

# **Science Advisory Board Consultation**

## **Proposed Approach for Developing Lead Dust Hazard Standards for Residences**

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# Background

- TSCA section 403 directs EPA to promulgate regulations to identify dangerous levels of lead in paint, dust, and soil
- In 2001, EPA established hazard standards for lead dust in residences
  - based on blood lead of 10  $\mu\text{g}/\text{dL}$  in children
  - 40  $\mu\text{g}/\text{ft}^2$  on floors and 250  $\mu\text{g}/\text{ft}^2$  on window sills
- August, 2009 EPA received petition to lower the hazard standard
- October, 2009 EPA agreed to re-examine the hazard standard, but did not commit to an outcome

# **Problem Formulation**

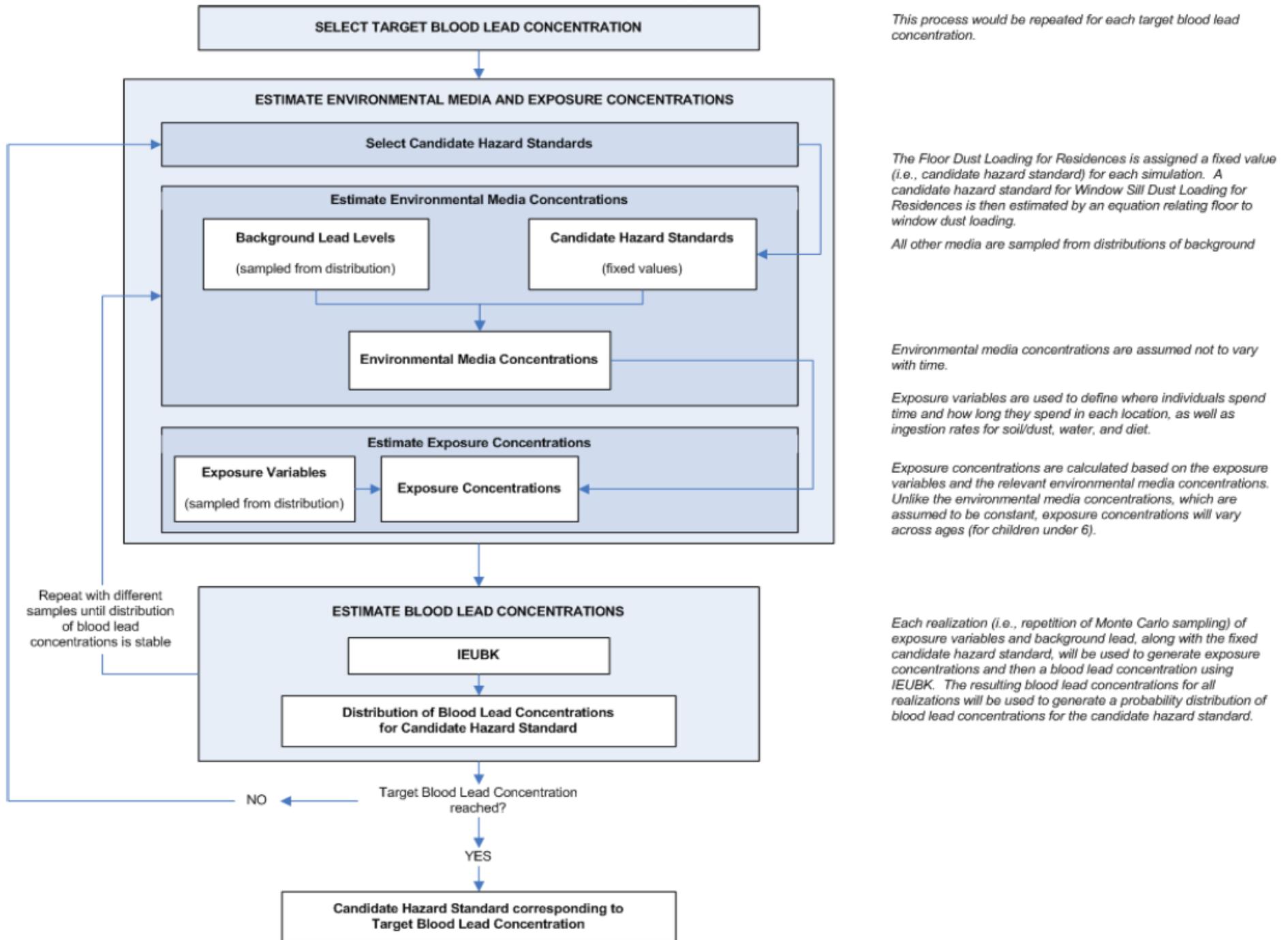
## **What is the Question?**

What concentration of surface lead dust can remain on the window sills and floors of a residence such that exposure to the lead dust does not result in blood lead levels higher than a specified level in children?

# Proposed Approach

- Three major steps:
  - Select target blood lead concentration
    - In 2001, EPA set the blood lead level at 10  $\mu\text{g}/\text{dL}$
    - This proposed approach will set it at 1, 2.5, and 5  $\mu\text{g}/\text{dL}$
  - Estimate environmental media and exposure concentrations; and
  - Estimate blood lead concentrations.

**Figure 1-1. Overview of Approach for Developing Hazard Standards for Residences**



# Overview of Charge Questions

- 1) Please comment on the reasonableness of the approach outlined in the draft Approach document
- 2) Please comment on the proposed methods for converting dust loadings to dust concentrations. Please comment on whether the empirical or mechanistic model is preferred. Are there other methods that should be explored?
- 3) Please comment on the proposed method to relate floor dust loadings to window sill dust loadings. Please comment on the discussion of the regression's development. Please comment on how the assumptions regarding compliance with hazard standards are incorporated. Are there other methods that should be explored?

# Overview of Charge Questions

- 4) Please comment on the proposed methods to establish the activity patterns and microenvironments for the blood lead modeling. Are there methods other than CHAD/APEX that should be explored?
- 5) Please comment on the use of the IEUBK model. Please comment on whether other models should be used.