Assessment of Exposure in the Community Surrounding the Martin Luther King/ Jefferson School Construction Site in Trenton

In 2004-2005, the construction of a new school at the site of the Martin Luther King/Jefferson School in Trenton resulted in the release of dust from fill material that had been brought to the site. This fill material contained both soil material and concrete construction debris. In addition, the fill was found to have low-to-moderate levels of lead and polycyclic aromatic hydrocarbons (PAHs). During the period of construction, residents in the vicinity of the school reported experiencing acute respiratory symptoms. After the source of dust emissions had ceased due to the stoppage of the construction, the NJDEP Division of Science, Research and Technology (DSRT) was requested by the community to investigate the extent and spread of dust from the construction site. NJDEP/DSRT worked with the Environmental and Occupational Health Sciences Institute (EOHSI) of Rutgers/UMDNJ to carry out this investigation. To investigate this, elemental analysis was conducted on soil samples from the construction site, dust samples from the inside and outside of the houses in the surrounding area, and dust samples in the adjacent (unused) school building. Air samples were also collected during the demolition of the partially completed construction. This samples were compared based elemental analysis to determine whether a signal of the construction-site soil could be identified in the surrounding area. Samples were also analyzed for PAHs. Statistical analysis of the samples provided evidence for the spread of construction-site soil to the outside of homes in an area within one block of the site. However, dust inside the homes was not related to the construction-site soil. Lead levels outside the homes did not appear to be related to the construction-site soil. PAH levels were found to be below a level of health concern. Air samples showed that during demolition, dust control measures were sufficient to prevent further exposure.