



DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Agency for Toxic Substances and Disease Registry  
Region 3  
1650 Arch Street, 3HS00  
Philadelphia, PA 19103

Gregory Ham  
On-Scene Coordinator  
U.S. Environmental Protection Agency (EPA)  
Region 3  
1650 Arch Street, 3HS00  
Philadelphia, PA 19103

May 16, 2013

Dear Mr. Ham,

On 3/29/2013, you contacted ATSDR Region 3 requesting ATSDR's conclusions based on the clearance sampling completed by EPA's contractor at the Crowson Avenue residence following EPA removal actions. On 4/4/2013, you forwarded for ATSDR review the Trip Report from your contractor. This report included a summary of the removal/clearance activities and sampling performed, including Lumex monitoring data and National Institute of Occupational Safety and Health (NIOSH) method 6009 clearance sampling results for mercury. This letter provides ATSDR's public health evaluation of the clearance sampling results.

**Background**

In September 2012, the Crowson Avenue home owner hired a plumber to complete several tasks. This included removing an old heating system with an expansion tank on the second floor of the home. The system contained elemental mercury, which was released during the tank removal by the plumber. The tank was later removed from the home by the Maryland Department of Environment (MDE) in September. The family, which includes a breastfeeding newborn, was not living at the home during renovations, and as of April 2013 remained voluntarily relocated.

On 01/04/2013, EPA initiated a removal assessment. On 01/07/2013, you contacted ATSDR R3 requesting a review of mercury vapor monitor readings and recommendations for addressing the mercury contamination at the residence to protect the health of the residents. On 01/10/2013, ATSDR provided you with a technical assistance document, which (1) concluded the Crowson Avenue residence mercury air monitoring results were a public health hazard for building occupants and/or visitors, (2) concurred with the current re-location of the residents, and (3) recommended mercury mitigation at the residence prior to re-occupancy of the home.

In January and February, 2013, EPA removed elemental mercury and mercury contaminated items, including clothing, furniture and structural materials (e.g. flooring and subflooring) from the home. On

2/21/2013, the EPA contractor conducted clearance air sampling for mercury vapor following the approved NIOSH method 6009. Samples were collected for approximately 6.5 hours each in separate rooms (living room, kitchen, basement, bedrooms, closet where release occurred, and from the third floor of the home). The results ranged from 0.19 to 0.52  $\mu\text{g}/\text{m}^3$ , all below 1 microgram per cubic meter ( $\mu\text{g}/\text{m}^3$ ), the action level recommended in the Chemical-Specific Health Consultation for Joint EPA/ATSDR National Mercury Cleanup Policy Workgroup – Action Levels for Elemental Mercury Spills Document, released on March 22, 2012.

### **Discussion**

ATSDR reviewed the EPA Superfund Technical Assistance and Response Team (START) contractor's Trip Report which provided a summary of the site background, EPA cleanup and air monitoring activities, and the Lumex and NIOSH method 6009 clearance sampling results for the Crowson Avenue mercury site. ATSDR noted the results from both the Lumex monitor and the NIOSH method sampling were comparable and all less than 1 microgram per cubic meter in breathing zones in each of the rooms assessed. This included the room where the spill occurred. The ambient room temperatures were maintained at the high end of normal room temperature and each room was sealed during sampling, except to access the areas for ongoing monitoring of the sampling apparatus.

### **Conclusion**

Based on the trip report and analytical results provided, ATSDR concludes that mercury cleanup activities have reduced airborne mercury concentrations and subsequent exposures to below levels of public health concern. Chronic and acute exposures to mercury at the maximum level detected are not expected to be of health concern for adults, children, or breastfeeding newborns.

If you have any additional questions, feel free to contact me.

Sincerely,



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