

Air Monitoring Program BoRit Site

Kristine Matzko, EPA
BoRit CAG Meeting

Activity Based Sampling

- Purpose of activity based sampling
- Describe the sampling method
- Explain the sampling program
- Summary of results

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Why EPA perform ABS

- Standard method for asbestos testing
- Follows EPA's Asbestos Framework
 - EPA's guidance on asbestos
- Results used for human health assessment
- Evaluates inhalation of asbestos fibers

What is ABS?

- Sampling method for asbestos
- Sampling crew performs an activity
 - raking, digging, hiking, mowing
 - Disturbs soil to capture any release of asbestos in air
- Collects air sample from monitors worn on their suits
- Samples collected at a child height and adult height (2 samples per sample)

ABS Sampler



ABS locations

- ABS performed at the BoRit site
 - Park
 - Pile
 - Reservoir

ABS performed in off-site locations

- Residential yards
- Trail along the Wissahickon Creek

ABS at BoRit site

- Asbestos Pile
 - 3 locations
 - top of the Pile; area Removal had not covered
 - Based on levels of asbestos in soil
- Reservoir
 - 1 location
 - Based on plan for observation platform
- Park
 - 6 locations
 - Based on levels of asbestos in soil
 - Along perimeter of park

ABS at Off site properties

- Residential yards – 8 locations
 - 3 in the Mercer Hill neighborhood
 - 5 in the West Ambler neighborhood along Maple Street
 - Both sides of the site
- Trail along Wissahickon Creek - 2 locations
 - walking trail
 - Both sides of creek

Sampling Conditions

- Dry weather
- Little or no rain
- Low soil moisture

Activities for ABS

- Four activities
 - Raking – BoRit site and yards
 - Hiking – along trail
 - Digging - reservoir
 - Mowing – along trail

Raking Activity

- Raking
 - the actor used a rake disturb the top of soil
 - Raking for 2 hours
 - 10 by 10 foot area

Raking ABS at Pile



Digging Activity

- Digging
 - the Reservoir parcel
 - 2 hours shoveling to remove soil
 - Dug a hole and then filled it

Hiking activity

- Hiking
 - Hiking along the trail
 - East side of Wissahickon Creek
 - 2 hours hiking along trail
 - Walked back and forth along part of trail

Mowing Activity

- Mowing
 - along the Green Ribbon Trail
 - west of Wissachickon Creek
 - 2 hours of mowing
 - the actor operated a gas-powered walk-behind lawn mower
 - the actor mowed a 10 by 30 foot area

- Compare Results to Screening Value
 - 0.04 fibers/cubic centimeter (f/cc)
 - Worked with EPA's risk assessor to develop screening value
 - Following EPA's Asbestos Framework

Results from ABS program

Location	Number of Samples	Screening value (0.04 f/cc)	Results	Detections
Pile	6	6 above	0.04 – 0.13 f/cc	
Park	12	7 above	0.04- 0.2 f/cc	
Reservoir	2	No detection	No detection	
Yards	16	All below	0.0004-0.0094 f/cc	6 detections
Trail – mowing	2	Below	0.0008 f/cc	1 detection
Trail -hiking	2	No detection	No detection	

Summary

- ABS performed at 20 locations
 - 10 site and 10 off-site
- at BoRit site, residential yards, and trail
- Four activities – raking, hiking, digging, mowing
- Compare to screening value
- EPA will evaluate air data further
 - ABS results and ambient air results use in health assessment for complete evaluation

Summary

- ABS results at Pile and Park
 - show risk; exceed screening value
 - maintenance worker
- Residential yards
 - No results above screening value
- Child or adult resident
 - no unacceptable risks
 - Activity like raking

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