

Letter Health Consultation

Evaluation of Childhood Blood Lead Data

ATLANTIC STATES CAST IRON PIPE COMPANY

PHILLIPSBURG, WARREN COUNTY, NEW JERSEY

APRIL 15, 2009

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Agency for Toxic Substances and Disease Registry
Division of Health Assessment and Consultation
Atlanta, Georgia 30333

Health Consultation: A Note of Explanation

An ATSDR health consultation is a verbal or written response from ATSDR to a specific request for information about health risks related to a specific site, a chemical release, or the presence of hazardous material. In order to prevent or mitigate exposures, a consultation may lead to specific actions, such as restricting use of or replacing water supplies; intensifying environmental sampling; restricting site access; or removing the contaminated material.

In addition, consultations may recommend additional public health actions, such as conducting health surveillance activities to evaluate exposure or trends in adverse health outcomes; conducting biological indicators of exposure studies to assess exposure; and providing health education for health care providers and community members. This concludes the health consultation process for this site, unless additional information is obtained by ATSDR which, in the Agency's opinion, indicates a need to revise or append the conclusions previously issued.

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LETTER HEALTH CONSULTATION

Evaluation of Childhood Blood Lead Data

ATLANTIC STATES CAST IRON PIPE COMPANY

PHILLIPSBURG, WARREN COUNTY, NEW JERSEY

Prepared By:

State of New Jersey
Department of Health and Senior Services
Under a cooperative agreement with the
Agency for Toxic Substances and Disease Registry



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HEATHER HOWARD
Commissioner

January 28, 2009

Michael Sivak
U.S. Environmental Protection Agency, Region 2
290 Broadway
New York, N.Y. 10007-1866

Dear Mr. Sivak:

This Letter Health Consultation (LHC) has been completed for the Atlantic States Cast Iron Pipe Company site located at 183 Sitgreaves Street in Phillipsburg, Warren County, New Jersey. The LHC provides separate analyses of childhood blood lead data for children living near the facility and the rest of Phillipsburg.

Statement of Issues

This LHC was prepared in response to a U.S. Environmental Protection Agency (USEPA) 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, evaluate extant blood lead data for children living near the Atlantic States Cast Iron Pipe Company in Phillipsburg. The USEPA On-scene Coordinator has indicated that poor handling practices at the facility have resulted in dust emissions from the slag/solid waste staging area which may be posing a lead hazard risk to the surrounding community.

Discussion

Childhood Blood Lead Data and Survey Areas

The concentration of lead in blood is an excellent indicator of exposure to lead. Current state regulations, in accordance with federal Centers for Disease Control and Prevention (CDC) guidelines, require health care providers to perform a blood lead test on all one and two year old children. This is the age at which lead poisoning is most damaging to the developing nervous system. New Jersey State regulation requires all clinical laboratories to report the results of all blood lead tests to the NJDHSS. Prior to July 1999, only blood lead tests above 20 micrograms of lead per deciliter of blood were required to be reported. While the current CDC blood lead guideline is 10 pg/dL, all blood-lead test data are reportable to the NJDHSS' Childhood Lead Poisoning Prevention Surveillance System.

For the purpose of this evaluation, all blood lead data were requested from the Department's Childhood Lead Poisoning Prevention Surveillance System for Phillipsburg over the period January 1999 to July 2008. To ensure that multiple testing of a child over a short period of time would not affect the analysis, only the highest test result was included in the final data set when more than one value was available per child over any three month period.

The blood lead survey area was defined as the residential neighborhood immediately next to the Atlantic States Cast Iron Pipe facility (see attached figures 1 and 2). In general, the Atlantic States survey area was bounded on the west by Jersey Avenue, on the east by Abbotts Street, on the north by the railroad tracks, and on the south by the Delaware River. The size of the survey area was approximately 3,100 feet from east to west and 1,500 feet from north to south. In addition to the Atlantic States survey area analysis, blood lead data for all of Phillipsburg less the Atlantic States survey area were evaluated separately.

