

# 300 Area Uranium Contamination

Prepared for the U.S. Department of Energy  
Assistant Secretary for Environmental Management

Contractor for the U.S. Department of Energy  
under Contract DE-AC06-08RL14788



P.O. Box 1600  
Richland, Washington 99352

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# 300 Area Uranium Contamination

J. V. Borghese  
CH2M HILL Plateau Remediation Company

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*J. D. Aardal*  
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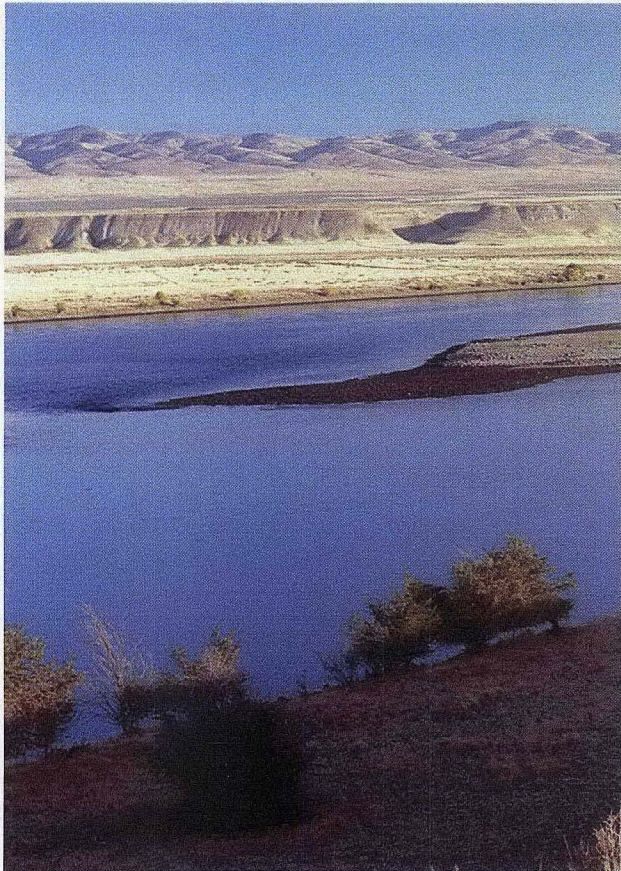
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Plateau Remediation Company



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Presented June 10, 2009 by: Jane V. Borghese



U.S. DEPARTMENT OF  
**ENERGY**

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# 300 Area Operation History

- **Uranium fuel production**
- **Test reactor and separations experiments**
- **Animal and radiobiology experiments conducted at the 331 Laboratory Complex**
- **Deactivation, decontamination, decommissioning, and demolition of 300 Area facilities**

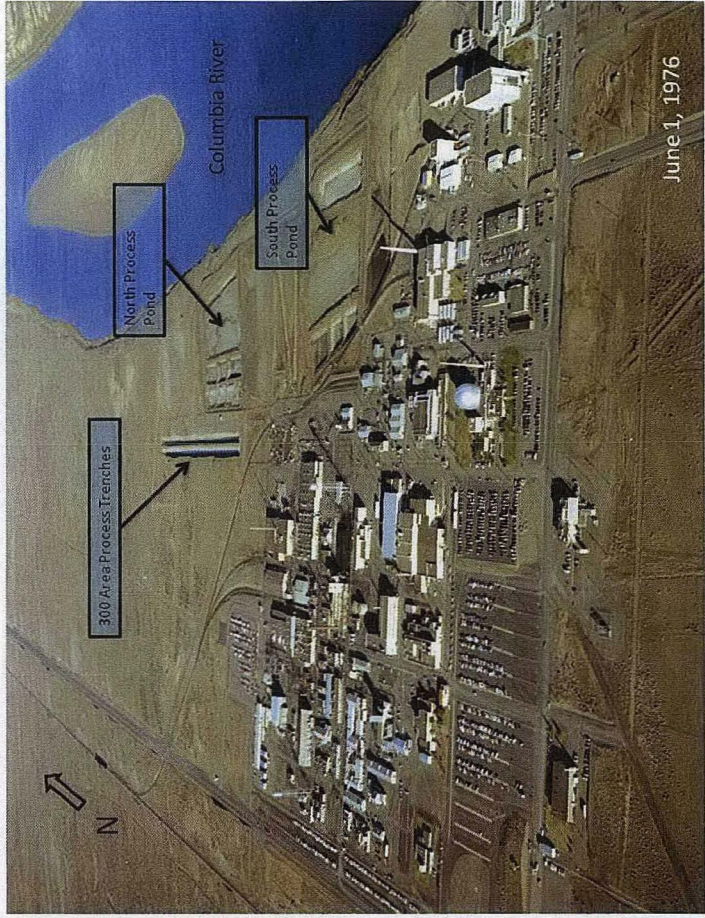
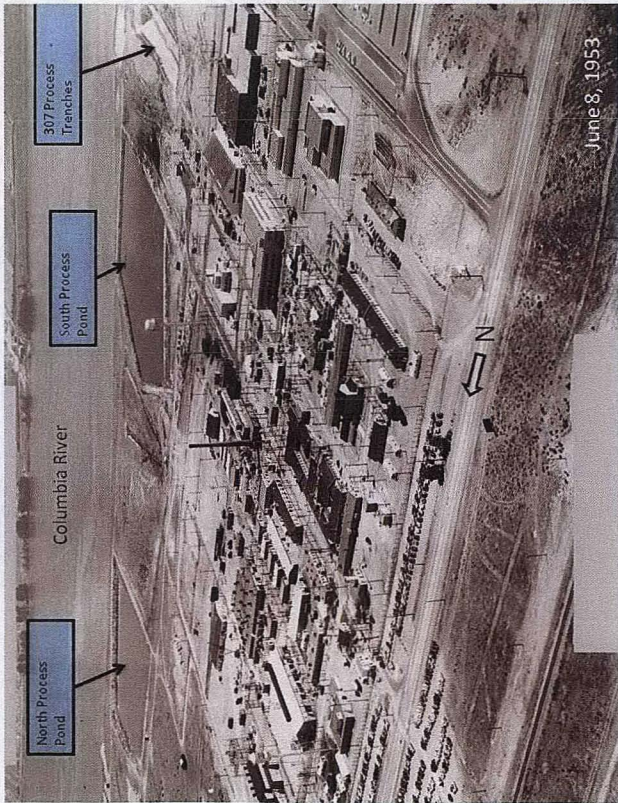


