Abstract Book

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oongnam. For ranked first group, the most
ents were less than 1 for all chemicals in all

fication and management for environmental
onably resource allocation more for risk

les in a Former Mining Area in

3, J. D. Spengler[1]; [1]Harvard School
onmental Protection Agency,
ency, Miami, OK

s is potentially an important route of human
e and abandoned mining areas. In this study,
$M_{2.5}$ at 3 monitoring sites for 60 consecutive
three sites were varying distances from the
arios. Energy-dispersive x-ray fluorescence
ne trace element concentrations. Mean mass
coarse (PM_{10}-$PM_{2.5}$) particles ($p=0.0002$)
ations of lead significantly decreased with
oarse (7.6 vs. 3.0 vs. 1.0 ng/m^3, $p<0.0001$)
s. A similar trend was also determined for
ntified 5 major sources for $PM_{2.5}$: coal-fired
il (5%), vegetative/biomass burning (2%),
nd Zn were associated with mining waste.
fraction using similar techniques: crustal
nd Zn were associated with mining waste.
ntly across the 3 sites ($p<0.0001$) for both
onclusion, mining waste was identified as
s suggesting that wind-borne transport is
mining-related metals.

g from Lead-Based Paint and/
f Leaded Gasoline?

tempel School of Public Health,

e the magnitude of environmental lead

Miami Inner City Area and involved the
ow wells, tap water, soil and air. Onsite
children under the age of 6 years. The
in situ via XRF analysis.
ad the most abundant occurrence of lead.
es with lead levels above Department of
the soil samples, the playgrounds around

the house had the highest concentration of lead. Soil sampling demonstrated that 27.5% of sites returned samples with lead levels (400ppm to 1600ppm) in excess of HUD/EPA standards. Positive XRF readings in one or more components were returned by 18% of sites.
Conclusions: More than half of the houses in these neighborhoods exhibited unacceptably high levels of lead dust and soil in areas where children live and play. With regard to education about the hazards of exposure to lead, attention should be drawn to the lead coming from the lead-based paint and the lead in the soil contaminated during the time leaded gasoline was used since it stays in the environment for about 3,000 years. A more comprehensive study including other areas of Miami Dade County with older housing stock and areas along the major streets and highways is recommended.

Abstract 390
Potential Radiation Exposures to Residents of New Mexico from the World's First Test of a Nuclear Device (Trinity Site, July 16, 1945)

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The test of the first plutonium-based nuclear weapon was conducted 140 miles south of the Los Alamos National Laboratory on July 16, 1945. As part of the Centers for Disease Control and Prevention's ongoing Los Alamos Historical Document Retrieval and Assessment project, information has been collected relevant to environmental impacts of the explosion and potential exposures received by residents of the areas around the Trinity site from the ~20 kiloton blast, the resulting radioactive cloud, and deposition of radioactivity. There was much uncertainty among the Los Alamos scientists and Manhattan Project officials as to the nuclear device's effectiveness and environmental impacts. Members of the public were not evacuated in advance of, or following, the highly secret test. Numerous ranches existed in the area, some of which were not known to government officials, and grazing areas and agricultural lands with truck crops were in the fallout area. The terrain and air flow patterns in the area resulted in a number of "hot spots." Documents collected revealed that seven two-man monitoring teams traversed local roads in the hours after the explosion and recorded their findings. The highest activity was found in an area 12 miles long and 1 mile wide that extended from the town of White Store across Chupadera Mesa, within which exposure rates around 15 R/h were measured near known ranches three hours after detonation. The results of our review indicate that inhalation and ingestion of radioactive fallout likely raised residents' exposures to levels that would currently exceed government standards.
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