

Relevance of Soil Sampling in Site Screening Level Assessments for PFOA

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ASH026750

EXP015811

Discussion Topics

- Review soil sampling key learning's
- Present site screening level assessment conceptual model

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Messages For Today

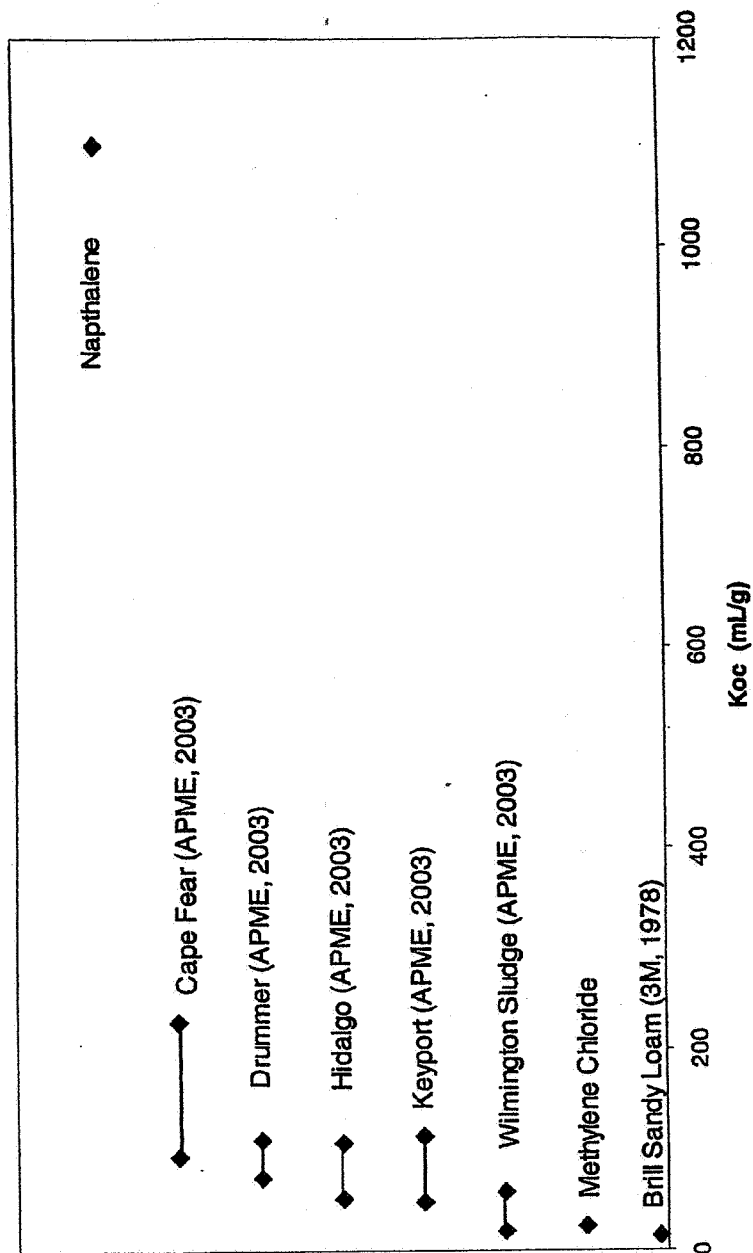
- Soil sampling is not critical to site screening level assessments designed to evaluate overall human and environmental exposure at a PFOA use facility.
- Water monitoring should focus on site boundaries, key discharge points, or where potential exposure is occurring.

PFOA P/C Characteristics

- PFOA displays high water solubility
 - 1000 mg/L (Kissa, 1994)
 - >10% (3M, 2001)
- PFOA displays low adsorption capacity in all soil types (3M & APME Studies)
 - Similar to other highly mobile chemicals (see Koc chart)

Koc Comparison

Comparison of Koc's for PFOA and Other Chemicals



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Soil Sampling Key Learning's

- Our extensive soil sampling database from Washington Works shows:
 - Overall low concentrations, won't build-up
 - Air deposited PFOA readily dissolves and migrates via water movement (sw/gw)
 - Most surface soils <50 ug/kg
 - All results significantly below CATT screening level of 240,000 ug/kg

