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## **STATUS OF RVAAP PHASE I PCB PAINT TEST**

Presented to Restoration Advisory Board

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Battelle Memorial Institute

June 21, 2006

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### **Proposed Objective**

- Objective: to investigate behavior of PCBs present in paint under various test conditions involving high temperatures.
- Results obtained will provide data on PCB volatilization as a function of temperature and decomposition/destruction of PCBs at high temperatures.
- Results should help define the upper limit on the quantity of PCB releases from the painted surfaces and the congeners (types) released.
- Help define requirements for monitoring in subsequent phases of testing.

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### **Phase I Testing – Current Status**

- Attended RAB Meeting held March 15, 2006 to present draft plan and receive input.
- Revised draft Quality Assurance Project Plan (QAPP) in May 2006; submitted to Army for review and approval.
- Selected and received 12 paint samples from list of powdered paints from MKM; returned the Chain-of-Custody.
- Four paints were chosen for testing.

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### **Phase I Testing – Current Status**

Paints were chosen for testing

- #1 - Light Green 8,800 ppm PCB from LL3, Building EA5 and 6A
- #2 - Dark Green 8,800 ppm PCB from LL4, Building G13
- #3 - Light Green 4,300 ppm PCB from LL2, Building DA5 and 6A
- #4 - Dark Green 3,700 ppm PCB from LL2, Building DB8

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### **Phase I Testing – Current Status**

#### **Preliminary Paints Test**

- Test 1 – 4 grams of Sample #1 heated in oven
- Test 2 – 1 gram of Sample #1 heated in oven
- Test 3 – blank/empty boat heated in oven

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### **Phase I Testing – Current Status**

#### **Preliminary Paints Test**

- Heated sample for 20 minutes, filter fully loaded
- Collected gas sample and residue sample
- Heated empty boat for 20 minutes
- Collected gas sample for background concentrations
- System worked well

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### Phase I Testing – Next Steps

#### Future Tasks Will Include:

- Analyze selected paint samples for PCBs as confirmation and identification of individual PCBs
- Combine and analyze the resin, filter, and glass sampling system wash liquid for individual PCBs, dioxins and furans
- Analysis of preliminary tests will be completed within 3 weeks (These results will determine the test conditions for the first set of samples.)
- Analyze residue for individual PCBs, dioxins and furans
- Analyze paint and residue for all metals

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### Phase I Testing – Next Steps (continued)

#### Future Tests Will Include:

- A ½-gram or less paint sample will be used in subsequent tests
- Paint Sample #1 will be heated to 1200° F, 1600° F, and at 2100° F in triplicate (9 total samples)
- Results from these tests will determine the best test conditions for Paint Samples #2, #3 and #4

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### US EPA's Burn Hut in North Carolina



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### **US EPA's Burn Hut in North Carolina**

Video

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### **US EPA's Burn Hut in North Carolina**



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### **For Additional Information**

