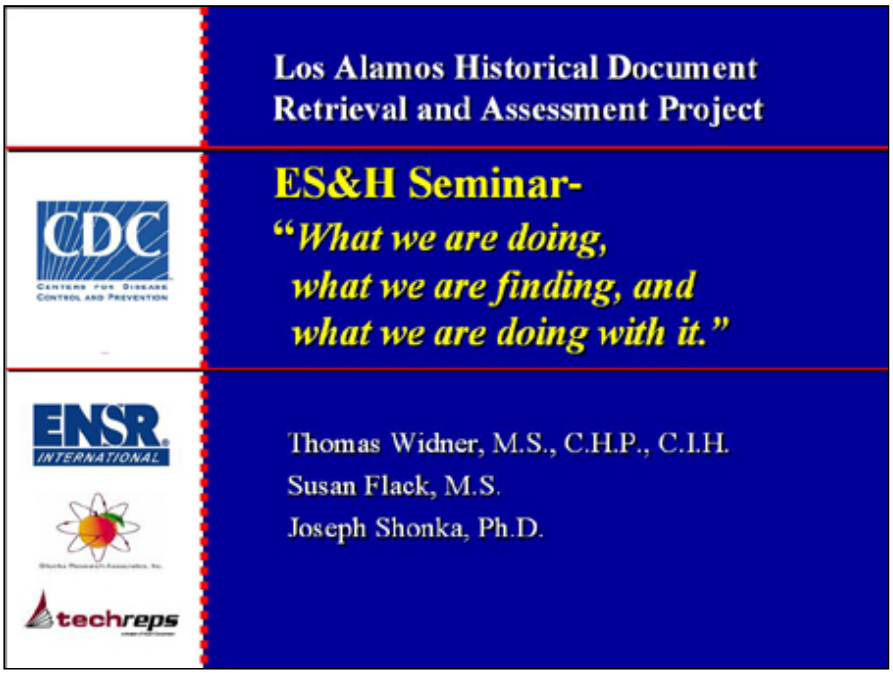
November 28, 2001 Project Seminar

Historical Document

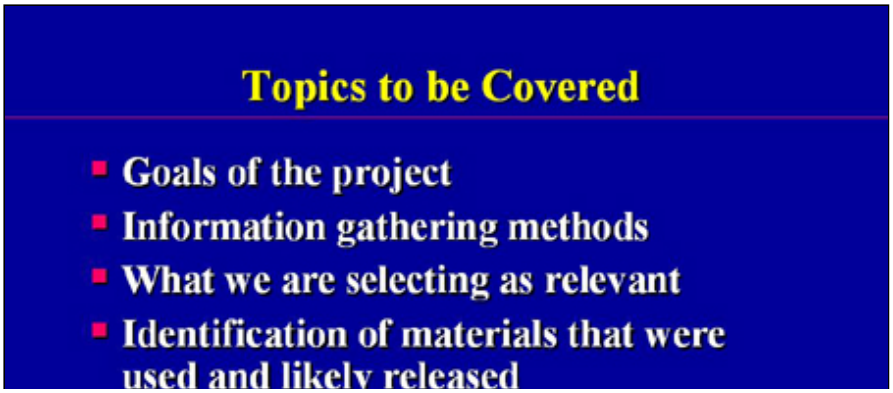
This page is archived for historical purposes and is no longer being maintained or updated.

Project Seminar

Members of the project team gave a seminar to LANL Environment Safety and Health personnel. The seminar covered progress on the project's document reviews, challenges in reconstructing releases of toxic chemicals, methods for collecting and adjusting radionuclide effluent data, methods for estimating early D-Building plutonium releases, and an update on the prioritization of radionuclide releases.



Slide 1 of 24



- Prioritization of past releases
  - Chemicals
  - Radionuclides
- Key areas where we need information

Slide 2 of 24

Dose Reconstruction

is a comprehensive analysis of the exposure received by individuals in the vicinity of facilities that released contaminants to the environment