Results

A total of 2,489 blood lead tests from Phillipsburg children were available during the survey period. Of these, 75 (3%) were from tests from the same children within a three month period and removed from the analysis. The age range for the remaining 2,414 blood lead tests was under one month of age to 15.9 years of age, with an average age of 2.5 years. The distribution of tests by sex for the Phillipsburg blood lead was 44.0% female, 49.4% male, and 6.6% unknown.

A total of 342 (14.2%) blood lead tests were from children residing in the Atlantic States survey area. The age and sex distributions were similar to the town as a whole. The geometric mean of the Atlantic States survey area tests was 3.16 with a 95% confidence interval of 2.92 $\mu\text{g/dL}$ to 3.42 $\mu\text{g/dL}$. A total of 12 (3.6%) of the survey area tests exceeded the CDC blood lead guideline of 10 with a maximum concentration of 21 $\mu\text{g/dL}$.

For Phillipsburg non-Atlantic States survey area, a total of 2,072 blood lead tests were available for analysis. The geometric mean was 2.94 $\mu\text{g/dL}$ with a 95% confidence interval of 2.85 $\mu\text{g/dL}$ to 3.03 $\mu\text{g/dL}$. A total of 88 (4.2%) of these tests exceeded the CDC blood lead guideline, with a maximum concentration of 42 $\mu\text{g/dL}$.

A qualitative spatial examination of the elevated blood lead values was conducted. While the elevated levels did not appear to be evenly distributed throughout Phillipsburg, they also did not appear to disproportionately aggregate near the Atlantic States Cast site nor the likely truck routes leading from the facility.

Conclusions and Recommendations

In conclusion, blood lead levels in children living near the Atlantic States site were similar to other sections of Phillipsburg over the survey period. A principal source of lead exposure for children in the United States is household dust and soil **contaminated by leaded paint. This evaluation does not provide any evidence that the Atlantic States site has had an adverse affect on childhood blood lead levels.** Consequently, no recommendations are suggested based on the findings of this LHC.

If you have any questions concerning this review, please feel free to contact me at (609) 584-5367. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Michael Berry". The signature is written in a cursive style with a long horizontal stroke at the end.

Michael Berry
**Consumer and Environmental
Health Services**

Figure 1. Atlantic States Cast Iron Pipe Childhood Blood-lead Survey Area.

