

PAH Update

Brownfield Study Group Meeting

October 7, 2016



Moving Parts:

- PAH Reassessment with DHS
- PAH Site Specific Risk Assessment Template
- PAH Background Study
- New Staff at DNR

What makes PAHs different than other contaminants?

PAHs occur in soils as complex mixtures of compounds:

- Exposure is always to mixtures
- PAHs that are currently regulated share similar mechanism of carcinogenic action

PAHs may be evaluating using the cumulative 10^{-5} cancer risk threshold:

- Individual compound criteria (10^{-6} threshold) does not reflect practical exposure scenarios or toxicological mechanisms

What makes PAHs different than other contaminants ?

Bioavailability of PAHs via ingestion pathway is not 100%:

- PAHs must be disassociated from soil matrix to which they are bound (i.e., bioaccessibility)
- Of this bioaccessible fraction, only a percentage of toxicants enters the bloodstream and are available for metabolic processes (i.e., physiological/toxicological bioavailability)

Scientific literature supports reducing relative bioavailability factor (RBF):

- PAH specific
- Reasonable and sufficiently conservative for a broadly applied risk assessment exposure variable
- Other highly conservative exposure assumptions in NR 720.12(3) remain

Under Evaluation

- Assess carcinogenic PAH using 10^{-5} cumulative risk and not individual compound 10^{-6} risk
- Reduce RBF for PAHs

PAH Site Specific Risk Assessment

- Develop template for assessing site specific exposure factors.
- Include basic criteria for exposure assumptions.
- Provide documentation for basis of decisions.
- Provide guidance to ensure consistency in decision making.

PAH Background Study

- Moving forward – Slow but sure
- Working with UW-Extension
- Plan to collect 300 samples from Milwaukee County Park sites
- Working with Milwaukee County to secure access and for coordination
- Laboratory selection = next step

New Staff at DNR

- Currently recruiting for Waste Management Specialist – Advanced.
- Advertisement open through October 11th.
- Additional staff person will lead several of the new initiatives and support PAH and Soil Management workload