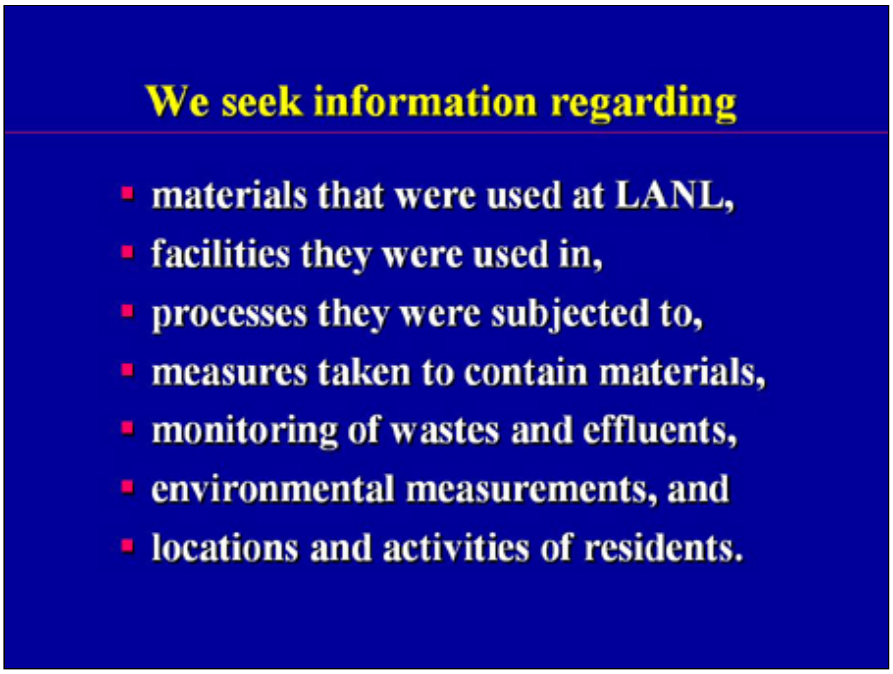
- "real doses to real people."

Slide 3 of 24

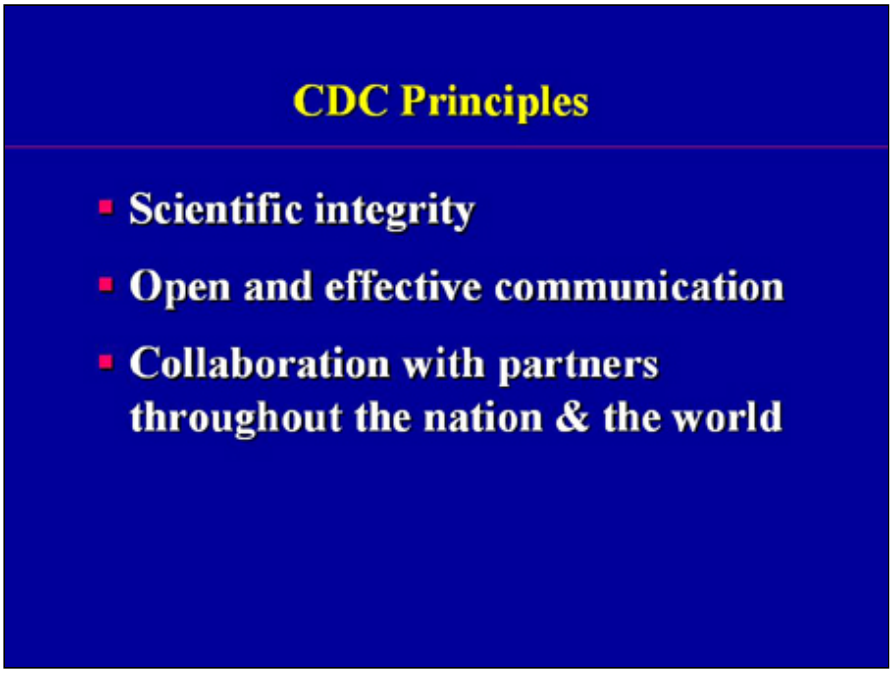
CDC's Phases of Dose Reconstruction

- Retrieval and Assessment of Data
- Initial Source Term Development and Pathway Analysis
- Screening Dose and Exposure Calculations
- Development of Methods for Assessing Environmental Doses
- Calculation of Environmental Exposures, Doses, and Risks

