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# EPA Responds to Questions About Summer Park Cleanup

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## W.C. Reed Playfields Site

Cleveland, Ohio

April 2014

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### For more information

You may contact these EPA team members for questions, comments or more information about the cleanup at the W.C. Reed Playfield site:

*For general questions:*

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Community Involvement  
Coordinator

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*For technical questions:*

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On-Scene Coordinator

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Or you may visit:

[epa.gov/region5/cleanup/wcreed](http://epa.gov/region5/cleanup/wcreed)

You may call EPA toll-free at  
800-621-8431, weekdays from  
9:30 a.m. – 5:30 p.m.

U.S. EPA  
Superfund Division (SI-7J)  
77 W. Jackson Blvd.  
Chicago, IL 60604

EPA also has a field office at  
25063 Center Ridge Road in  
Westlake.

EPA expects to begin a \$3 million cleanup in mid-June at W.C. Reed Playfields, a 12-acre Cleveland city park in a residential area at the intersection of West 15<sup>th</sup> Street and Denison Avenue. The city should be able to reopen the park once the three-month cleanup is complete.

Area residents and others interested in the project have raised many important questions about the contamination on the playfield, the impact of contamination on adjacent properties and the cleanup plan. Here are the U.S. Environmental Protection Agency's answers to the most frequently asked questions.

**Why is EPA cleaning up the W.C. Reed Playfield?** The city closed the playfield in December 2012 after soil tests showed high concentrations of chemicals called polycyclic aromatic hydrocarbons, better known as PAHs, in the soil. City officials contacted the EPA for assistance. EPA officials consulted with Ohio EPA and the federal Agency for Toxic Substances and Disease Registry, and all agreed a cleanup was needed so children could use the playfield again.

**What are PAHs? Do they cause cancer?** PAHs are found naturally in the environment but they can also be man-made. Some artificial PAHs are used to make dyes, plastics and pesticides. PAHs are created when products like coal, oil, gas and garbage are burned but the burning process is not complete. EPA has no information from studies on people to tell what effects can result from being exposed to PAHs. However, the Department of Health and Human Services has determined that some PAHs may cause cancer.



*U.S. EPA  
personnel  
collect soil  
samples from  
the W.C. Reed  
Playfield.*

**Where can I get more information about PAHs?**

Contact Ohio EPA or Ohio Department of Health, or visit:

[www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=25](http://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=25)

[www.atsdr.cdc.gov/toxfaqs/tf.asp?id=121&tid=25#](http://www.atsdr.cdc.gov/toxfaqs/tf.asp?id=121&tid=25#)

[www.epa.gov/wastes/hazard/wastemin/minimize/factsheets/pahs.pdf](http://www.epa.gov/wastes/hazard/wastemin/minimize/factsheets/pahs.pdf)

**How long has the city known about the PAH contamination?**

Since December 2012 when testing was done as part of planned upgrades to the playfield. The city closed the playfield and EPA began evaluating the site.

**Why is W.C. Reed Playfield being cleaned up as opposed to other city parks which some believe may be more contaminated?**

The EPA became involved with the W.C. Reed Playfield project because the city asked for assistance. The EPA is not aware of any other potentially contaminated city parks. However, if you have information about contamination at other parks, you should contact the Cleveland Health Department.

**What caused the PAH contamination at the playfield?**

The EPA's review of the playfield's history shows a ravine – about 60 feet deep – ran through the middle of what is now the W.C. Reed Playfield. This ravine was filled in, possibly with industrial debris, in the early part of the 1900s. Samples taken below the surface of the playfield show there is slag/cinder material below ground. That could explain the high levels of PAHs.

**Is the PAH contamination instead caused by air emissions from industry?**

No. Although industry emissions are a source of PAHs in the Cleveland area, soil samples from residential properties around the playfield have not shown widespread PAH soil contamination in concentrations greater than Ohio EPA's standards. In addition, soil test results within the playfield boundaries and surrounding properties indicate the PAHs are mostly below the surface. Some of the samples from deeper underground actually show higher concentrations of PAHs. This suggests air emissions are not the primary source of PAHs.

**Has the concentration of PAHs on the playfield increased or decreased over time?**

There's really no way to determine that. Neither EPA nor city officials know of any soil testing done on the playfield before December 2012. Without analytical data prior to that date, we can't make a comparison.

**How will the playfield be cleaned up?**

Digging up and removing all the fill material from the former ravine would be prohibitively expensive and disruptive to the community. So EPA plans to leave the contaminated soil where it is and cover the playfield with a barrier known as a "cap." EPA will install a semi-permeable membrane over the entire playfield, and cover it with 18 inches of silty clay and six inches of topsoil. This will keep people from touching any contaminated soil and prevent contaminants from moving up through the soil. The cap will allow residents to use the park safely for recreation.

**Why not excavate the PAH-contaminated soil as opposed to capping the playfield?**

The EPA's review of soil samples shows the PAH concentration is greater the farther down you dig. Given the ravine footprint on the playfield and how deep it was, the removal of PAH-contaminated soil is cost-prohibitive under the current federal budget. Removal would also be even more disruptive to the school and surrounding community.

**So there will be no excavation on the playfield?**

We'll need to do some digging on the playfield to properly install the cap and make sure it is properly graded. There will also be some over-excavation done in areas where the city plans to install baseball diamond backstops, overhead lighting, playground equipment and new trees. The over-excavation will allow city workers to install the playfield equipment and new trees without being exposed to PAH-contaminated soil.

