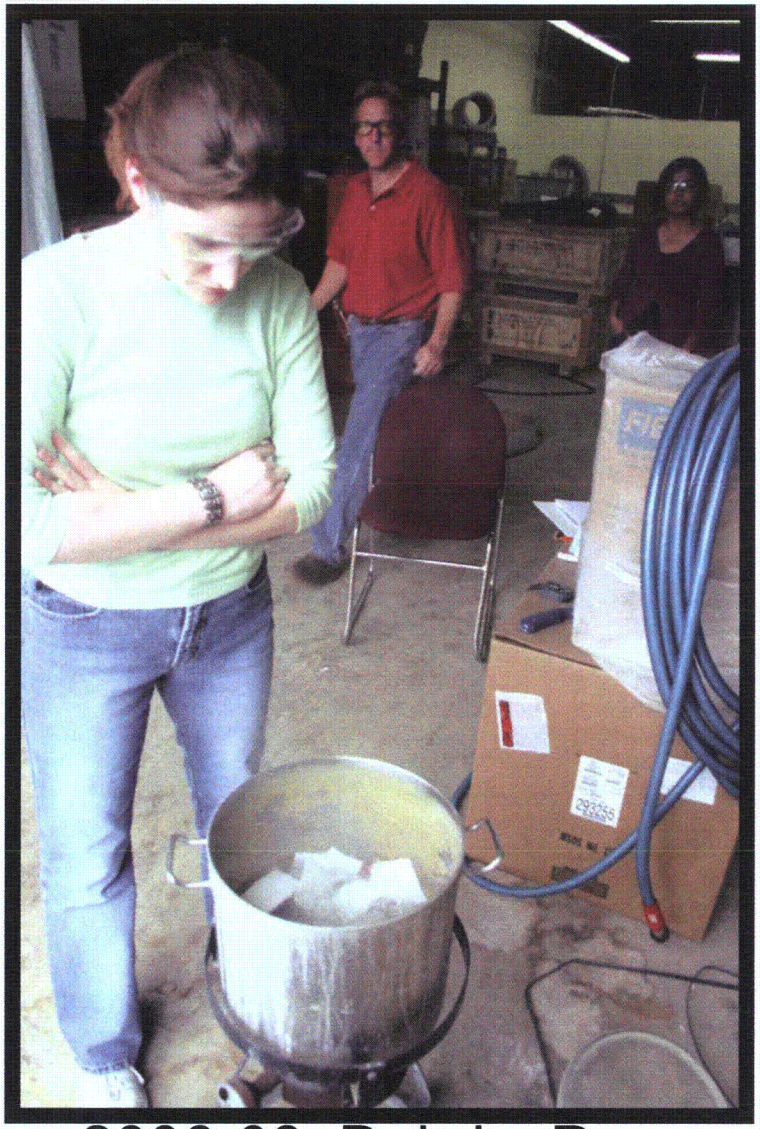
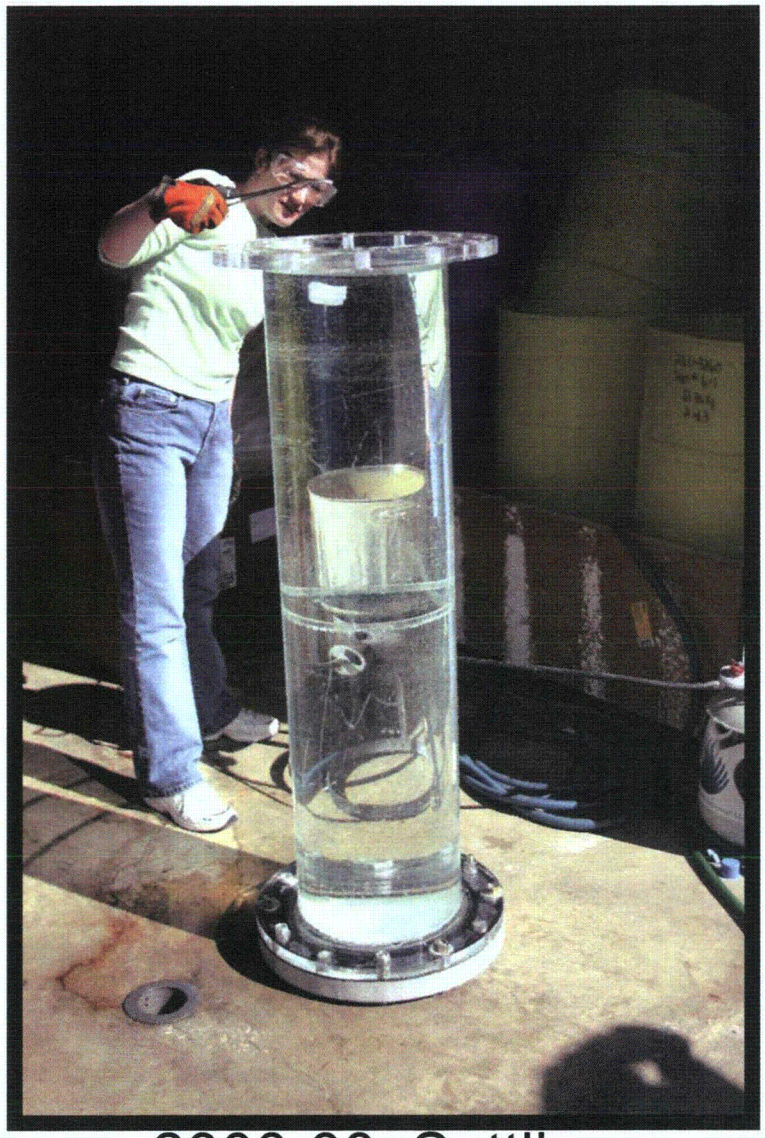
Comanche Peak Debris Transport Testing