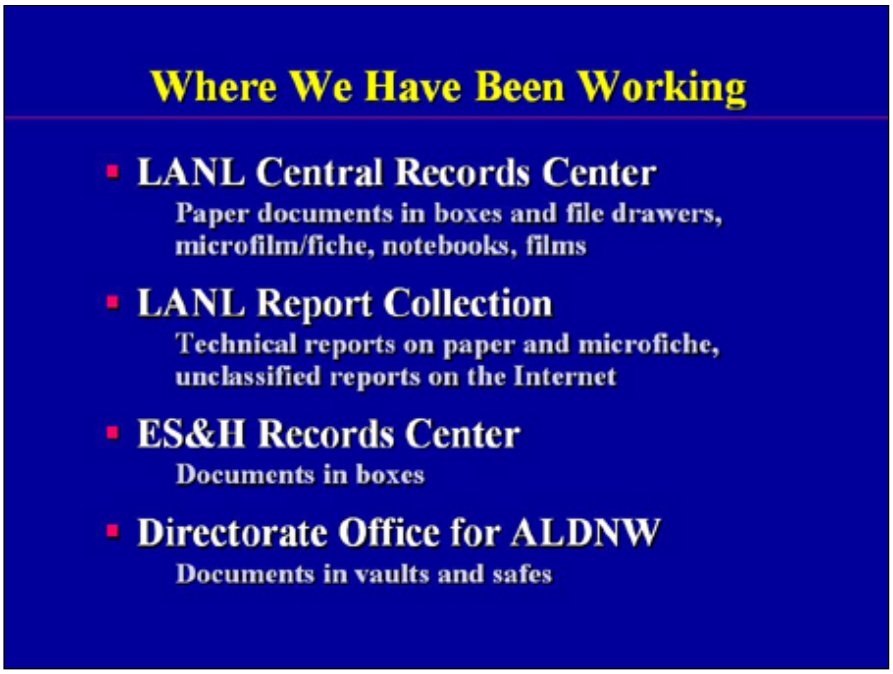
Slide 4 of 24



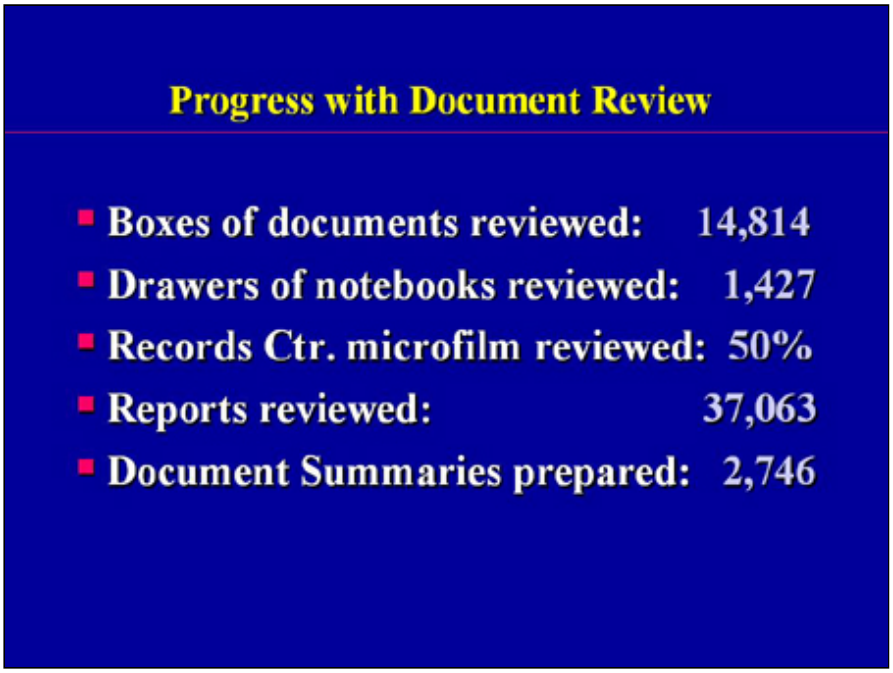
Slide 5 of 24



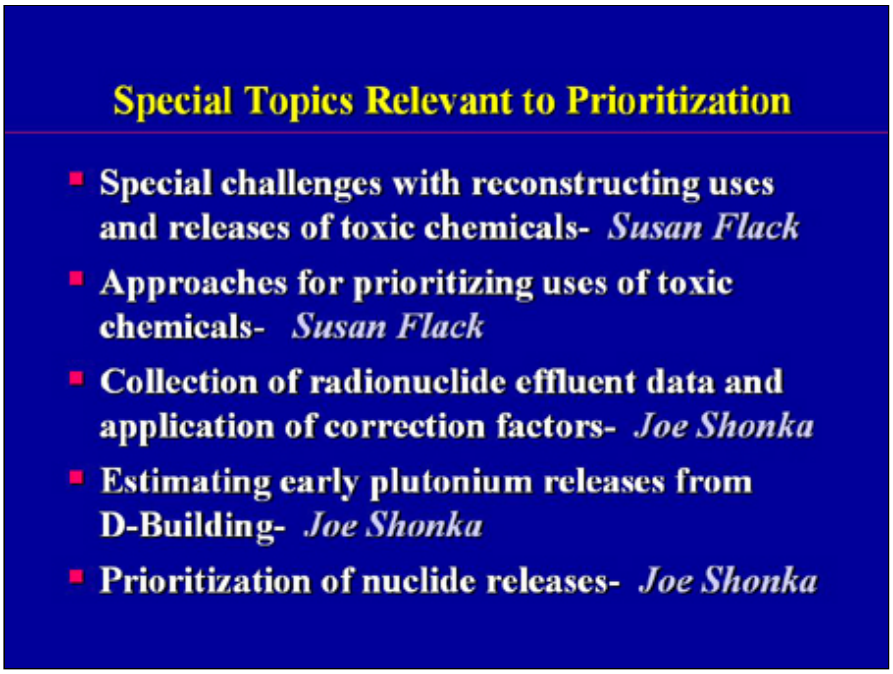
Slide 6 of 24



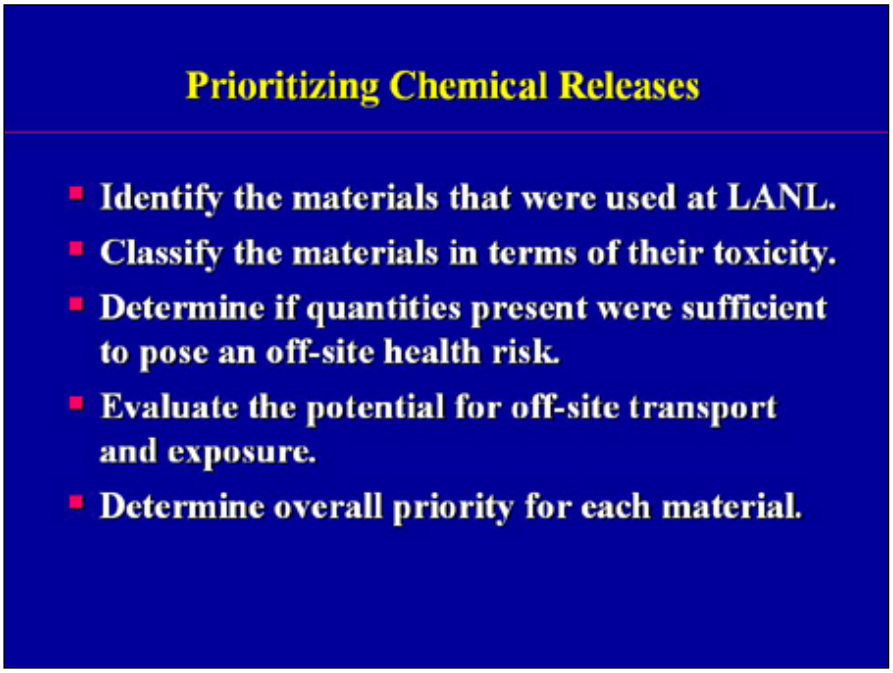
Slide 7 of 24



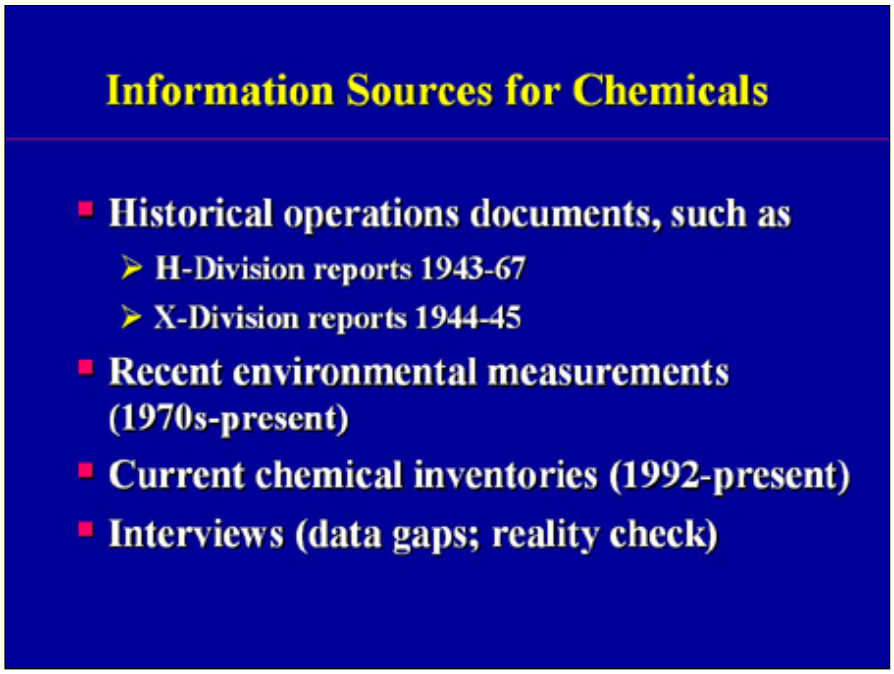
Slide 8 of 24



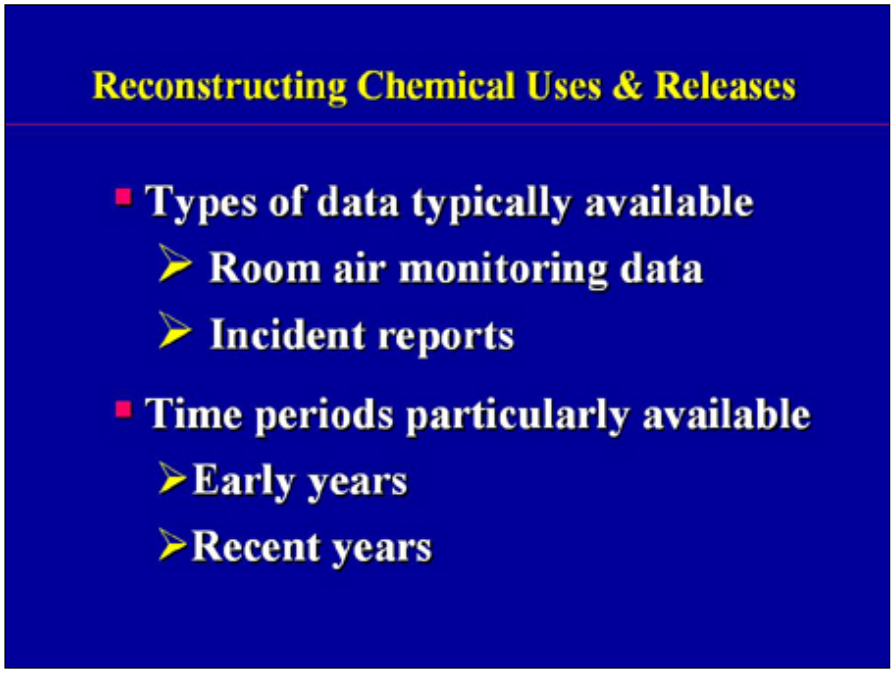
