

100K Basins Closure Project Update



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Federal Project Director
April 13, 2010



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100K Basins Closure Project Update

- **105KE Air Monitoring**
- **Sludge Treatment Project**
- **105KE Reactor Interim Safe Storage (ISS) or Core Removal**
- **Lessons Learned From KE Basin Removal**
- **Facility Demolition and Waste Site Clean up/Remediation**



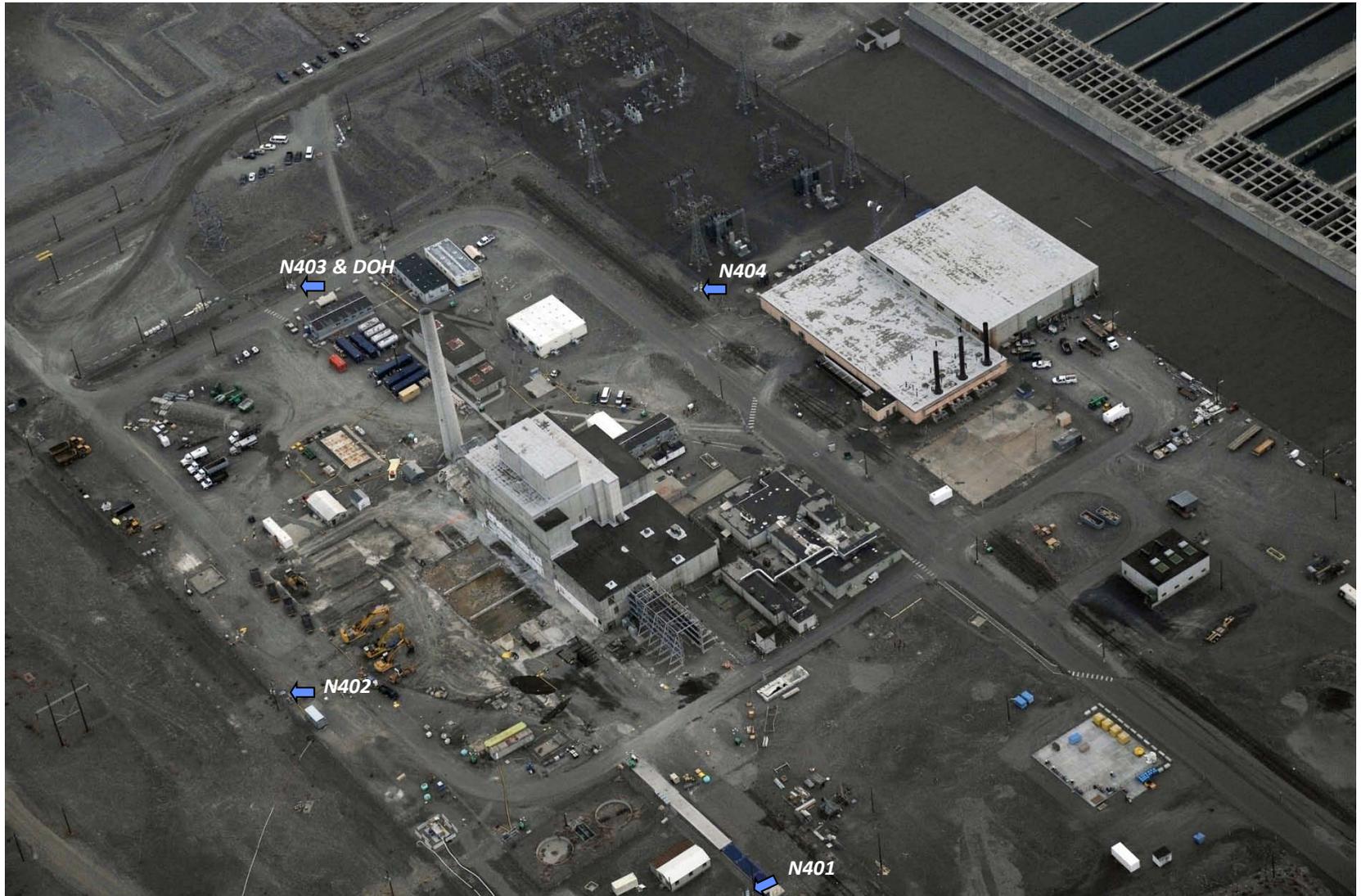
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105KE Air Monitoring

- **US EPA April 28, 2009 letter to DOE-RL on behalf of WA Dept. of Health (DOH) inquiring about elevated airborne levels near 105KE**
- **Second-half FY2008 air data influenced by July 2008 chiller pipe incident**
- **PNNL far field air monitoring stations indicated no abnormalities**
- **Near-field monitors are very close to work zone and are more reflective of work-zone than near-field**
- **Worker protection monitoring (i.e., work zone lapel and air monitors) indicated dust suppression controls are effective and serve as an early indicator of contamination control issues. Worker protection monitoring indicated radiological controls are effective**
- **Calculated doses at various public receptor locations are negligible**