August 2006



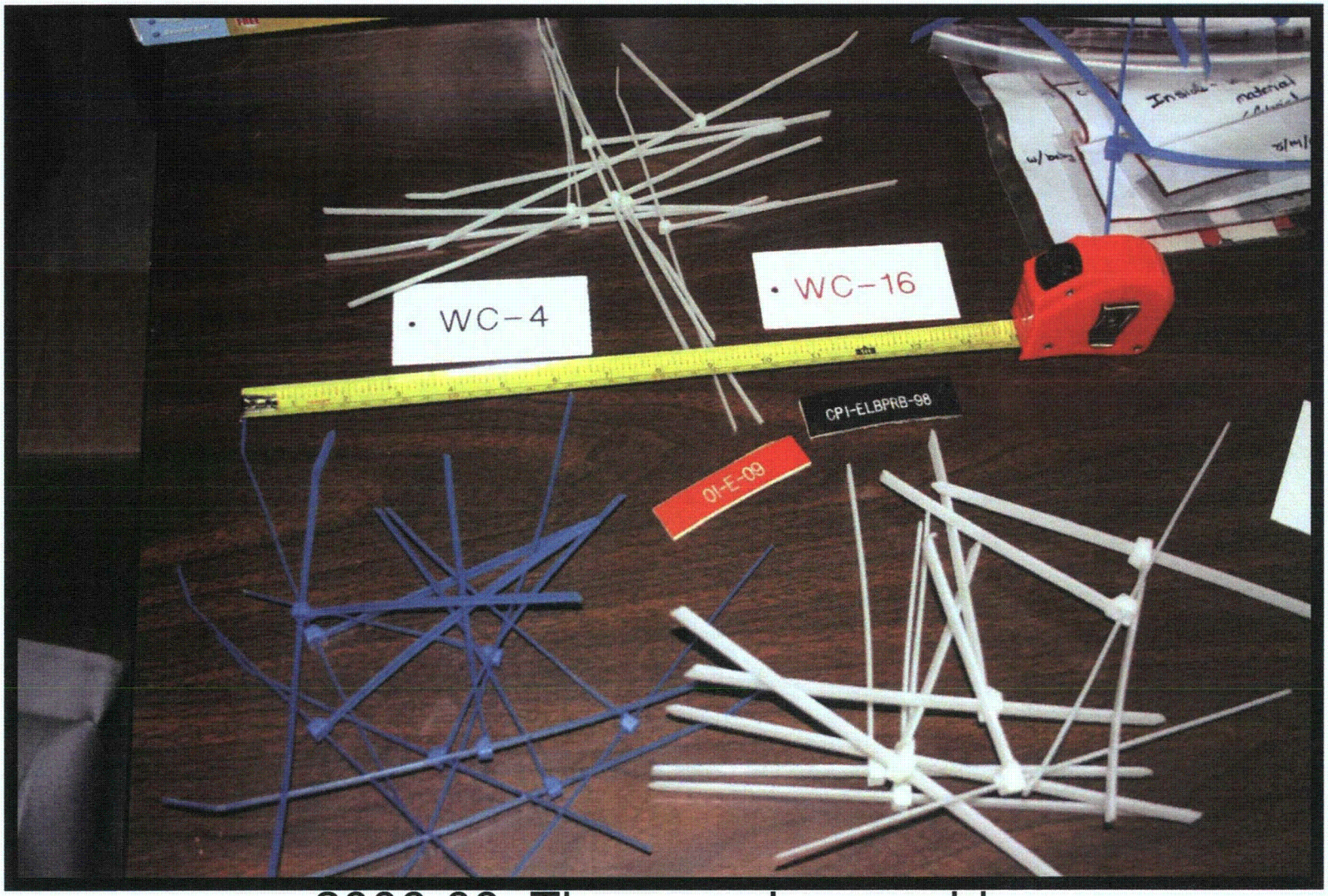
2006-08_Debris_Prep

2006-08_Settling



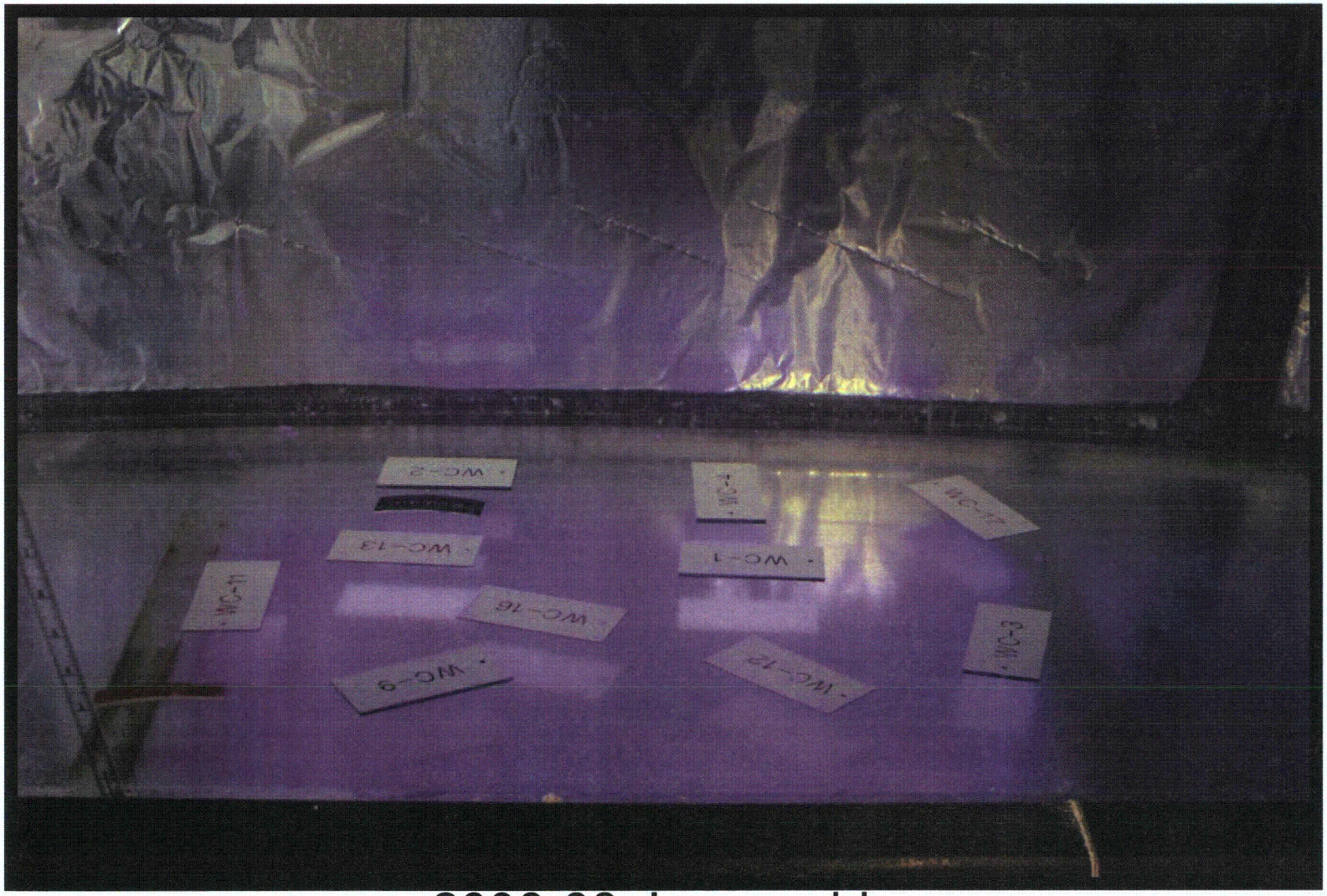
2006-08_Settling

2006-08_Test Flume

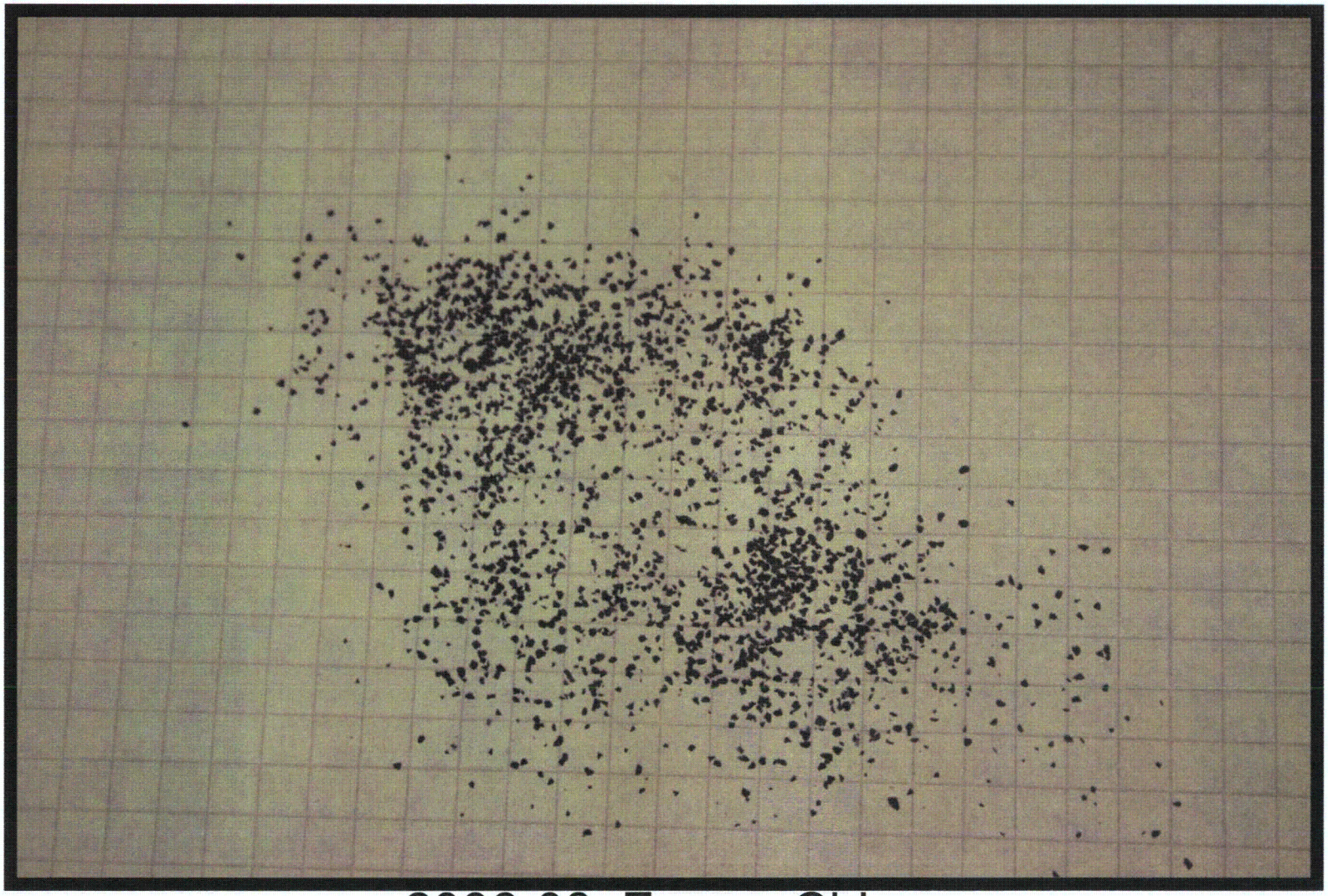


2006-08_Tiewraps_Lamacoids

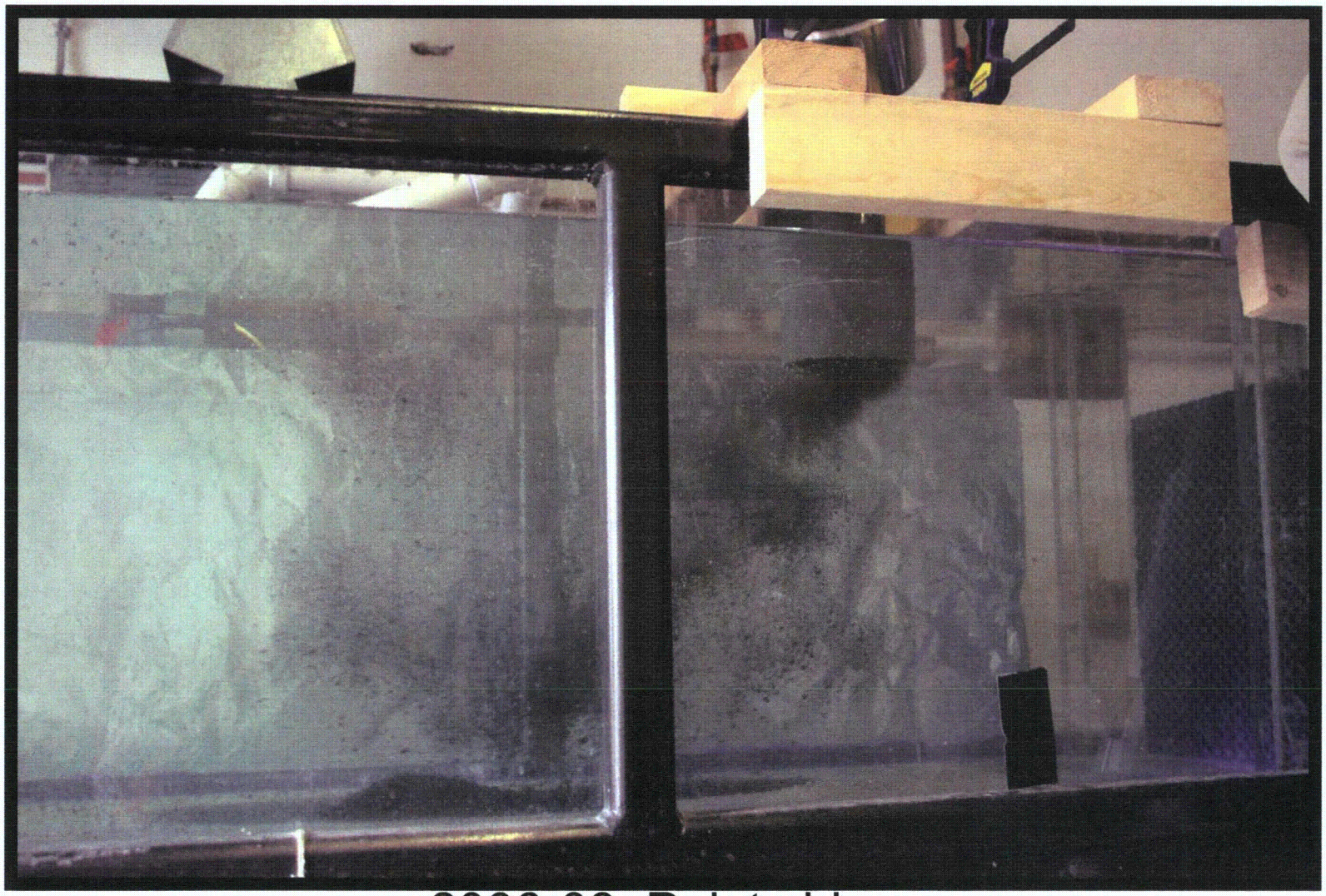