Slide 9 of 24



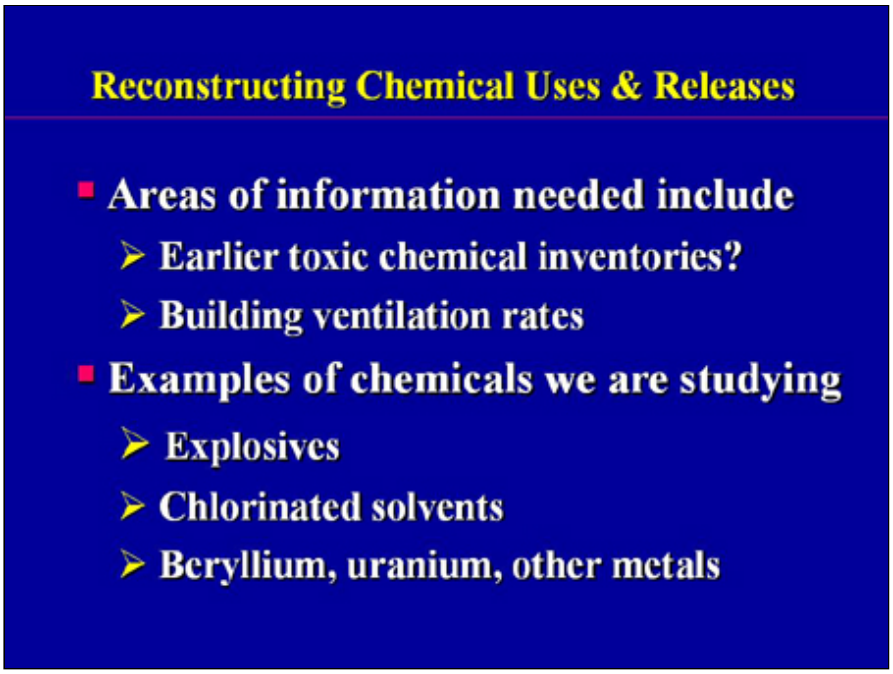
Slide 10 of 24



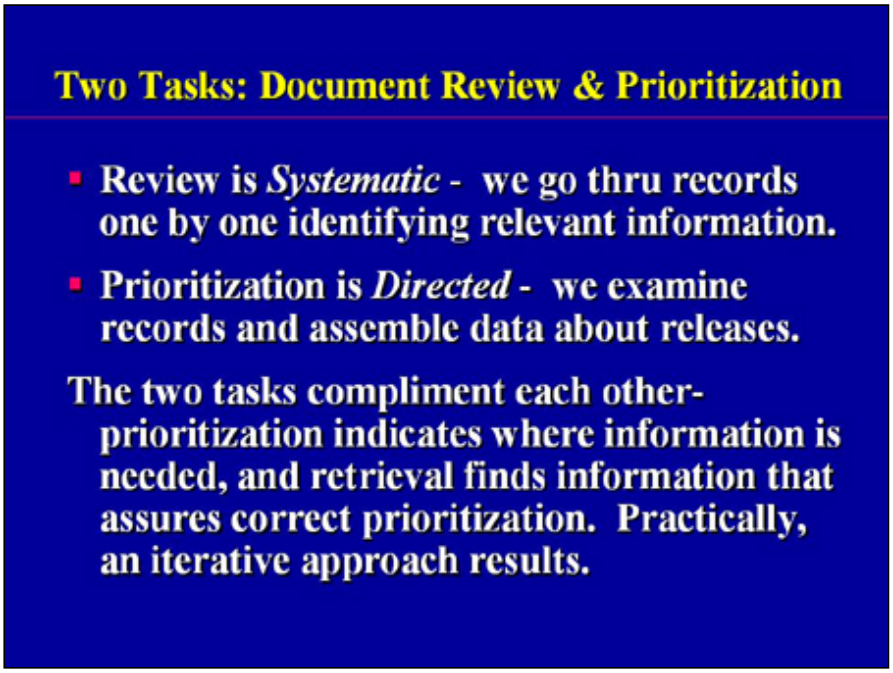
Slide 11 of 24



Slide 12 of 24



Slide 13 of 24



Slide 14 of 24

Prioritization of Radionuclide Releases

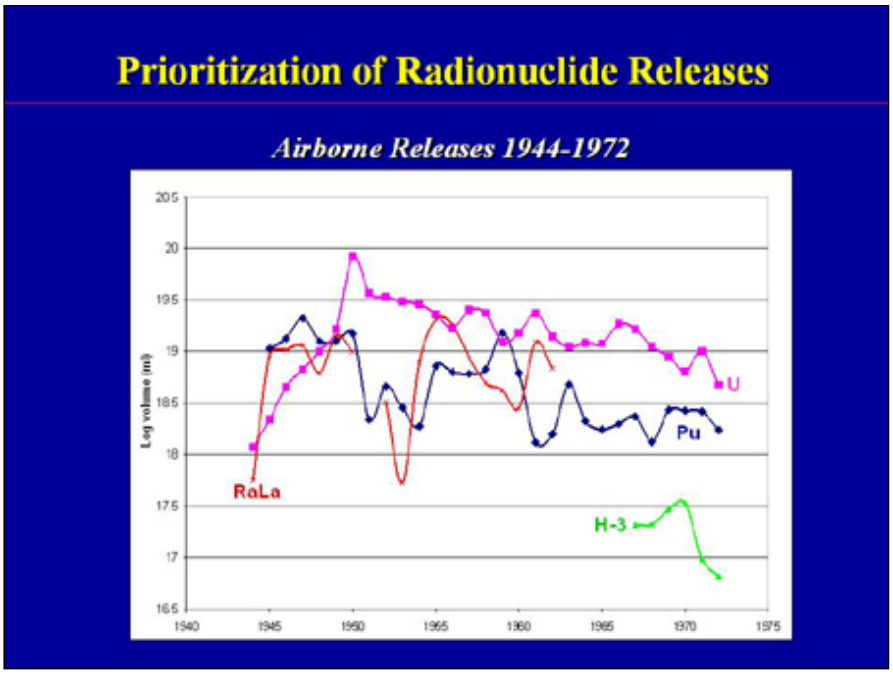
- Purpose of prioritization at this stage
