



Site Assessment Fact Sheet

American Street Tannery Site & Liberty Lands Community Park
Northern Liberties; Philadelphia, Pennsylvania

June 2007

EPA's Removal Program Responded to Community Request for Assistance

EPA conducted environmental sampling in December 2006 and January 2007. The samples were collected to respond to allegations that potentially contaminated soil was mismanaged during a local redevelopment project and may have spread contaminants throughout the community, including a nearby community garden and playground. The suspect redevelopment activities were conducted at the former American Street Tannery (AST) Site where the Liberty Walk 2 apartment and commercial complex now stands.

Because the AST Site was redeveloped under the Pennsylvania Land Recycling and Environmental Remediation Standards Act of 1995 (aka Pennsylvania Act 2), EPA, its contractor, and the Pennsylvania Departments of Environmental Protection and Health (PADEP and PADOH, respectively) met to review existing records of previous cleanup and investigatory actions (See Time Line of Activities), and EPA determined that additional limited sampling was justified to assess the current status of the areas in question. The sampling EPA subsequently conducted focused on the properties adjacent to the redevelopment project and on the Liberty Lands Community Park. EPA did not assess the area occupied by the Liberty Walk shops and apartments.

EPA requested and received guidance from PADOH and the Agency for Toxic Substances and Disease Registry (ATSDR) for developing its sampling plan. The guidance ensured that the data collected would be adequate to support the health consult that EPA and a citizen's petition requested from PADOH and ATSDR. On December 19, 2006, EPA and its contractors collected 26 samples of surface and subsurface soils, soil gas, groundwater, and sump water and shipped them to a laboratory for analysis. Three field duplicates, a trip blank, and a sample of investigation-derived waste (IDW) were also sent to the lab. Field duplicates and trip blanks are used to help verify the accuracy of the laboratory analyses of samples. The IDW sample is used to characterize waste materials resulting from the field work so that they may be properly disposed.

On January 16, 2007, EPA and its contractors revisited the site to collect replacement samples for some of the samples collected in December which had exceeded the acceptable temperature limit for volatile organics before the laboratory was able to process them. EPA directed the lab to discard the too-warm samples and, in January, collected four subsurface soil samples; three groundwater samples; one sump water sample; one trip blank; and two field duplicates (1 soil; 1 groundwater) to replace those that were discarded, and one IDW sample and sent them to the laboratory

Multi-media Environmental Samples Were Collected

EPA collected 15 surface soil samples, four of which were five-point composite samples collected from Liberty Lands Community Park. Composite samples are collected from an area roughly 4-6 feet square. Soil is scooped from each corner of the square and from the center. Then the soil is blended and sampled as though it were a single sample. This method approximates the exposure a child might actually have when rolling or falling in the dirt. The composites were collected in areas that exhibited the most wear from park users' activities, such as under the swings and in the semi-bare areas at the center of the park and at the park entry. Surface soil was analyzed for semi-volatile organics (SVOCs), pesticides, PCBs, Target Analyte List (TAL) metals, and cyanide.

Four subsurface soil samples were collected from three borings that extended to depths of 20 feet below surface. The samples were analyzed for 52 Target Compound List (TCL) volatile organic compounds (VOCs). Groundwater was collected using temporary wells installed in the three soil borings. It was analyzed for TCL VOCs. Nine 40-milliliter vials of sump water were collected from the only sump containing water during EPA's visits. The sample was analyzed for VOCs to determine whether groundwater seepage may carry VOCs into homes. Three soil gas samples were collected. Soil gas readings are used to determine whether indoor air samples should be taken. Under certain circumstances, VOCs in soil may enter homes through cracks or other openings in building foundations.

Some Samples Exceeded PADEP and EPA Guidance Concentrations

Surface soil and soil gas samples exceeded some state and EPA Region 3 guidance concentration levels. Subsurface soil samples, groundwater, and sump water did not exceed guidance concentrations.

Surface soil analyses were compared to PADEP direct soil contact Media-Specific Concentrations (MSCs) and EPA Region 3 Risk-Based Concentrations (RBCs) for residential soil. Lead, arsenic, chromium, and benzo(a)pyrene concentrations exceeded PADEP MSCs for direct soil contact in one or more of the samples. SVOCs (specifically polycyclic aromatic hydrocarbons – aka PAHs) and several metals exceeded EPA RBCs for residential soil.

Ethanol, isopropyl alcohol and acetone were detected in the soil gas samples. However, these compounds were not found in elevated levels in subsurface soil or groundwater. So, it is suspected the soil gas readings reflect the collection equipment cleaning compounds and not environmental contamination. Tetrachloroethene (PCE) was detected at 16.3 micrograms/cubic meter, which exceeds the EPA Region 3 target sub-slab soil gas concentration of 3.1 micrograms/cubic liter. However, the samples collected were not sub-slab samples. PCE was not detected in subsurface soil or groundwater samples.

Guidance Concentrations Don't Equal Risk

MSCs and RBCs are guidance concentrations intended to signal regulatory investigators to take a closer look at any compounds that exceed the established numbers to see if an actual risk to human health or the environment is present. The presence of risk must be analyzed in comparison to actual conditions that are present at a specific site. The concentrations of specific contaminants that are present in the environment are not the only factors for determining health risk. Other site-specifics that must be considered include whether and how humans and contaminants can come into contact with each other; the manner in which contaminants may enter the body upon contact; and the duration of time humans and contaminants are likely to remain in contact. While EPA is charged with determining if a site poses a potential risk to human health or the environment, the Agency relies on health agencies, such as PADOH and ATSDR to determine whether an actual risk is posed to human health.

Conclusions

PADOH and ATSDR completed a Health Consult for the American Street Tannery site and a public comment period is now open. The Consult concluded that Liberty Lands Community Park does not pose a health risk to residents who regularly visit the park nor do soils at the vacant lot of the AST Site pose a health threat. The Consult suggested that additional data is needed to rule out the possibility of soil vapor intrusion into homes, although the potential was found to be unlikely.

Next Steps

EPA met with residents nearest to the AST Site and will schedule indoor air sampling later this summer. Indoor air sampling requires that all sources of VOCs be removed from residences before sampling can occur in order to ensure that only intrusive vapors will be captured. Some common sources of VOCs found in peoples' homes include paint; household cleaning products; furniture and shoe polish; recently dry-cleaned clothing, upholstery and drapes; small gas-fueled tools, such as weed whackers; motorized vehicles; some cosmetics, and some art supplies, including markers.

For More Information about EPA's investigation or to See the Health Consult

Visit our website at: www.epaosc.net/americanstreettannery

For Information about EPA's Site Investigation Contact

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