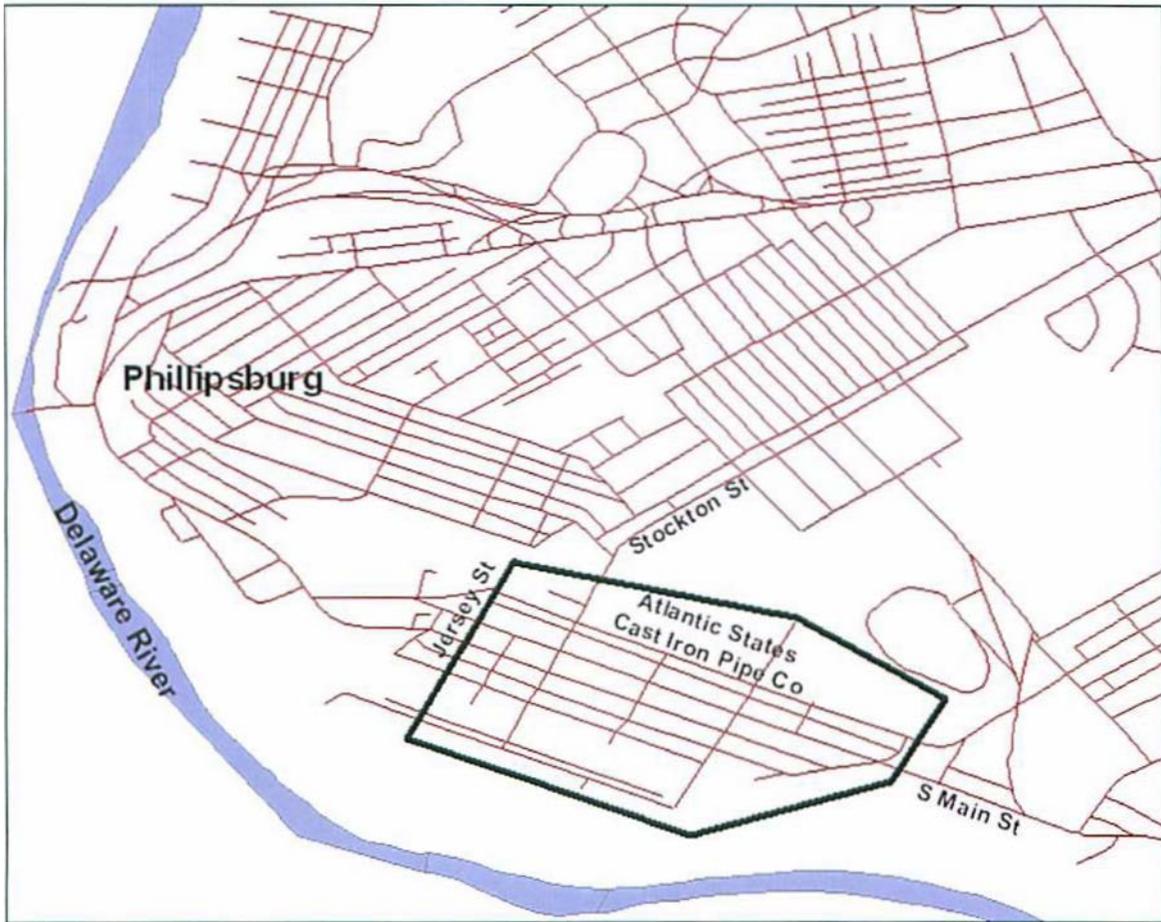
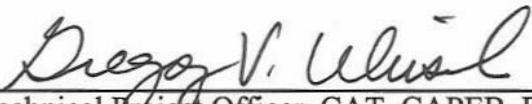


Figure 2. Atlantic States Cast Iron Pipe Childhood Blood-lead Survey Area.

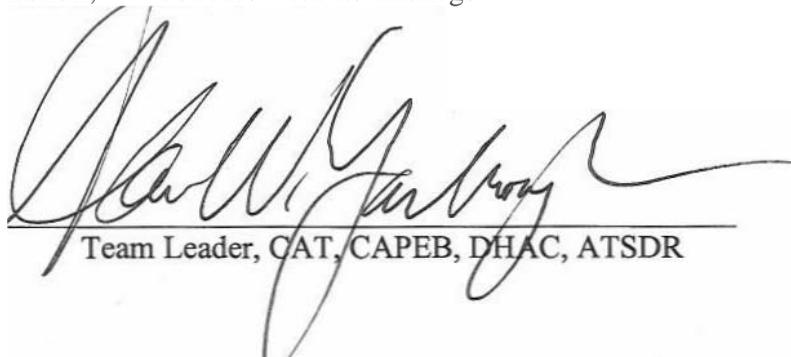


CERTIFICATION

The letter health consultation for the Atlantic States Cast Iron Pipe Company (Evaluation of Childhood Blood Lead Data) site was prepared by the New Jersey Department of Health and Senior Services under a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). It is in accordance with approved methodology and procedures existing at the time the health consultation was initiated. Editorial review was completed by the cooperative agreement partner.


Technical Project Officer, CAT, CAPEB, DHAC

The Division of Health Assessment and Consultation (DHAC), ATSDR, has reviewed this health consultation, concurs with its findings.


Team Leader, CAT, CAPEB, DHAC, ATSDR