2006-08_Tie_Wraps



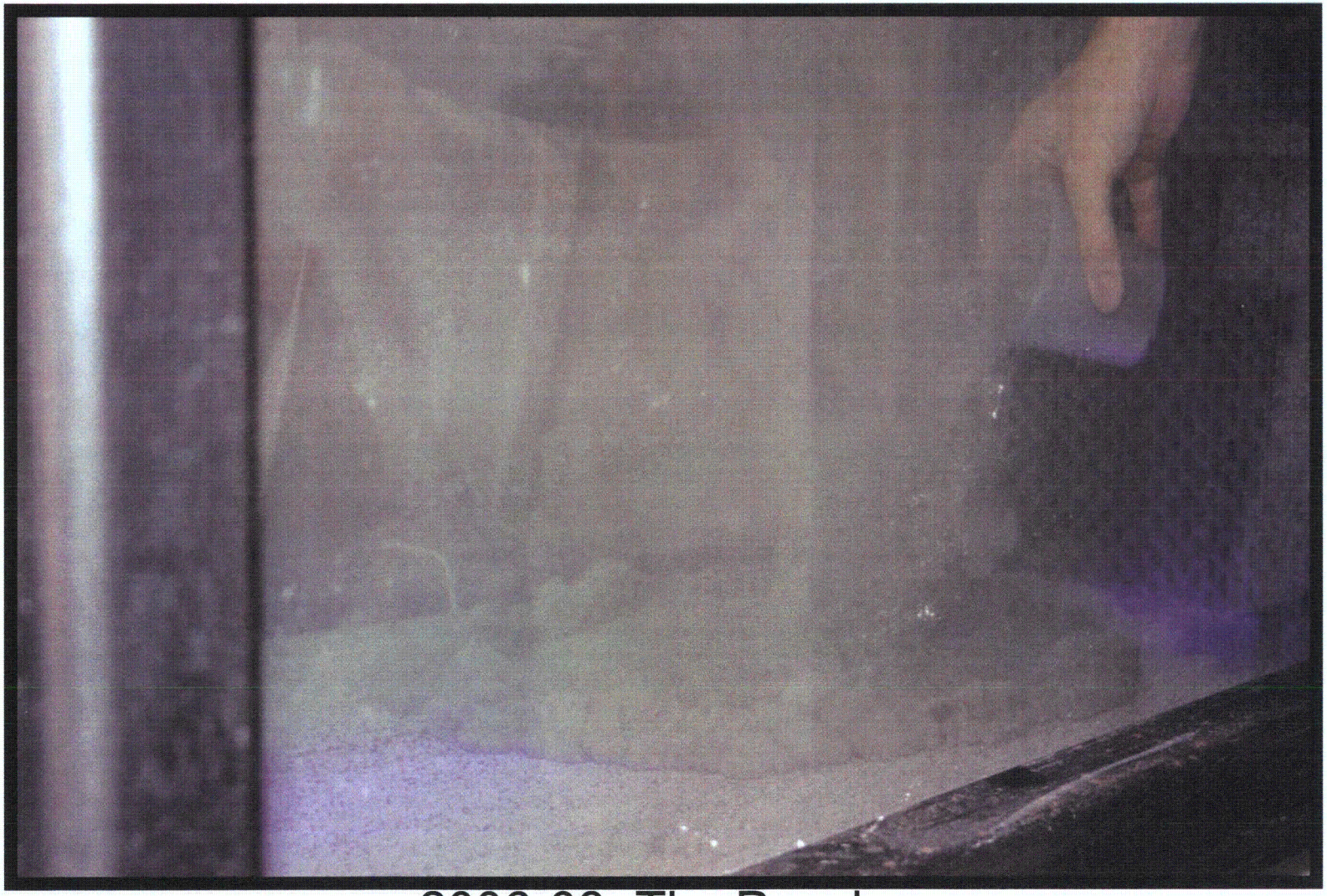
2006-08_Lamacoids



2006-08_Epoxy_Chips



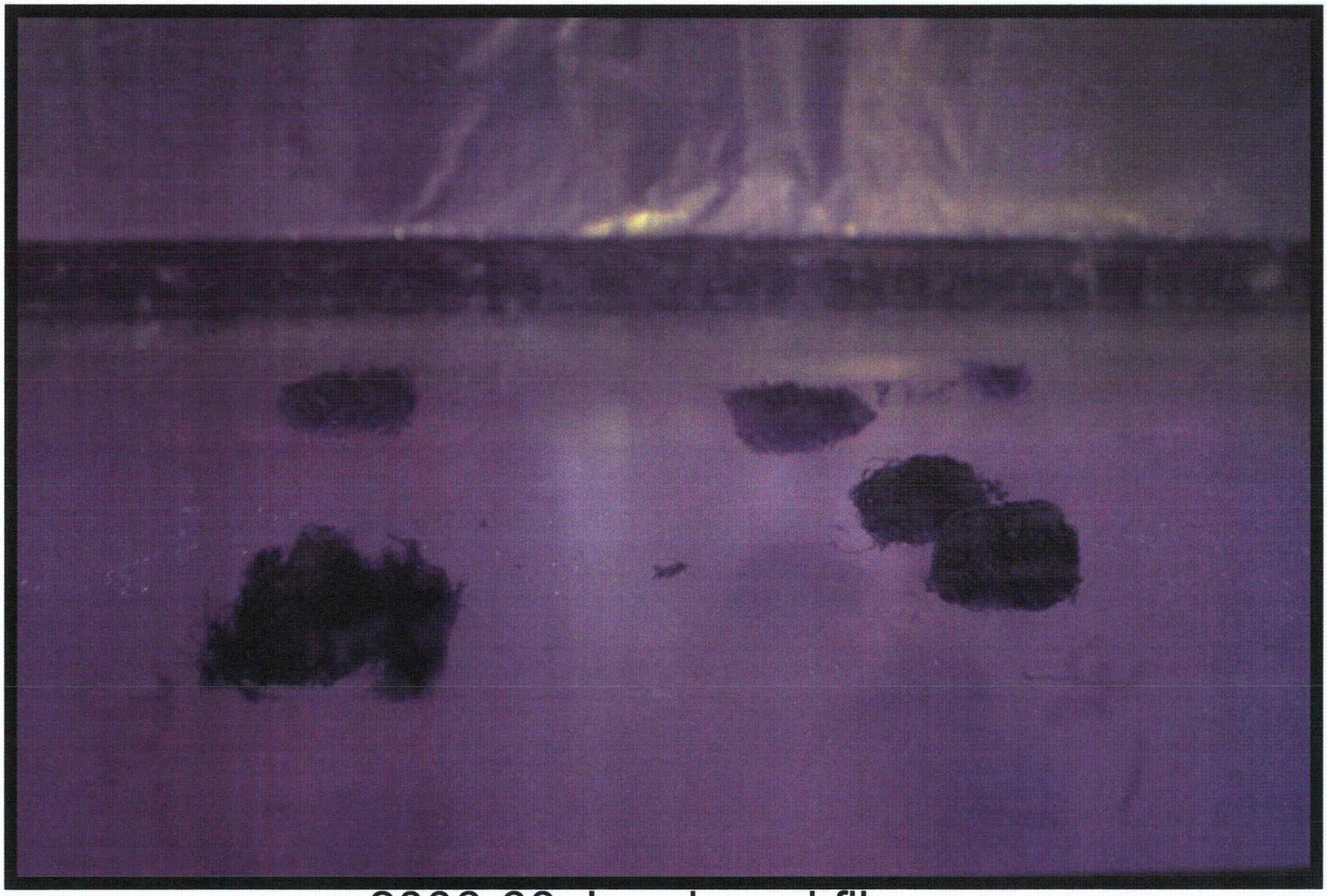
2006-08_Paint chips



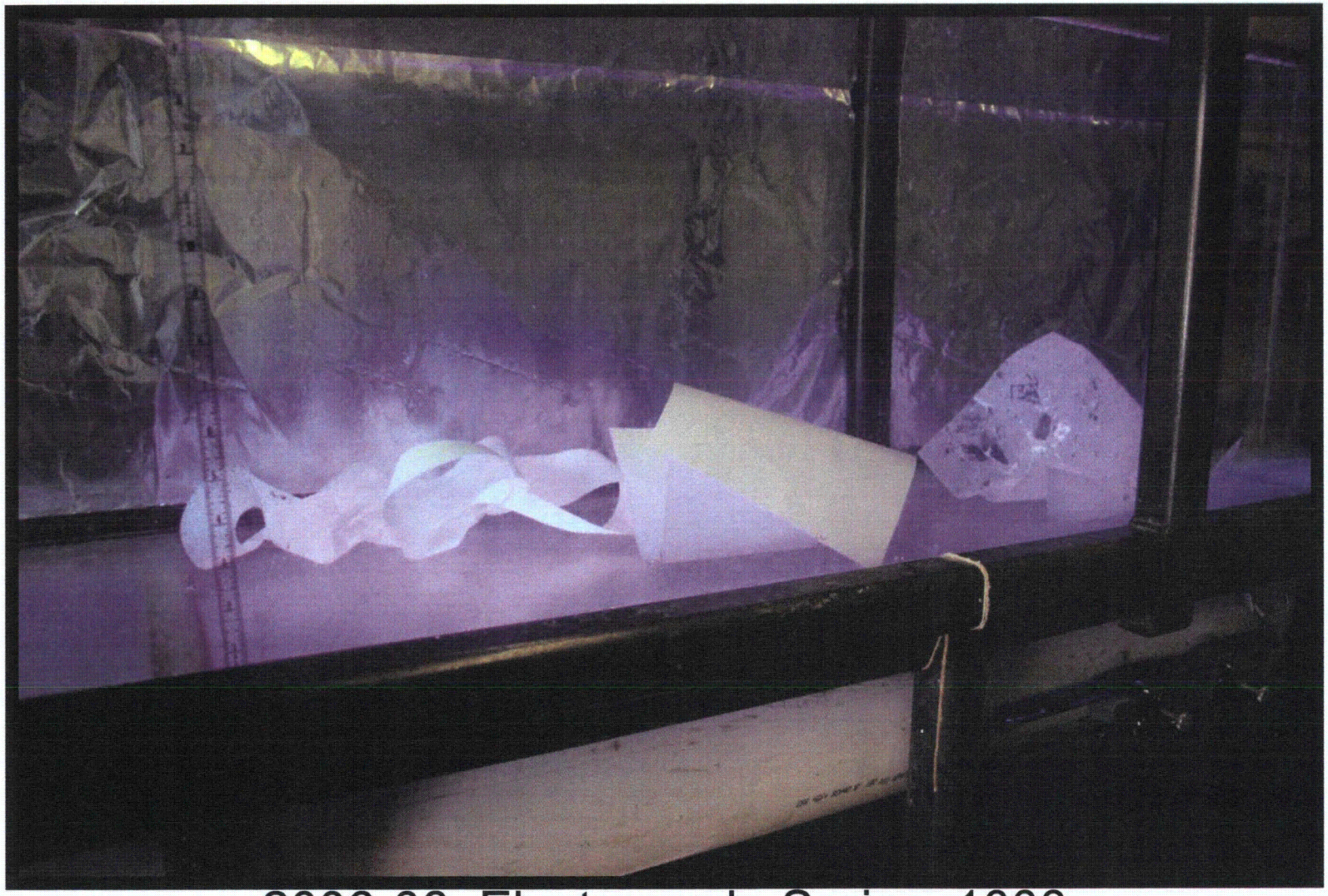
2006-08_Tin_Powder

2006-08_Lancs Lead Blanket