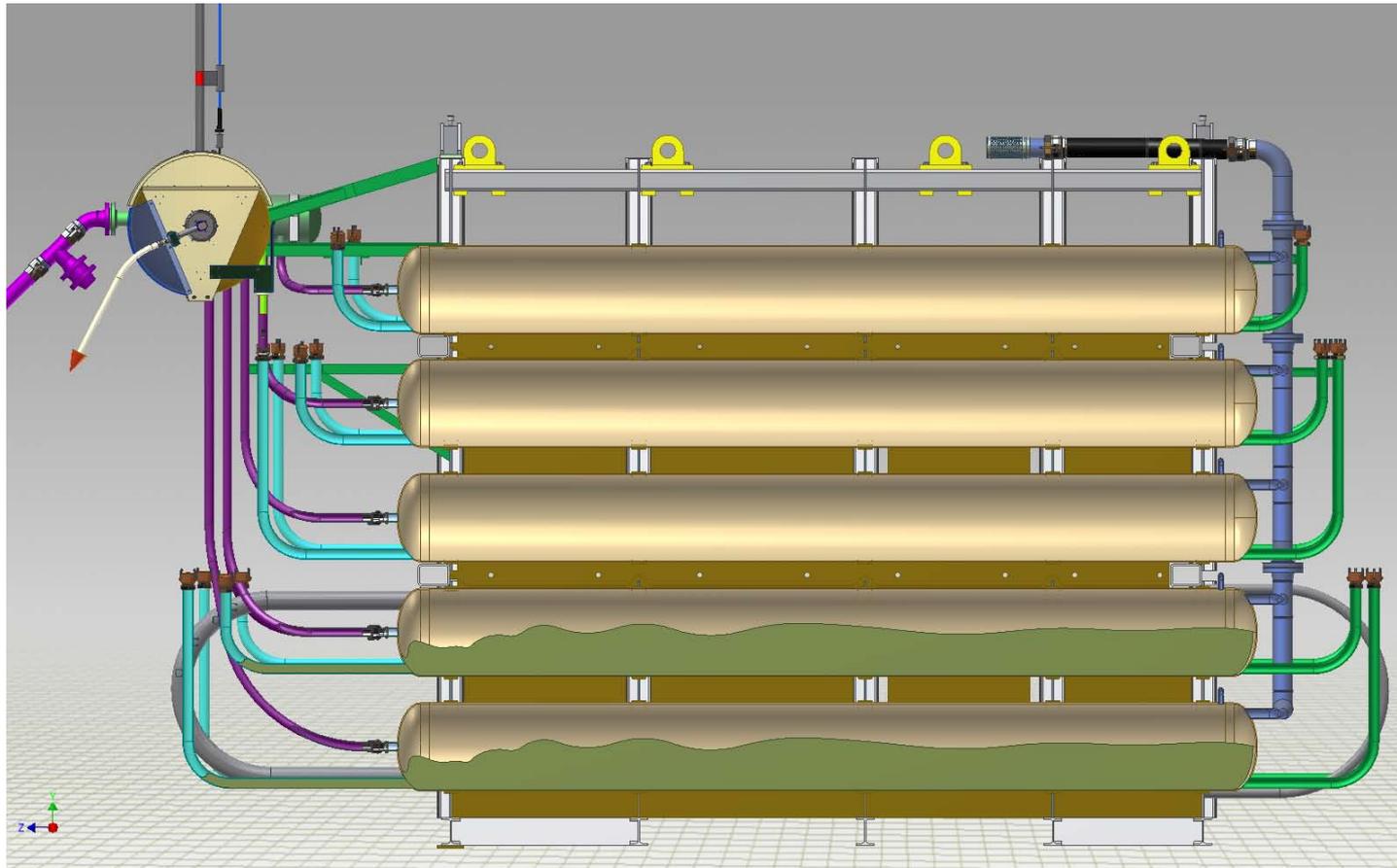


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Sludge Treatment Project Update



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Sludge Treatment Project Work in Progress

