Maryland Department of the Environment

FACTS ABOUT:

DIXIE/HETTELMAN METALS SMELTER SITE 290

Site Description

The Dixie Metal Company/K. Hettelman & Sons site (Site 290) was a 9.3 acre parcel located north of Patapsco Avenue, east of the corner of 9th Street and Annabel Avenue in Brooklyn, Baltimore City, Maryland. The property address was 3437 9th Street, Brooklyn, MD 21225.

Dixie operated on property owned by the Hettelman Company. The parcel occupied by Dixie was located on the east side of 9th Street just north of Patapsco Avenue in the Brooklyn section of Baltimore City. The site had been the "Brooklyne" Chemical Works from 1937 through 1951. Hettelman acquired the property from Brooklyne Chemical Works after Brooklyne's 1951 bankruptcy. Hettelman et al transferred the property to Jarvis Steel in 1972.

The geographic coordinates for the center of the property are latitude 39.2358945° north and longitude 076.5961497° west based on NAD83 data collected from the Curtis Bay 1:24000 quadrangle map. The Maryland grid coordinates are north 511,000 feet and east 914,200 feet. The property is currently owned by Jarvis Steel & Lumber Co. Inc and is referenced on the Maryland Department of Assessments and Taxation as Block 7274, Lot 017, Map 0025 in Baltimore City.

Site History

For an undocumented period in the mid 1900s, Dixie Metal Company (Dixie) operated a lead smelter near the intersection of 9th Street and Patapsco Avenue in the Brooklyn area of Baltimore City, Maryland. The site was a chemical processing plant in the early 1900s. After the Brooklyne Chemical Works closed, the property came under control of the Hettelman family. Dixie/Hettelman operated a smelter on the site from 1953 til an unspecified time prior to 1972 when Jarvis Metal and Lumber acquired the property.

Waste Description

Lead smelting involved the melting of lead and the removal of contaminants from the liquid lead mixture. Metals commonly associated with lead smelting include lead, antimony, arsenic, tin, copper and silver. The smelting process discharges metallic waste into the atmosphere. This metallic waste cools and settles out of the air rapidly impacting surrounding soil.

Environmental Investigations

EPA contractors visited the site in January 2006 and noted that the site was in a mixed commercial/residential area. They referenced sampling done for the Eckel's Study and lead concentrations in the area between 306 and 520 mg/Kg. They recommended that soil be sampled in nearby residential yards to determine if a health threat existed. There are no records of this sampling being completed.

MDE conducted a Site Inspection of the area in the fall of 2012. The Site Inspection targeted exposed soil in the vicinity of the Dixie smelter. The source of the contamination was airborne. A model of air dispersion for lead particulates indicated that the contaminant would drop out within several hundred feet of the smelter's stack. Samples were collected from a quarter mile radius of the site to determine if there are harmful levels of lead or other metals associated with the smelting operation.

Current Status

The soils in the general vicinity of the Dixie Site contain levels of arsenic, lead and other metals that are generally in keeping with the anticipated concentrations of metals in Maryland soils. A toxicological evaluation of site data found that there was a potential risk to the child visitor from additive effects of the ingestion of surface soils.

Studies in the 1970s and 80s in Baltimore City found lead in soil ranging from 0.8 mg/kg to 10,900 mg/kg. A study of lead in garden soils throughout Baltimore found the median level of lead to be on the order of 100 mg/Kg. EPA defines a soil lead hazard as 400 mg/kg in play areas and a 1,200 mg/kg average for bare soil in the rest of a yard.

The average lead levels in soils surrounding Dixie was 235.05 mg/kg. The median level was 104 mg/kg. The lead levels ranged from a minimum of 33.2 mg/kg at S-1 northwest of the smelter to a maximum of 828 mg/kg near the 9th Street entrance to the smelter property. The second highest level of lead was found at the corner of 9th and Patapsco Avenue in the industrial area surrounding the smelter. Lead levels in the residential area were significantly lower than those in the industrial zone. The median lead level in the residential area on the south side of Patapsco Avenue was slightly less than 100 mg/Kg. Dixie may have contributed lead contamination to the environment of South Baltimore, but that contamination is not available to casual contact. Lead levels in soil within a quarter mile radius of the site are in general below actionable levels. MDE recommended that there be no further action taken with regards to this site.