# Liquid Waste Systems

- **Process Sewer System (300-15)**
- **South and North Process Ponds (316-1 and 316-2)**
- **300 Area Process Trenches (316-5)**
- **Sanitary Sewer System (300-276)**
- **340 Complex, Retention Process Sewer, Radioactive Liquid Waste System (RLWS), 307 Process Trenches (316-3), and 307 Retention Basins (307 RB)**
- **334 Tank Farm (334 TFWAST), 311 Tank Farm, and the Waste Acid Treatment System (300-224)**



# Liquid Waste Systems (cont.)

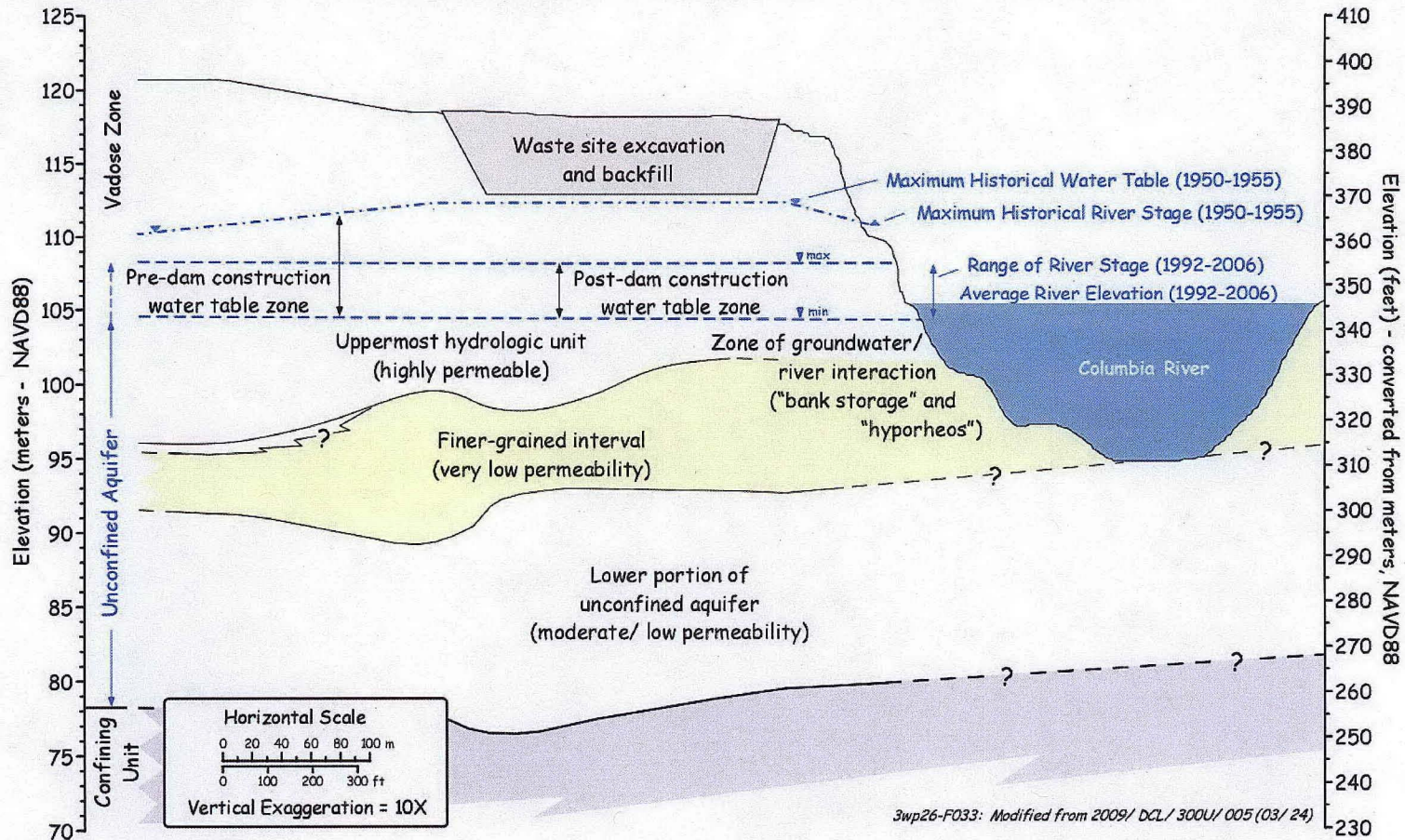






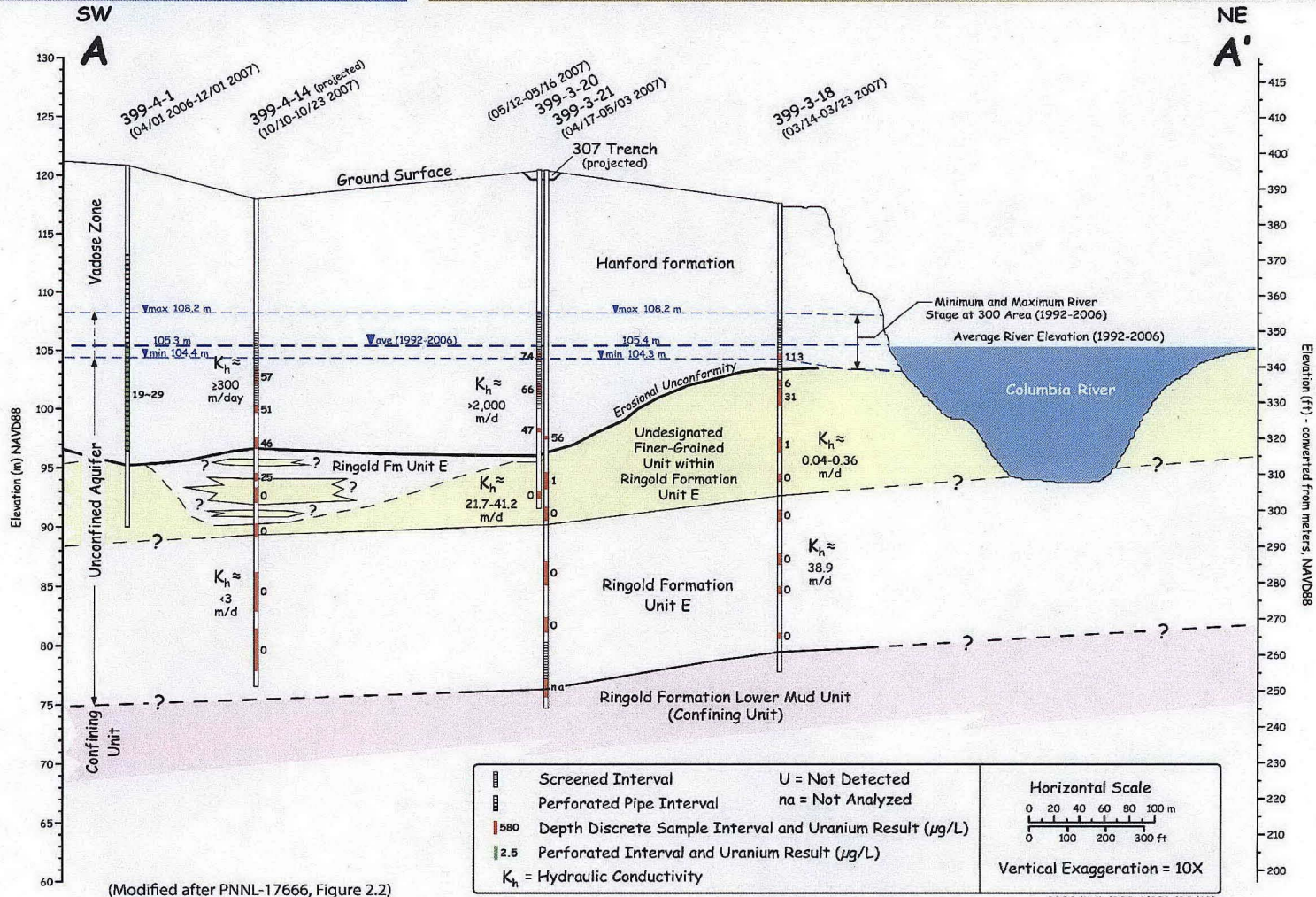


# Subsurface Regions





# Vertical Distribution of Uranium





# Technology Needs

- **Long-term treatment to sequester uranium throughout the vadose zone**
  - Easily implemented over a large area
  - Currently evaluating infiltration of polyphosphate