Site Screening Level Assessment Conceptual Model

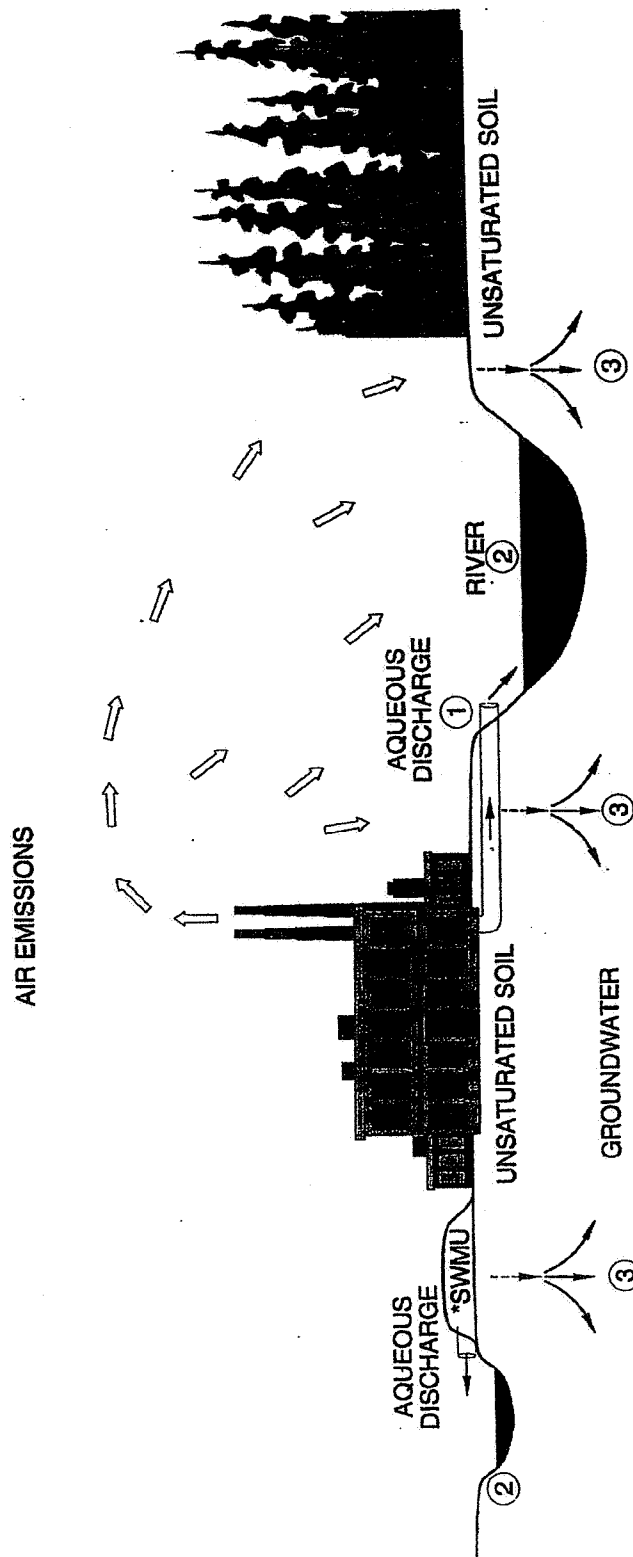
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PFOA Site Screening Level Assessment Conceptual Model

- Compiled using extensive modeling and monitoring conducted at Washington Works
- Considers realistic potential exposure points to focus screening level assessment monitoring
 - Facility water discharges
 - Groundwater at site or discharge boundaries
- Soil is not a key monitoring point

SCREENING LEVEL ASSESSMENT MODEL



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POTENTIAL SCREENING LEVEL ASSESSMENT MONITORING POINTS

- ① FACILITY AQUEOUS DISCHARGE (OUTFALLS)
- ② SURFACE WATER (RIVERS, PONDS, STREAMS ETC.)
- ③ GROUNDWATER (MONITORING WELLS, PRODUCTION WELLS ETC.)

*SWMU = SOLID WASTE MANAGEMENT UNIT