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DEPARTMENT OF HEALTH AND SENIOR SERVICES
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July 25, 2007

Mr. Nicholas Magriples
On-Scene Coordinator, Removal Action Branch
U.S. Environmental Protection Agency, Region 2
2890 Woodbridge Avenue
Edison, New Jersey 08837-3679

Dear Mr. Magriples:

This Letter of Technical Assistance is in response to a United States Environmental Protection Agency (USEPA) Region 2 request that the New Jersey Department of Health and Senior Services (NJDHSS), through a cooperative agreement with the federal Agency for Toxic Substances and Disease Registry (ATSDR), to evaluate potential health risks posed by lead contaminated soil detected at the Tidewater Baling Site, Newark, Essex County, New Jersey. Analytical results for surface soil samples (0 to 3 inches) collected from the site on April 5, 2007 indicate that lead contaminated soil is present throughout the property and off-site along the property frontage facing Saint Charles Street as follows:

Sample Location	Number of Samples	Range of Lead Concentrations (mg/kg) [a]	Average Lead Concentration (mg/kg)	Non-Residential Soil Guidance Values (mg/kg)
On-Site	10	180 – 17,700	4,037	750 [b]
Off-Site Property Frontage – St. Charles Street	6	79 – 572	328	

(a) mg/kg = milligrams per kilogram
(b) USEPA Non-Residential Soil Guidance Value

Based on site topography and lead concentrations in soil, it appears that contaminated soil is migrating off-site, possibly via surface run-off, and collecting along the sidewalk and curb areas along Saint Charles Street. The average lead concentrations in surface soil do not exceed the USEPA Non-Residential Soil Guidance Value of 750 milligrams per kilogram in soil. However, it is noted that all four on-site soil samples collected near to the property fence-line along Saint Charles Street exceeded the USEPA Non-Residential Soil Guidance Value for lead. As lead contamination appears to be migrating, lead concentrations for this off-site area may potentially increase in the future.

Environmental exposure to lead has long been recognized as a public health problem, and children less than six years of age are particularly vulnerable to the toxic effects of lead. Exposure to lead in soil has been shown to increase lead levels in children. Lead toxicity can cause decreased learning and memory, lowered Intelligence Quotient (IQ), speech and hearing impairment, fatigue, and lethargy. Maternal blood lead can cross the placenta and put the fetus at risk of low birth weight or premature birth. Health effects associated with lead exposure, particularly changes in children's neurobehavioral development, may occur at blood lead levels so low as to be essentially without a threshold.

Based on observations made by the NJDHSS during a March 14, 2007 site visit, there are completed and potential exposure pathways to area residents (including children) via incidental soil ingestion and possibly dust inhalation. Lead contaminated soil has been confirmed from exposed soil patches and locations where soil was observed to collect in the sidewalk and curb areas along Saint Charles Street. Area residents use this sidewalk. The nearest residence is approximately 100 feet to the west of the off-site lead contaminated sidewalk area and approximately 110 feet to the west of on-site lead contaminated areas. Unauthorized access into the site was visibly evident at several locations. During the site visit, an individual was observed to enter the site through a damaged wall area at the front of the property along Saint Charles Street. Other compromised areas allowing unauthorized access were noted along the east (rear) property boundary. Additionally, it is possible that the site may be accessed at compromised locations by area children increasing the potential risk for on-site exposure to lead contaminated soil. The adjacent Ironbound Athletic Field was noted to have sparse deposits of soil/dust imbedded in its artificial cover. It is plausible that some of this deposited soil/dust could be contaminated material originating from the site and potentially exposing sensitive persons such as children and pregnant women who use this field.

Based on review of lead concentrations in soil and the potential for exposure to area residents, current conditions at the Tidewater Baling site indicate on-site conditions represent a public health hazard regarding exposures via trespassing. Off-site conditions represent an indeterminate public health hazard regarding lead contamination along the sidewalk area of Saint Charles Street. Off-site lead concentrations may change in the future as there is no erosion or stabilization measures implemented to control on-site lead contamination from migrating off-site. As such, the ATSDR and NJDHSS recommend the following actions be taken by the USEPA to reduce or eliminate the potential for exposures to site-related contaminates in soil/dust for area residents, including children:

1. Remedial and/or control measures should be implemented to prevent exposures to lead contaminated soil present at the sidewalk area along Saint Charles Street. Control measures should include the prevention of contaminant run-off from the site to off-site areas.

2. Perimeter fence and wall areas should be inspected and repaired. Site security should be re-evaluated to determine if additional security measures would be prudent to prevent unauthorized access onto the property.

3. Sampling of the Ironbound Athletic Field should be considered to determine if the artificial field cover has been impacted from site-related contaminates (i.e. lead). At EPA's request, the NJDHSS, in cooperation with ATSDR, have agreed to perform this sampling. In turn, NJDHSS requests EPA's support in obtaining access approval from the City of Newark who owns the Ironbound Athletic Field property.

4. If it is determined that site-related contamination has impacted the athletic field to a degree where it represents a public health, access restrictions to the field may be required by EPA to prevent potential exposures. Additionally, control measures would be necessary to prevent migration of site contaminates onto this area in the future. ATSDR can be contacted to evaluate the public health hazard posed to area residents if contamination is present at the recreational field.

NJDHSS is making arrangements for access appoval for the athletic field so sampling can be performed as soon as possible.

Please contact me at 609-588-7497, Glenn.Pulliam@doh.state.nj.us or alternately, Ms. Leah Graziano, Associate Regional Representative, ATSDR Region II at 732-906-6932, Escobar.Leah@epamail.epa.gov.

Yours truly,

Glenn Pulliam
Occupational Health Consultant,
Health Assessment and Consultation Unit
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c: Gregory Ulirsch, Technical Project Officer, ATSDR
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