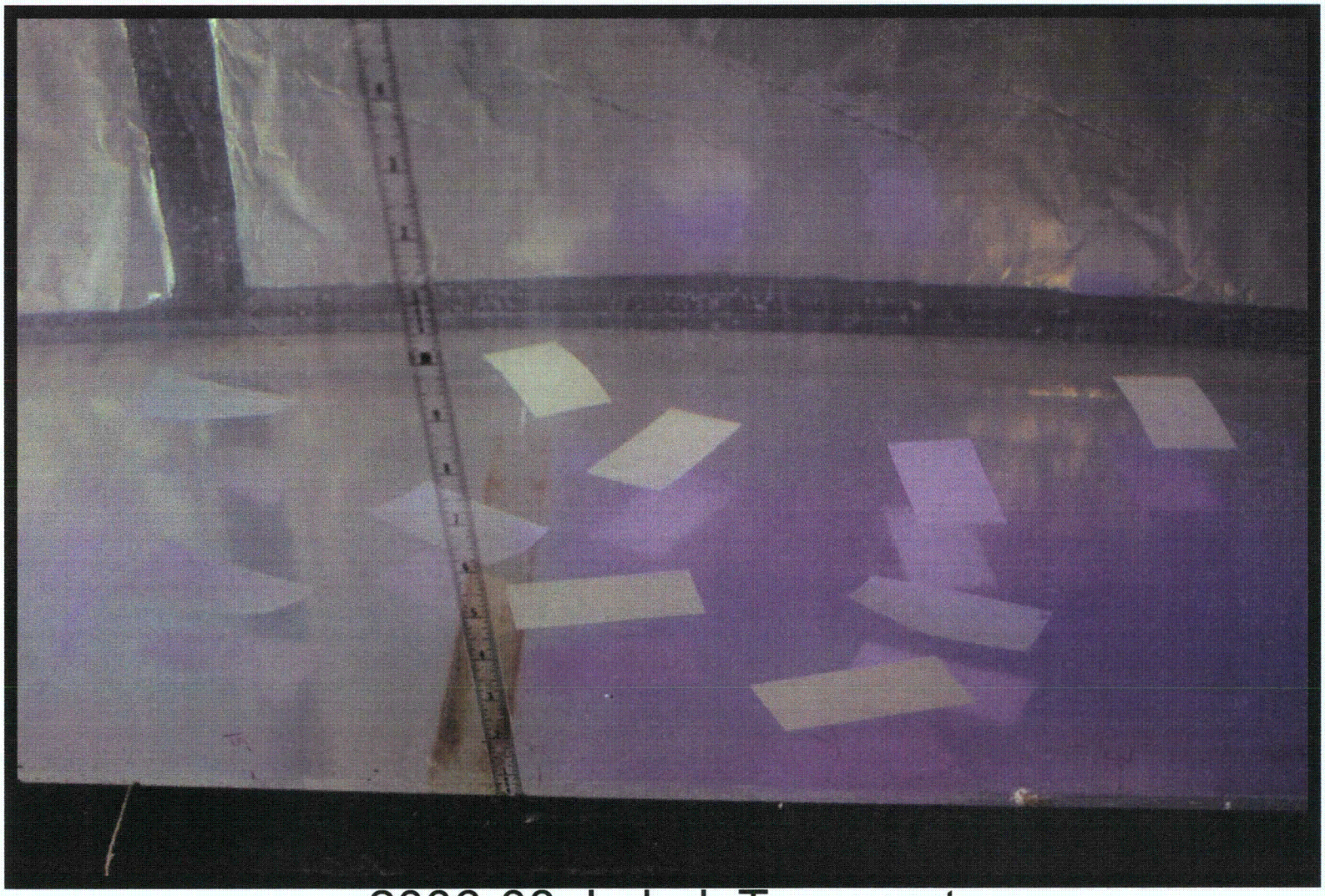
2006-08_Lead_Wool



2006-08_Lead wool fibers



2006-08_Electromark_Series_1000



2006-08_Label_Transport

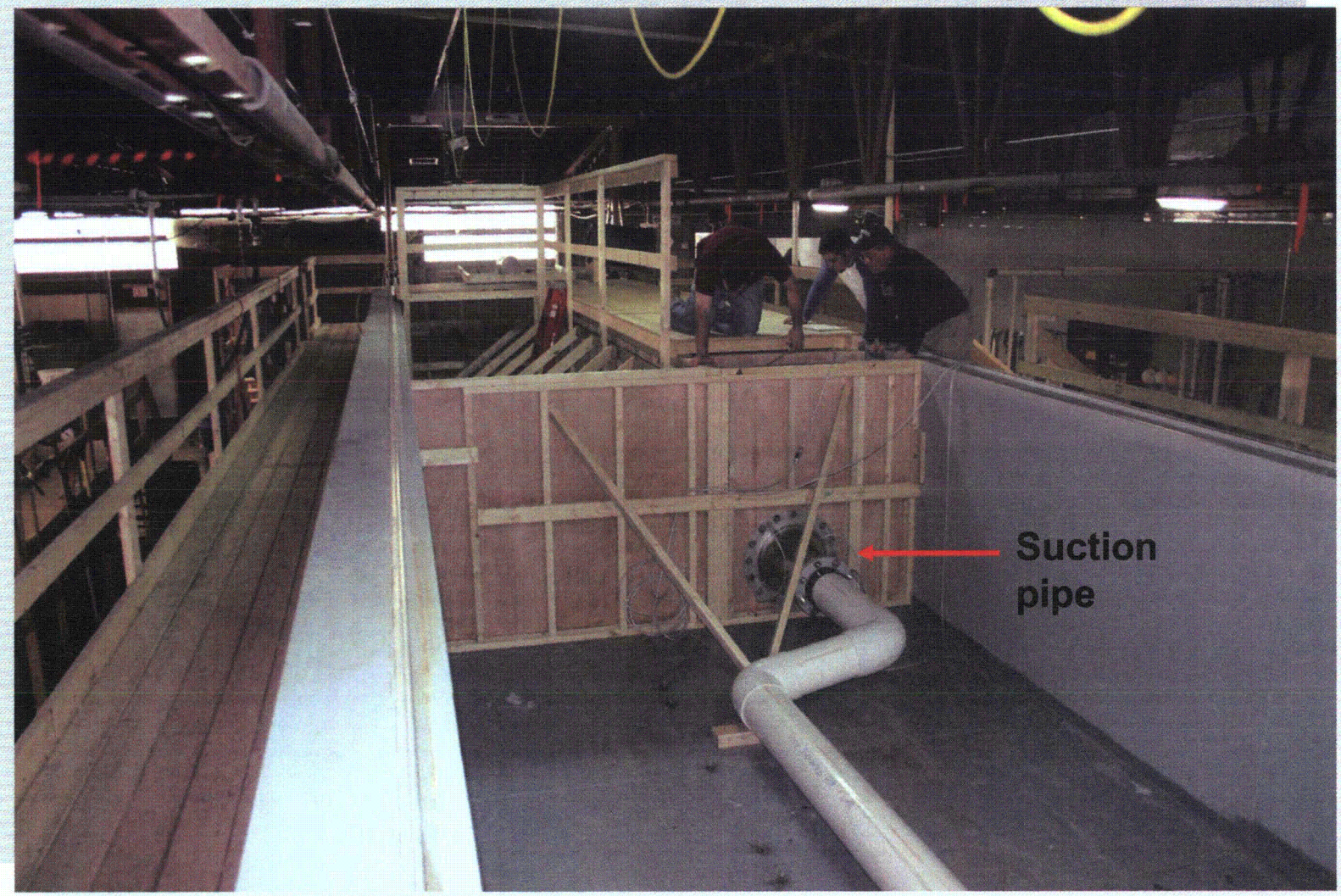
Luminant

Comanche Peak
Emergency Sump Strainer Testing
March 3rd to 6th
2008

Summary