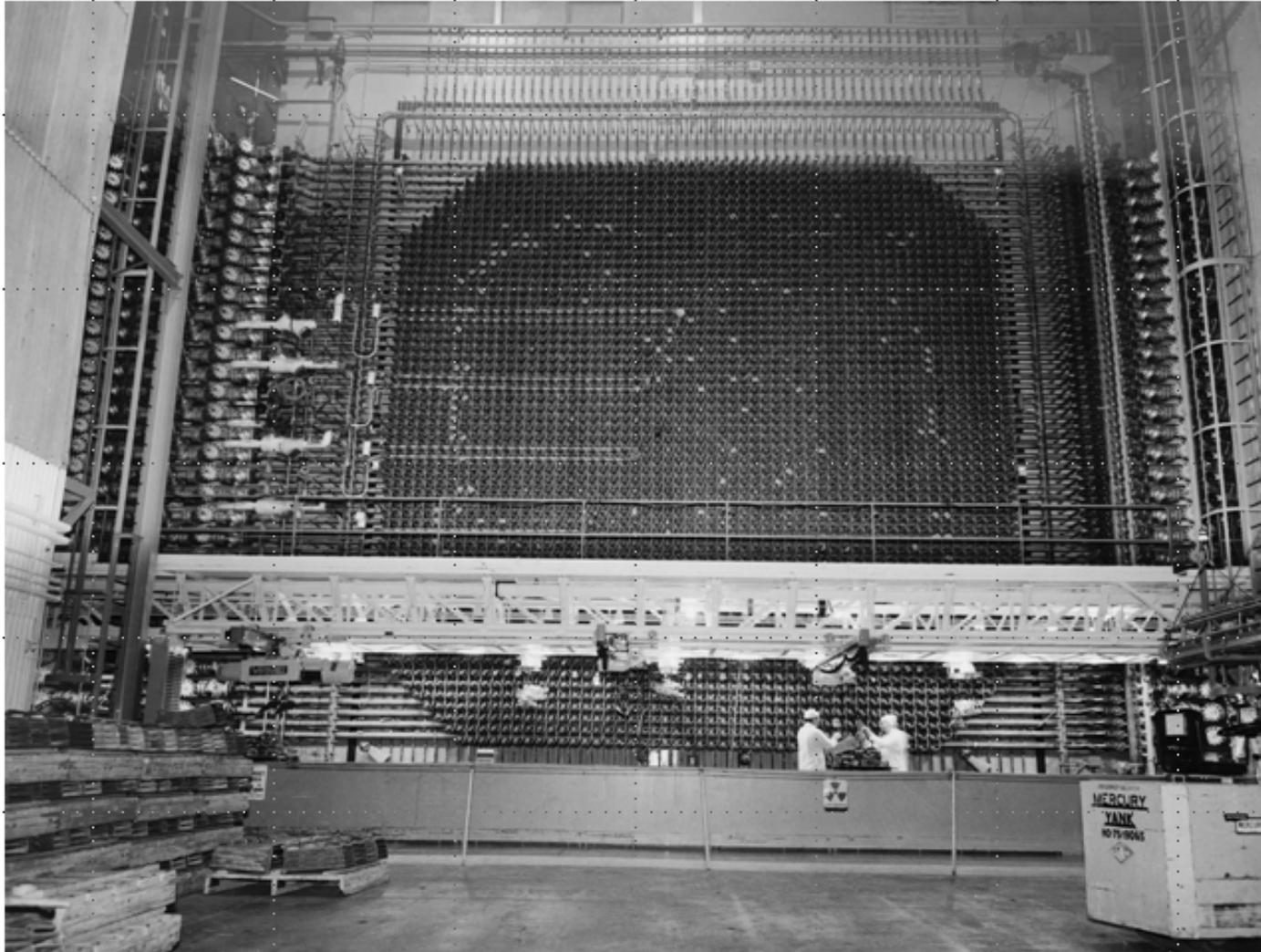
- **Settler Tube sludge retrieval & transfer to Engineered Container 230.** *Seven of Ten Tubes retrieved to date.*
- **Phase I, Critical Decision -1 (Conceptual Design) approval by DOE-RL.** *RL in process of reviewing contractor CD-1 submittal.*
- **Project Phase II alternative analysis of potential engineer container and settler tube sludges treatment and packaging technologies .** *Contractor is reviewing proposals.*
- **Construction started on a 90,000 gallon fuel basin mock-up at the Maintenance and Storage Facility (MASF) in the 400.**
- **Knock-Out Pot equipment development and testing at MASF**



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105KE Reactor Front Face



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Preparation for 105KE Reactor ISS or Core Removal

- **Characterization** - Core sampling, surveys and laboratory analysis scheduled for completion during third quarter FY 2010- *To be performed in April 2010*
- **Hazardous material and equipment removal** – Remove lead, asbestos, fluids, etc.; Equipment removal and structural modification will be performed to support characterization, and core removal activities- *In progress*
- **Permission to proceed**- Dr. Triay's approval of Critical Decision Step 0 (CD-O), Mission Need, is required for us to proceed- *Working for a June 2010 approval*



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Lessons Learned from 105KE Basin Demolition

- **What worked well**

- *Teamwork*
- *Safety*
- *Skill of Craft*
- *Flexibility/Problem Solving*

- **What could be done better**

- *As Low As Reasonably Achievable (ALARA)*
- *Managing and estimating collective worker dose-including impacts to existing ambient air monitors*
- *Demolition strategy and sequencing*
- *Communications between CHPRC , WCH (ERDF operations), MSA (heavy equipment operators and waste container drivers)*



Brookhaven Graphite Research Reactor Core Removal



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105KE Reactor Area Demolition & Soil Clean-up



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*183KW Sedimentation Basin and Water Treatment Plant
January 2010*



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