- First method used = estimation of dilution volumes required to meet MPCs.
- Strengths and limitations of this method
- Results for airborne releases
  - Priority plot over two time spans
  - Comparison to other DOE Pu facilities
- Results for waterborne releases

Slide 15 of 24

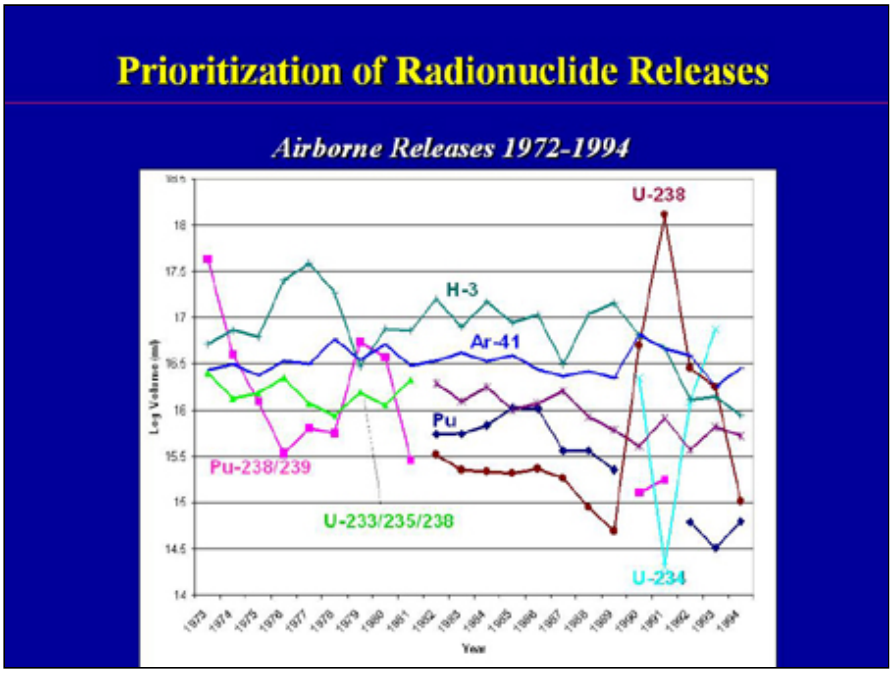
Adjustments to Effluent Data

- Alpha particle burial in filter paper
  - Description of the phenomena
  - What we know about the magnitude of effect
  - How we are applying a correction factor
- Sample line loss-
  - Description of the phenomena
  - What we know about the magnitude of effect
  - How we are applying a correction factor
- Magnitude of corrections on release totals