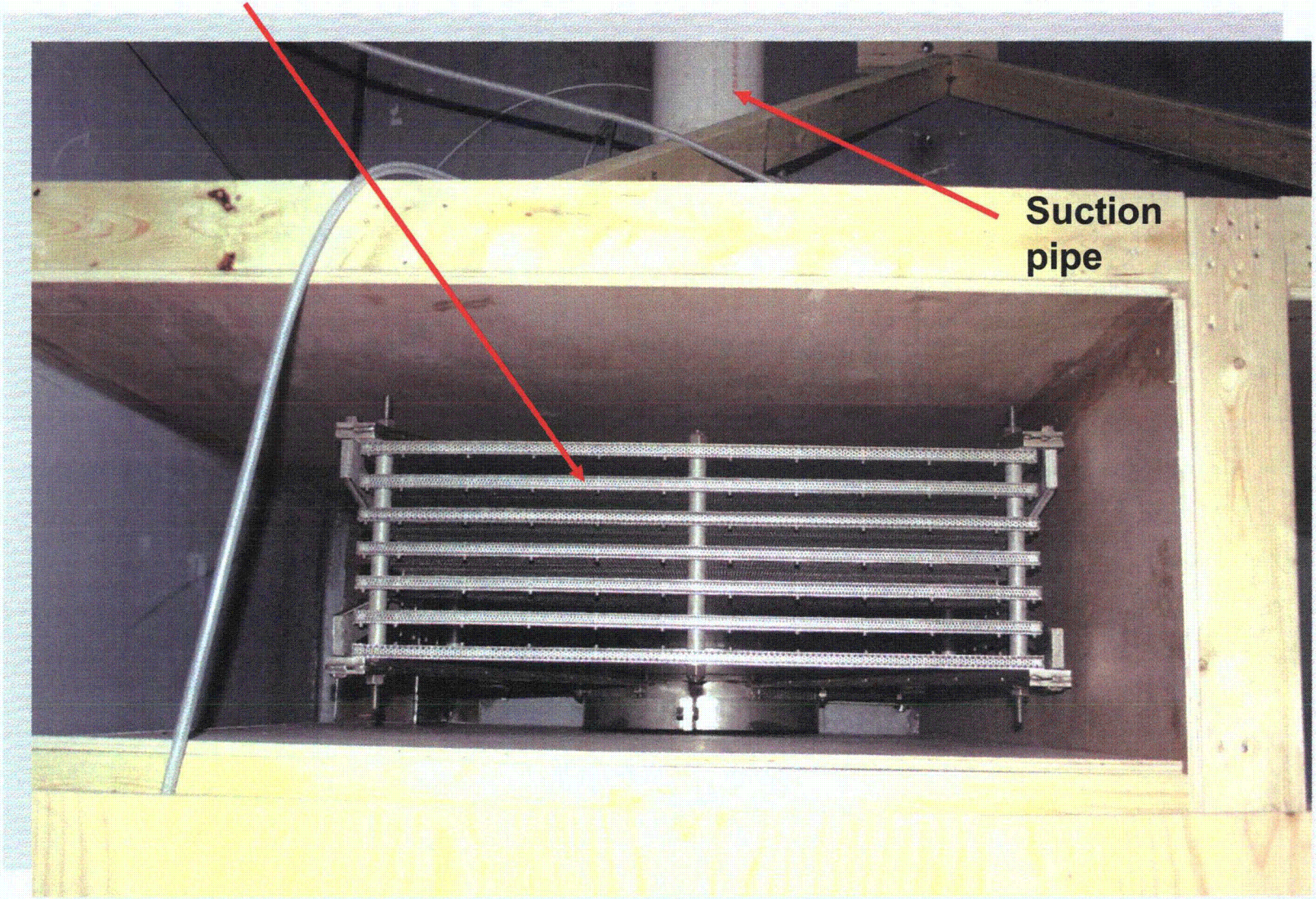
- Test 1 – CSHL < calculated
- Test 2 – Fiber bypass data
- Test 3 – Particulate bypass data
- Test 4 – Maximum Debris Head Loss with Chemicals Passed
- Test 5 – Thin Bed test not required
- Test 6 – Debris Transport Test Successful

