels. Furthermore, statistical analysis of the PAH data, including evaluating the PAH fingerprint of petroleum products compared to the fingerprint of background PAH in soils and sediments can be critical in distinguishing site-related PAH from widespread urban/suburban background.

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