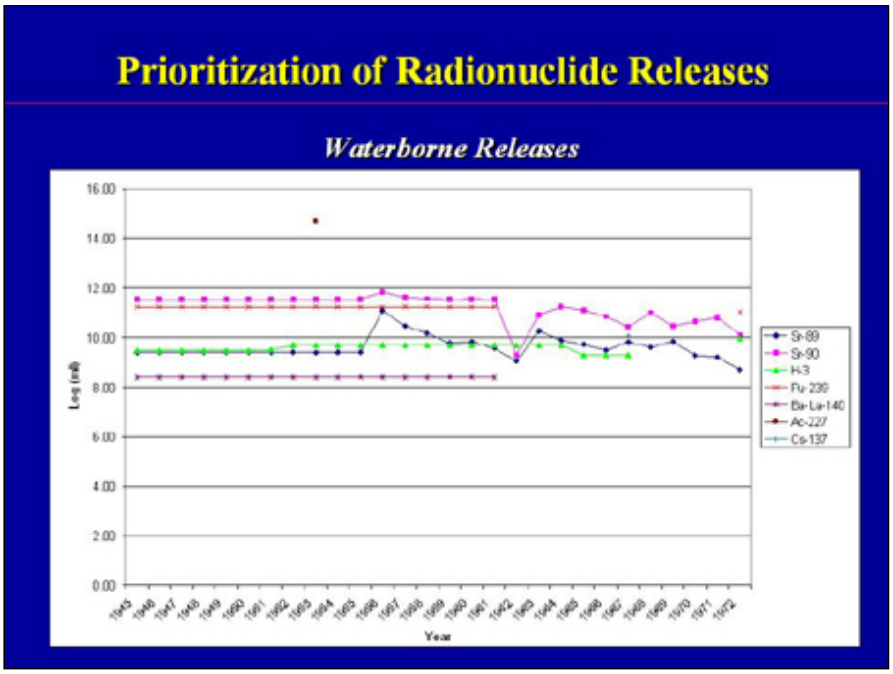
Slide 16 of 24



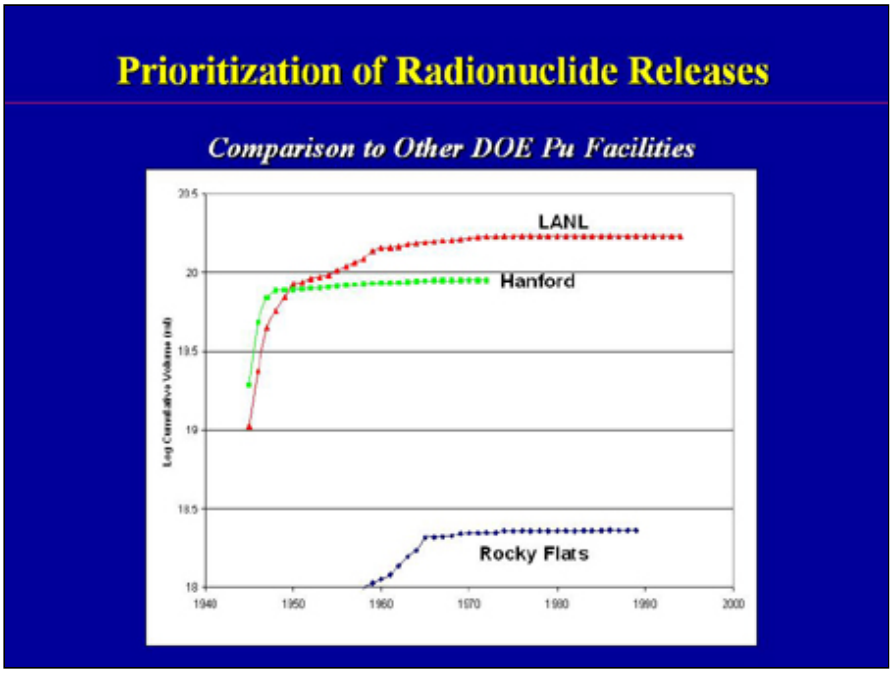
Slide 17 of 24



Slide 18 of 24



Slide 19 of 24



Slide 20 of 24

Estimation of D-Building Plutonium Releases

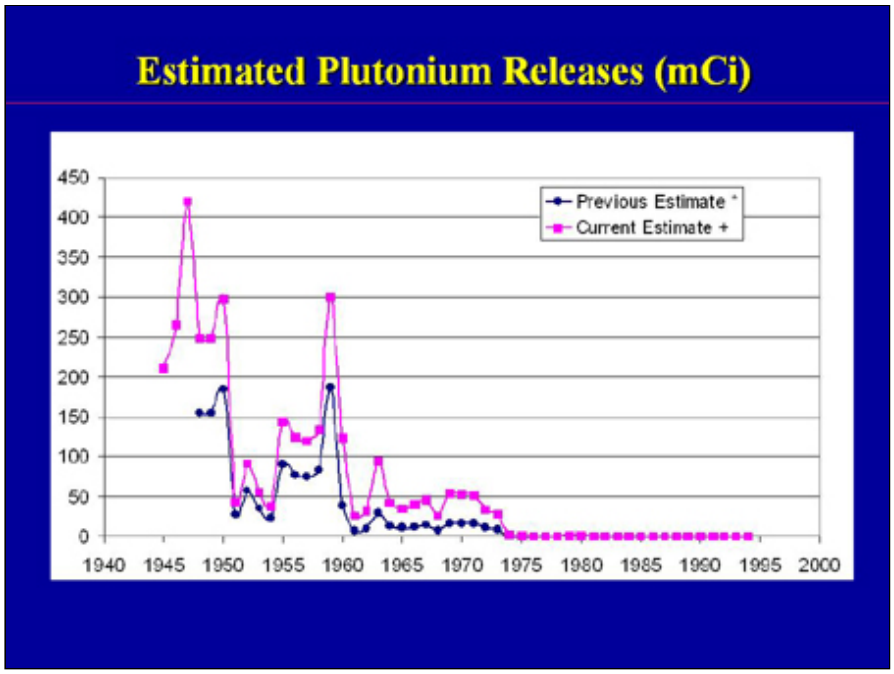
- Effluent measurements have not been found.
- Indoor air concentrations have been found.
- The method for estimating D-Building releases
  - Data that are used (Pu levels, room sizes, flow rates)
  - Key parameters of the model
- Results of the modeling
  - Magnitude of the added releases