Comanche Peak Test Flume built within the large steel tank



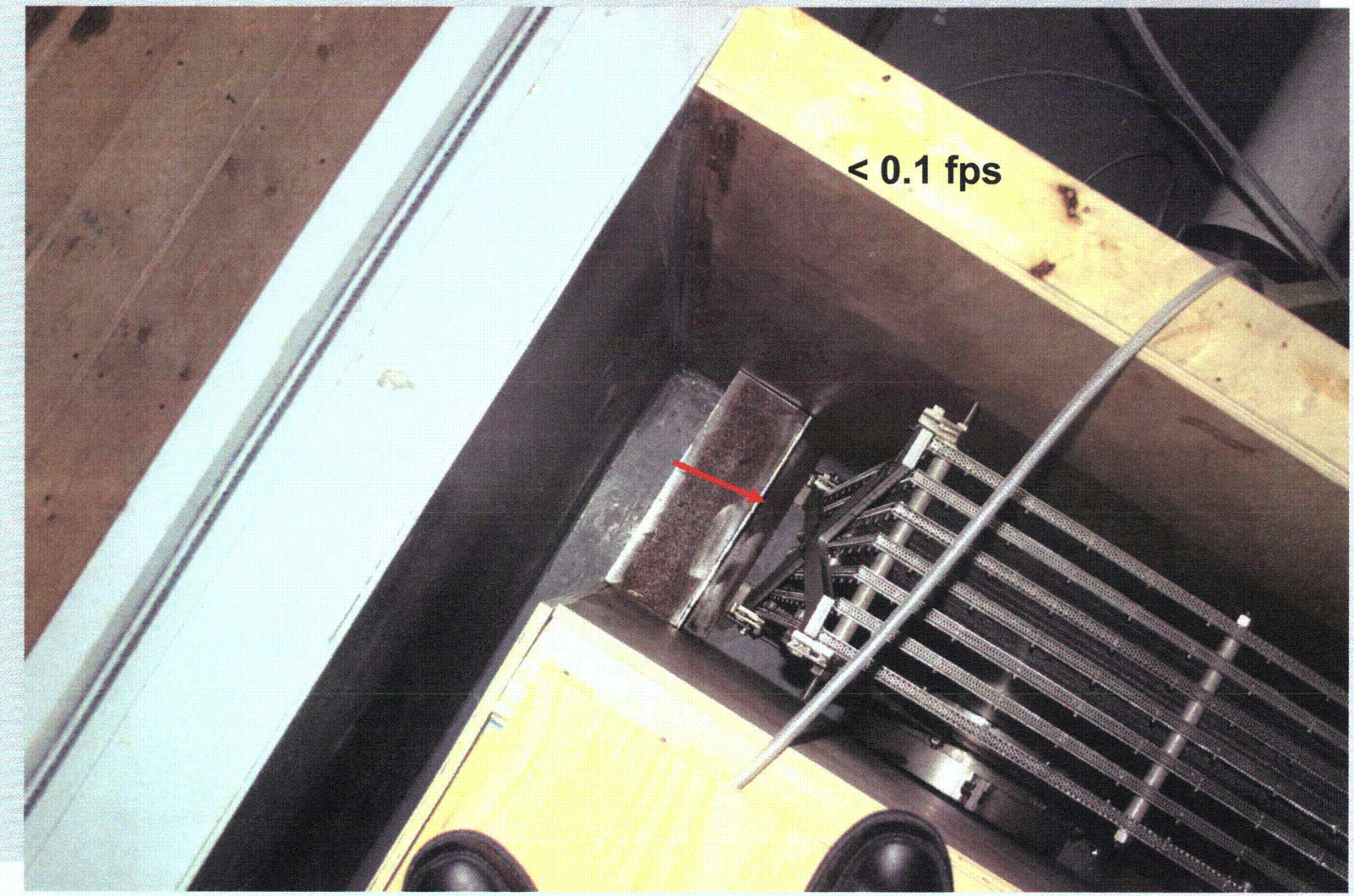
Test 1 Clean Strainer Head Loss

Test Module – 109.5 ft2 [approach velocity 0.0073 fps]



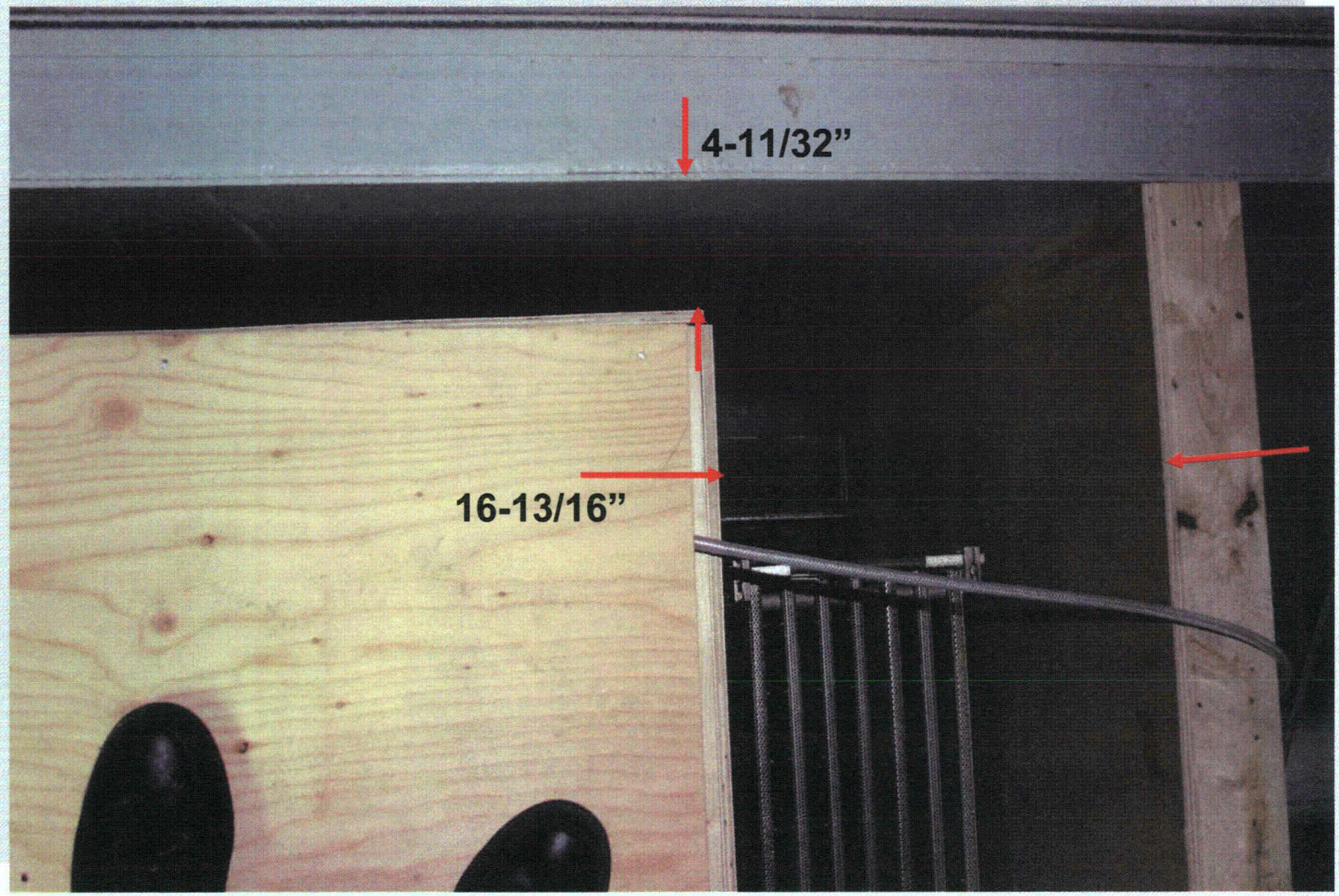
109.5 ft2, net scaling factor 2.9225%

Debris interceptor – 12 inches tall with 6 inch wide top



0.18 fps test vs 0.12 fps avg

Transport Velocity controlled by width of flume/depth of water



Test 1 Clean Strainer Head Loss

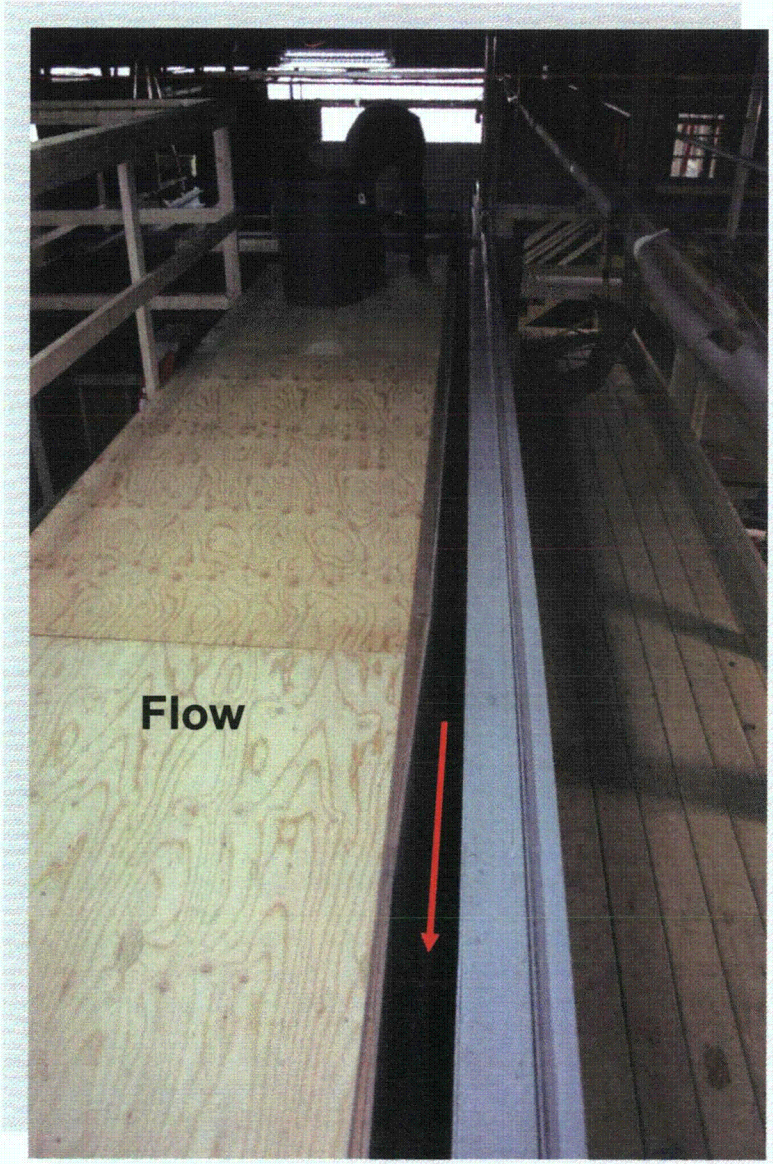
Transport flume –

264 inches

(22 feet)

