Magnetic Susceptibility Surveys

Soil magnetic susceptibility can be use to test for the presence of heavy metals such as lead, iron, cadmium, chromium, and nickel. Two magnetic susceptibility surveys were performed in areas of Philadelphia that have a long history of industrial utilization.

1. Transect along Castor Ave.

Magnetic susceptibility was surveyed along 3,000 meter three thousand meter transect that followed Castor Avenue .. Readings were recorded in those areas where access to undisturbed soil was available. The results show a strong peak at the Franklin smelter as well as peaks by I-95 and a railroad right-of way.

A aerial view of a city

Description automatically generated

1. The Lost Smelter of Hedley Street

Historical records from 1925 document the location of the White Brothers lead smelter on Hedley St in the Kensington neighborhood of Philadelphia. Although this smelter was in operation at least until 1959, no trace of it currently exists.

A survey of this area was performed using magnetic susceptibility to measure the presence of heavy metals that might be associated with the smelter operation. Results indicated high levels of magnetic susceptibility

(see below)

A close-up of a map

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