- Point of Contact

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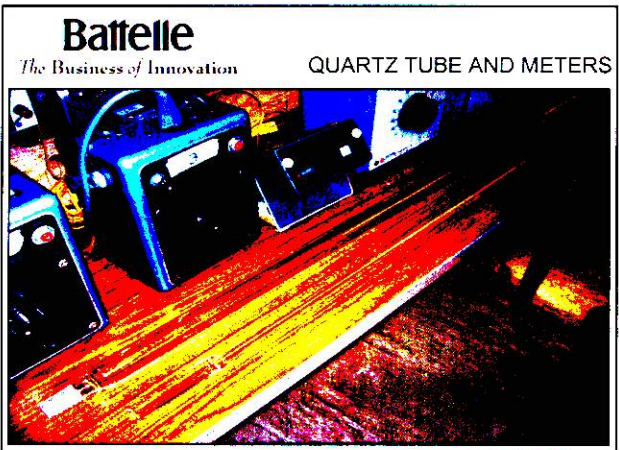
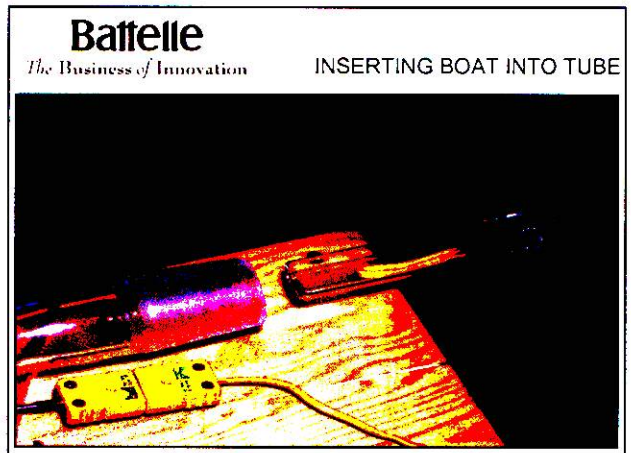
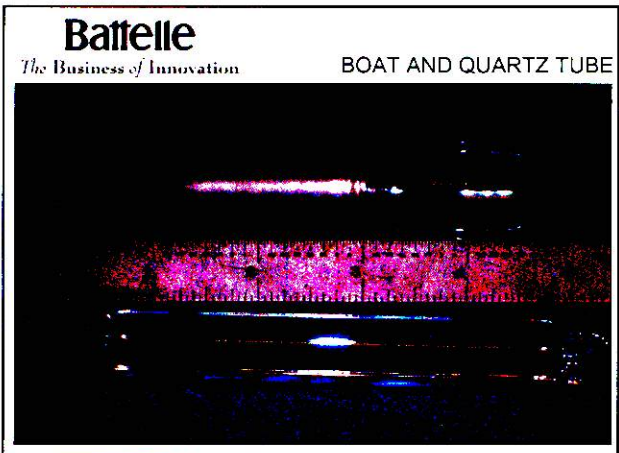
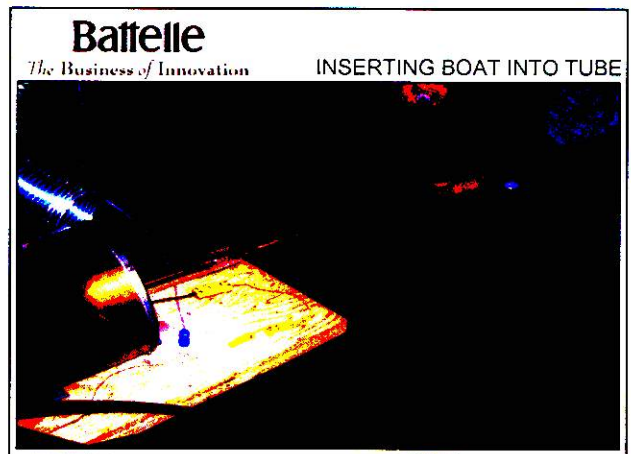
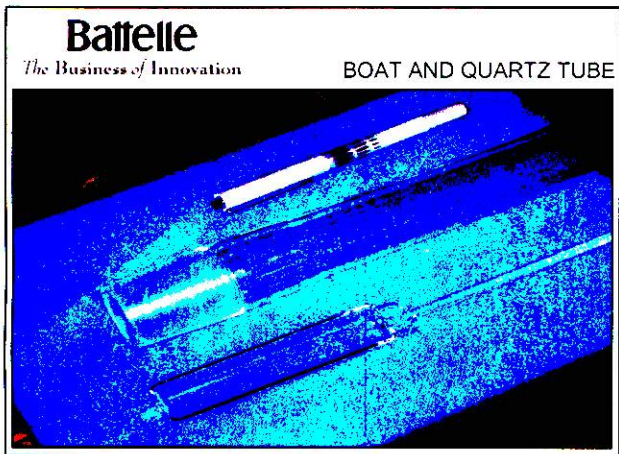
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OVERVIEW OF FURNACE



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OUTLET END OF FURNACE



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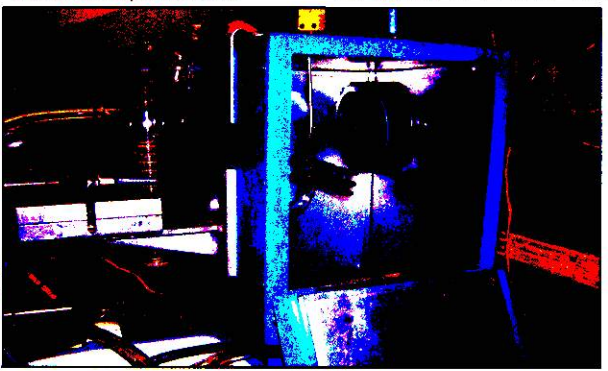
OVERVIEW OF FURNACE



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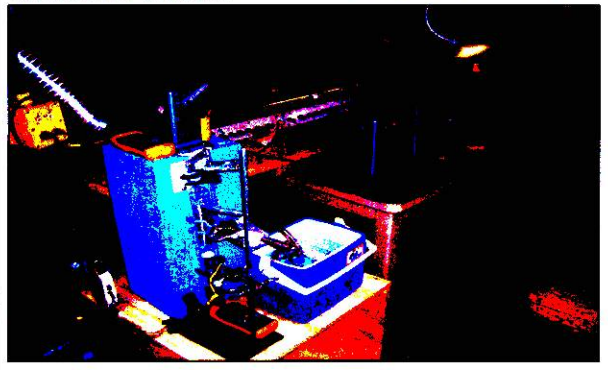
INTERIOR OF FILTER BOX



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FILTER BOX WITH RESIN



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OUTLET END WITH RESIN TRAP