Max flow –

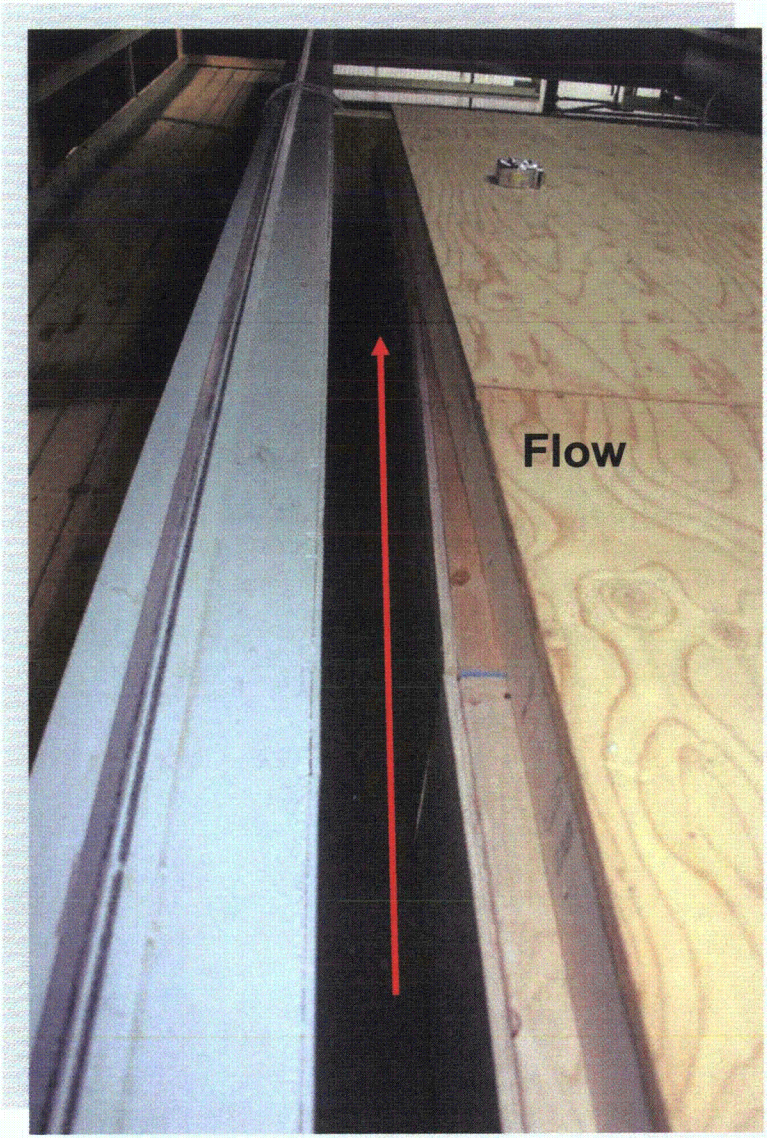
0.62 fps



Supplemental Strainer Testing

Transport

Flume

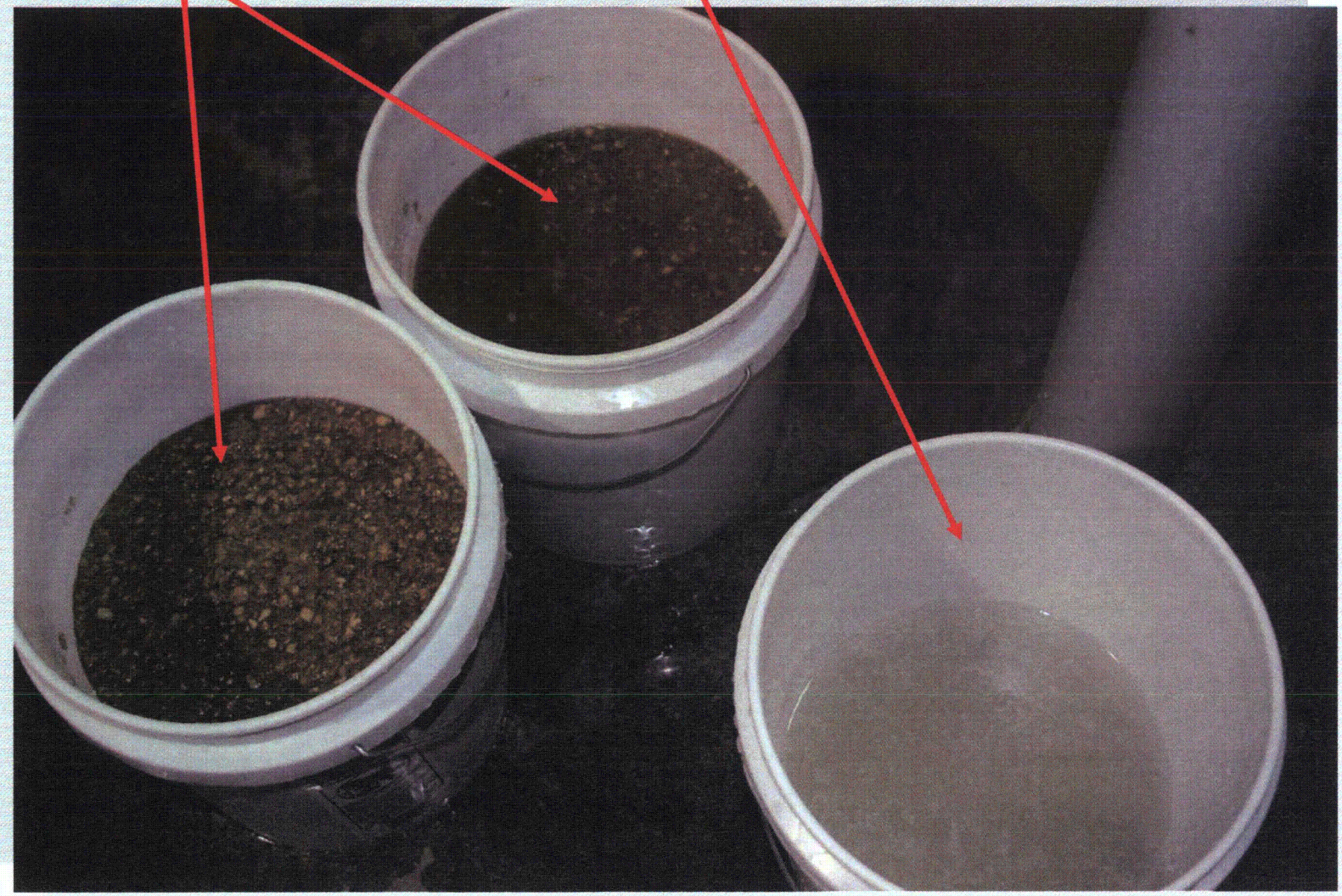


Test 1 Clean Strainer Head Loss

Lead Blanket Cover Fines – 0.97 lbm

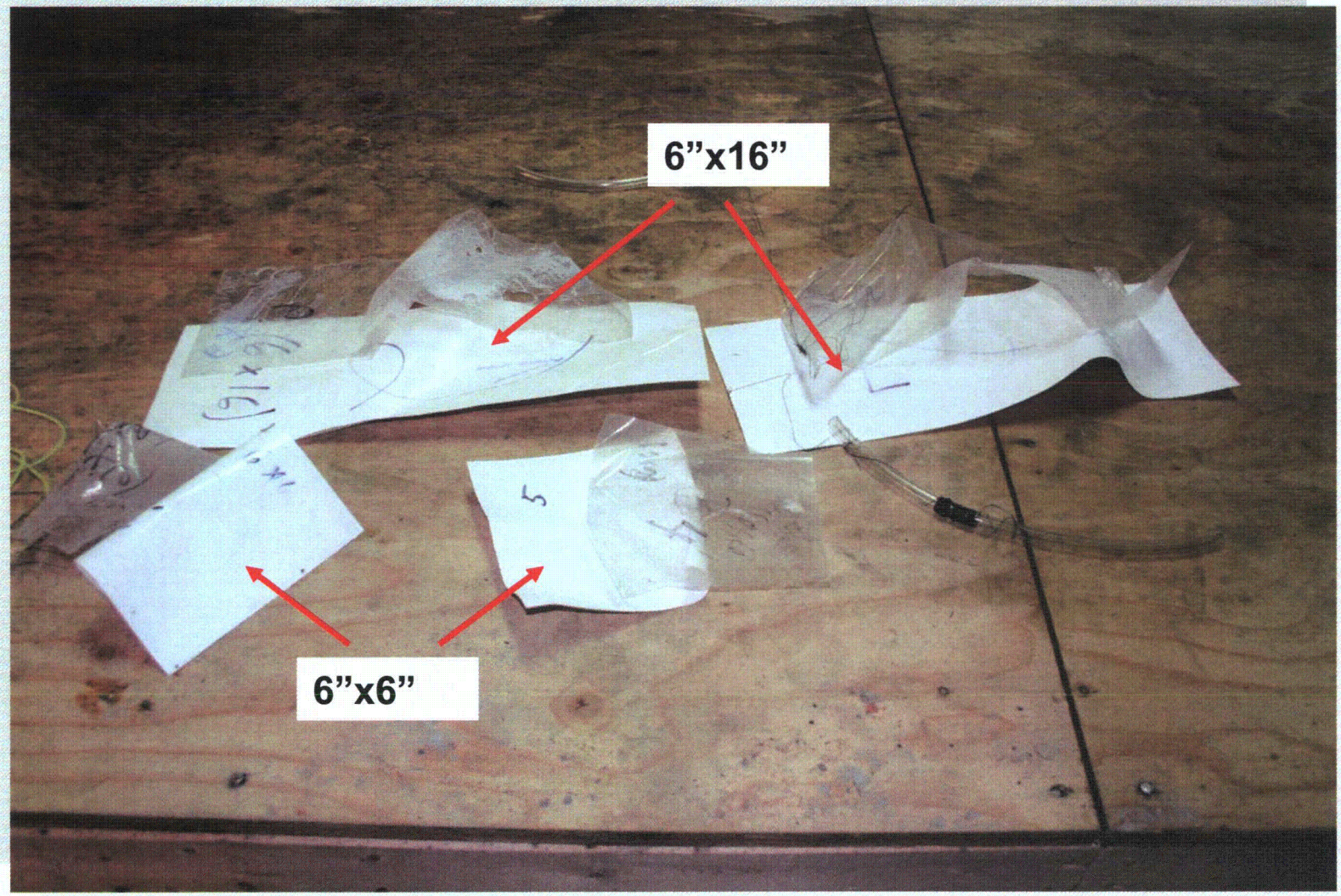
Test 2 Fiber only

