Lead & Asbestos Issues with the new National Museum of African American History & Culture (NMAAHC) Artifacts and Collections

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NMAAHC Overview

- Grand opening September 24, 2016
- Broke ground February 2012
- Broad themes: resiliency, spirituality, hope and optimism
- Landscape layered with trees native to the South: oaks, magnolias, and American beeches
- 3,600 exterior bronze-colored cast aluminum “Corona” panels (230 tons)
- 400,000 ft² building
- 60% underground
- LEED Gold certification
Jim Crow Era Railroad Car

- Both Lead-based paint & Asbestos-containing materials were discovered.
- Both Exterior & Interior Painted Surfaces were in poor condition.
- All sampled components revealed elevated concentrations of Lead (Pb) (in excess of 5,000 parts per million).
- Thermal system insulation (TSI) pipe wrap was discovered on the undercarriage of the railcar.
Lead & Asbestos Abatement of Iconic Artifacts

- Jim Crow Era Railroad Car
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- Jim Crow Era Railroad Car
Louisiana State Penitentiary (Angola)  
Prison Guard Tower

- Asbestos-containing materials were discovered on the guard tower.
- Black roof flashing (2% Chrysotile)
- Black window frame flashing (6% Chrysotile)
- Bulk paint chip samples were collected from the guard tower and none were considered to be lead-containing.
Angola Prison Guard Tower
Angola Prison Guard Tower
Angola Prison Jail Cell
Angola Prison Jail Cell

- Paint chips collected from the ceiling and a beam within the prison cell, revealed the presence of lead-based paint.
- Recommendations were made to utilize licensed abatement personnel to abate lead-based paint before delivering to NMAAHC.
Chicago Defender Linotype

- Chicago Defender newspaper, primarily African American readers, founded in 1905

- Linotype machine (letterpress printing process)
  - Casts a line of type using matrices
  - Molten lead alloy for making type (~85% lead, 11% antimony, 4% tin)
  - 90-character keyboard

- 2 lead abatement efforts
  (lead cannot be fully abated)
  Recommended enclosure and/or encapsulation

- Air sampling
  - 3 inside, 2 outside

Magazine

- Matrices assembled with spacebars

Recommended and/or encapsulation

Molded type slug

Print side

Side view
Chicago Defender Linotype

- Lead source from molten lead alloy used to cast a line of type called a “slug”
- September 16, 2011, OSHEM lead wipe sampling
- 2 lead abatement efforts (contractors)
- Lead permanently embedded in wood, grease, coated on metal components, etc.

OSHEM recommendations:
- Encapsulation
- Enclosure

June 15, 2016, lead in air sampling conducted inside and outside the exhibit

NMAAHC Office of Collection incorporated BOTH recommendations
Chicago Defender Linotype

Air sampling locations: Linotype object in Chicago Defender exhibit (case #PP09.02.ca.01)
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Questions?