**Has the EPA installed a similar cap at other sites destined for recreational use?**

Yes. Sites like the W.C Reed Playfield are often well suited for recreational uses – sports fields, hiking trails, parks and playgrounds. Caps are in place at the Ohio River Park in Neville, Pa.; the International Minerals Co. site in Terre Haute, Ind.; the Mill Creek Dump in Erie, Pa.; the Bangor Gas Works in Bangor, Maine; and the Westline site in Westline, Pa. Ohio EPA has approved use of a cap for sites destined for recreational reuse, including the Diamond Shamrock site in Painesville, the Merex site in Cleveland and South High School in Cleveland.

**How long will it take the EPA to clean up the playfield?** We plan to start in early June, and expect to be finished by the end of August. Once the cleanup is done, the Cleveland Parks and Recreation Department will begin its previously planned renovations.

**How does the EPA plan to address nuisance dust associated with the cleanup of the playfield?** During the project, EPA will monitor the air at five points along the playfield's perimeter for nuisance dust. If monitors show too much dust, or if there is visible dust, then the cleanup contractor will take steps to suppress the dust. EPA will also collect perimeter air samples to be sure PAH-contaminated dust is not drifting away from the playfield during the cleanup.

**Why is the EPA not relying on phytoremediation or similar measures?** In order for phytoremediation to work properly, the entire affected area needs to be covered with vegetation that effectively promotes phytoremediation, which it is not. Also, it could take years to make the playfield available for public use again. The EPA has also ruled out measures such as soil washing or thermal and chemical destruction of PAHs in the soil. Those methods are too expensive and take too long to consider for large areas.

**Can the playfield be left as it is and allow the PAHs to naturally degrade?** No. PAHs often degrade naturally in the soil. However, even after 60 years, the PAH concentrations at the playfield are still above Ohio EPA's standards.

**Will all of the trees be removed?** After consulting an arborist from the Ohio Department of Natural Resources and commercial tree management companies, the EPA has determined that most of the trees must be removed so we can properly install the cap. The EPA has identified about a dozen swamp white oak trees for preservation. These trees will be professionally pruned and fertilized before the cleanup begins to give them the best chance of survival.

**Was a tree census conducted by a qualified tree expert?** Yes. A forester from ODNR's Division of Forestry conducted a census of the playfield trees Sept. 25, 2013. You can see a copy of the census by visiting: [www.epaosc.org/site/region\\_list.aspx?region=5](http://www.epaosc.org/site/region_list.aspx?region=5)

**What measures have been taken to prevent runoff onto adjacent properties after the cap is installed?** EPA is developing a stormwater management plan to

keep surface runoff from the playfield from flooding adjacent properties. This includes proper grading and "green" stormwater infrastructure options, such as drainage swales and rain gardens.

**Where will the trucks come in and out of the playfield? I'm concerned about heavy truck traffic on residential streets.** The EPA will use an existing entrance to the playfield, near the intersection of West 15<sup>th</sup> Street and Denison Avenue, as the truck route. With the exception of some truck traffic necessary to remove contaminated soil from adjacent residential properties, the EPA will not use residential streets to move either contaminated soil or clean backfill material.

**What happens over time when the barrier material and/or overlying soil cover erodes?** The EPA is preparing an operations and maintenance plan for the city's Parks and Recreation Department, detailing what must be done to maintain the barrier, overlying soil and vegetative cover, and tree wells. When the plan is approved by EPA and the city, you will be able to see it at: [www.epaosc.org/site/region\\_list.aspx?region=5](http://www.epaosc.org/site/region_list.aspx?region=5).

**Will the EPA sample properties adjacent to the playfield or within the original ravine footprint to determine if they are contaminated?** We collected soil samples in December 2013 from 35 parcels adjacent to the playfield or within the historic limits of the ravine. We are seeking permission to collect soil samples from the remaining parcels within this target area, and we hope to take samples there in April or May.

**How many properties were found to be contaminated and will need to be cleaned up?** The EPA mailed letters Feb. 27 to inform property owners of the soil sample results. As of mid-March, we have found 23 parcels with PAH concentrations greater than the Ohio EPA's residential standards. The EPA will discuss cleanup options with parcel owners in April.

**Is the contamination found on adjacent properties related to that in the playfield soils?** EPA conducted PAH fingerprint analysis of some samples collected in December 2013. While some results are pending, preliminary results show a probable match.

**What cleanup option is available to property owners?** The EPA will discuss specific cleanup details with each property owner. Generally, the EPA will dig up and remove up to two feet of contaminated soil at affected off-site parcels, and replace it with 18 inches of

silty clay fill material followed by six inches of topsoil.

**Who will pay for the cleanup of PAH-contaminated soil on adjacent properties?** The EPA will pay for the cleanup of PAH-contaminated soil on any properties adjacent to the playfield or within the historical footprint of the ravine.

**Residents of the Foster Pointe apartments adjacent to the playfield have smelled sewer gas odors, which have affected their health. Is this related to the PAH**

**contamination found in the playfield?** The EPA does not believe there is a relationship because the playfield contaminants do not readily evaporate and disperse as a gas. City officials have told EPA that during construction of the apartment complex, contaminated soil was removed and clean fill was placed on the site to reach final construction grade. EPA and city officials believe the sewer gas odors in the apartment complex may be related to improper installation of water traps in sanitary drains. City officials will work with residents and the apartment complex owner to determine if the traps are properly in place.



*U.S. EPA will spend approximately \$3 million this summer and fall on a cleanup project to contain hazardous chemicals just below the surface of the W.C. Reed Playfields.*