  - Key areas of uncertainty

Slide 21 of 24

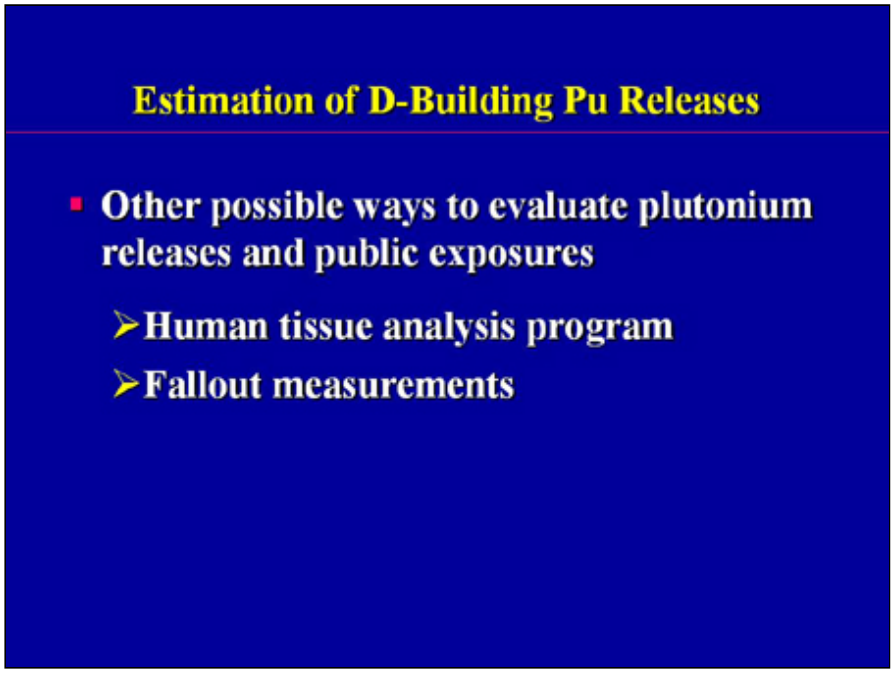
Estimation of D-Building Plutonium Releases

- D-Building Model - Key parameters
  - Concentration
  - Air Exchange Rate
  - "Hood Factor"
- Results of the modeling
  - Magnitude of the added releases
  - Key areas of uncertainty

Slide 22 of 24



Slide 23 of 24



Slide 24 of 24

Page last reviewed: November 06, 2018

Page last updated: November 06, 2018

Content source: Centers for Disease Control and Prevention

(https://web.archive.org/web/20230207103319/https://www.cdc.gov/)