LDFG (Nukon) fines – 1.6 lbm, Min-K fiber fines – 0.025 lbm



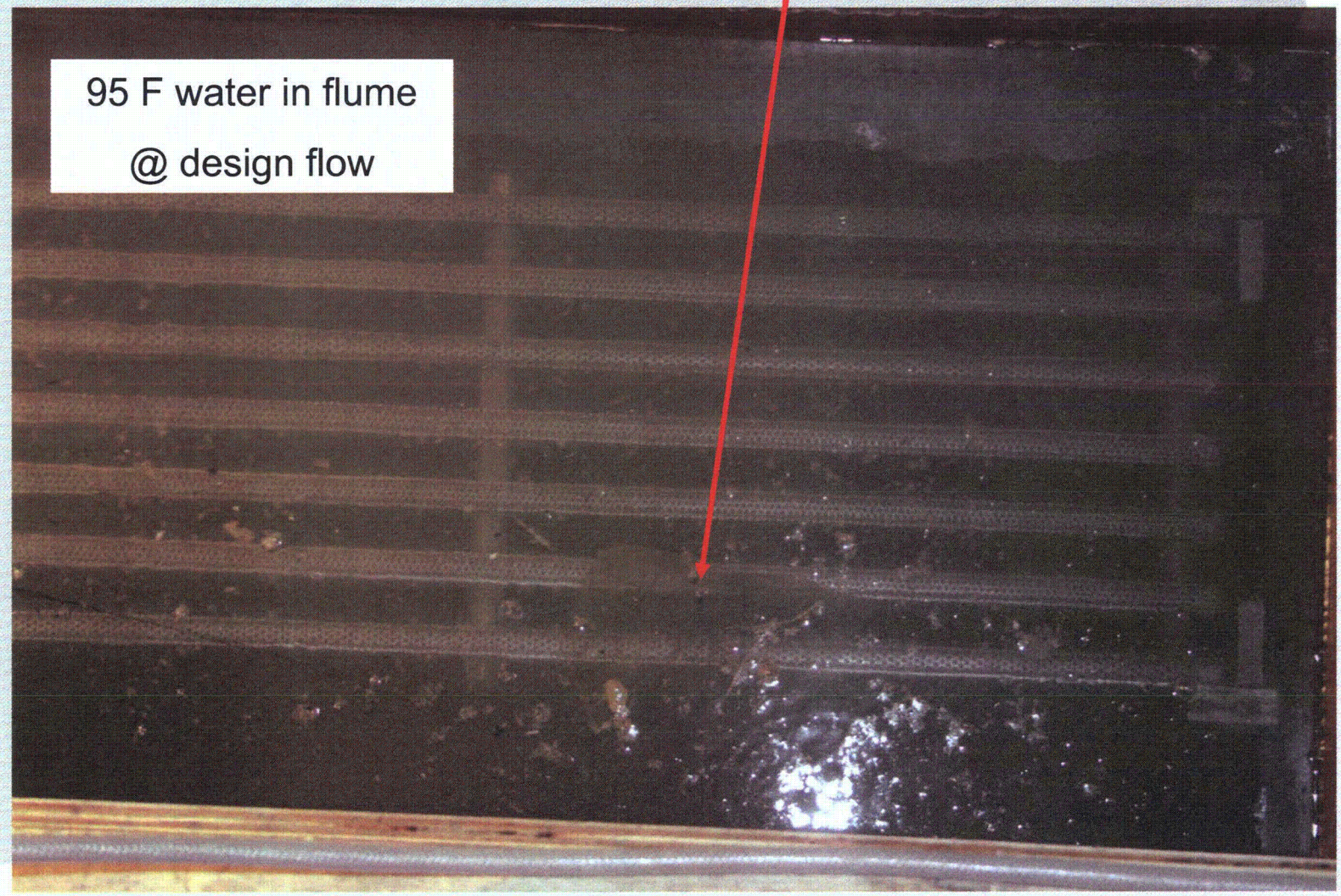
Test 2 Fiber only

Series 1000 Electromark labels – boiled 15 to 20 minutes



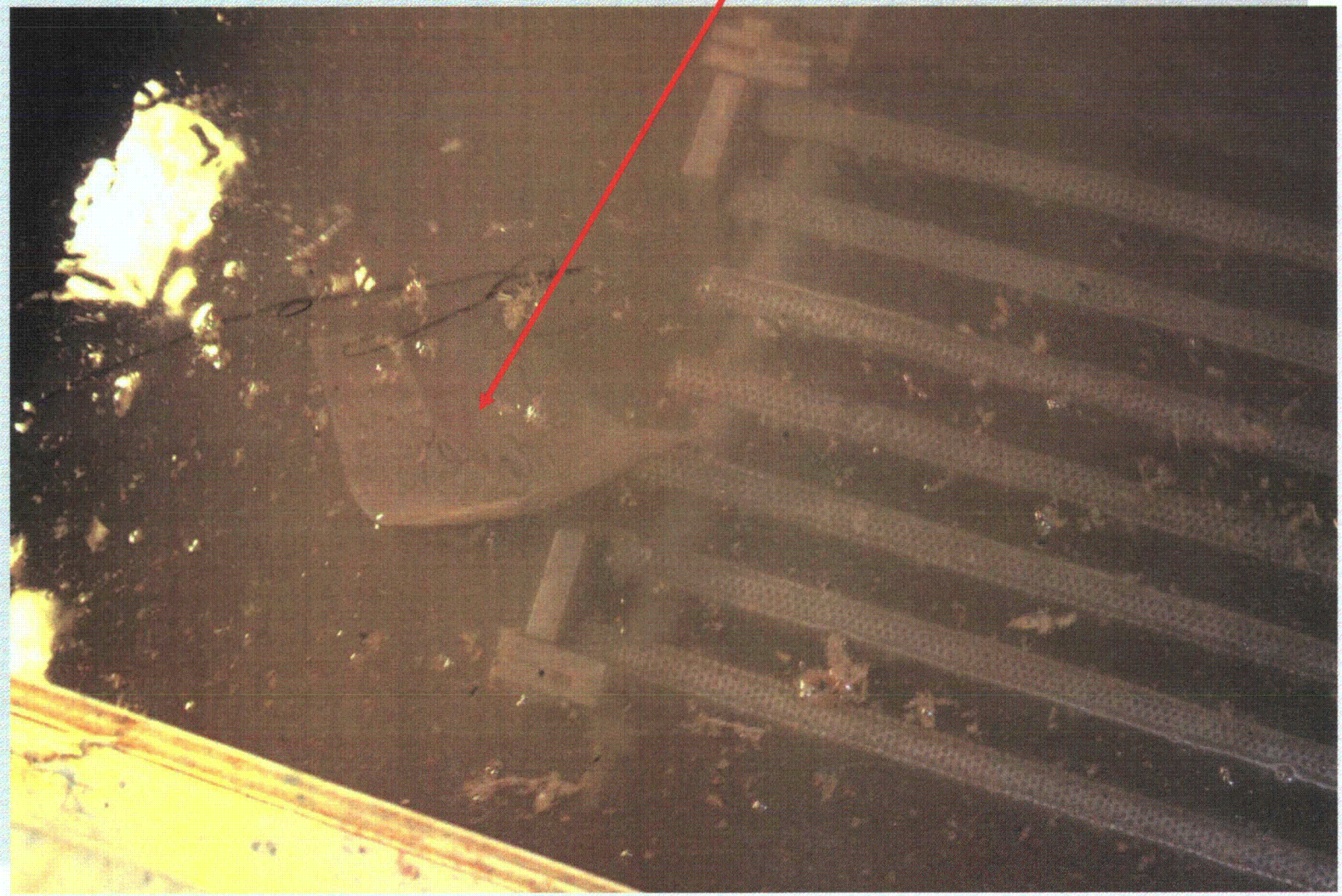
Test 3 Labels

Series 1000 Electromark labels – 6x6 clear vinyl



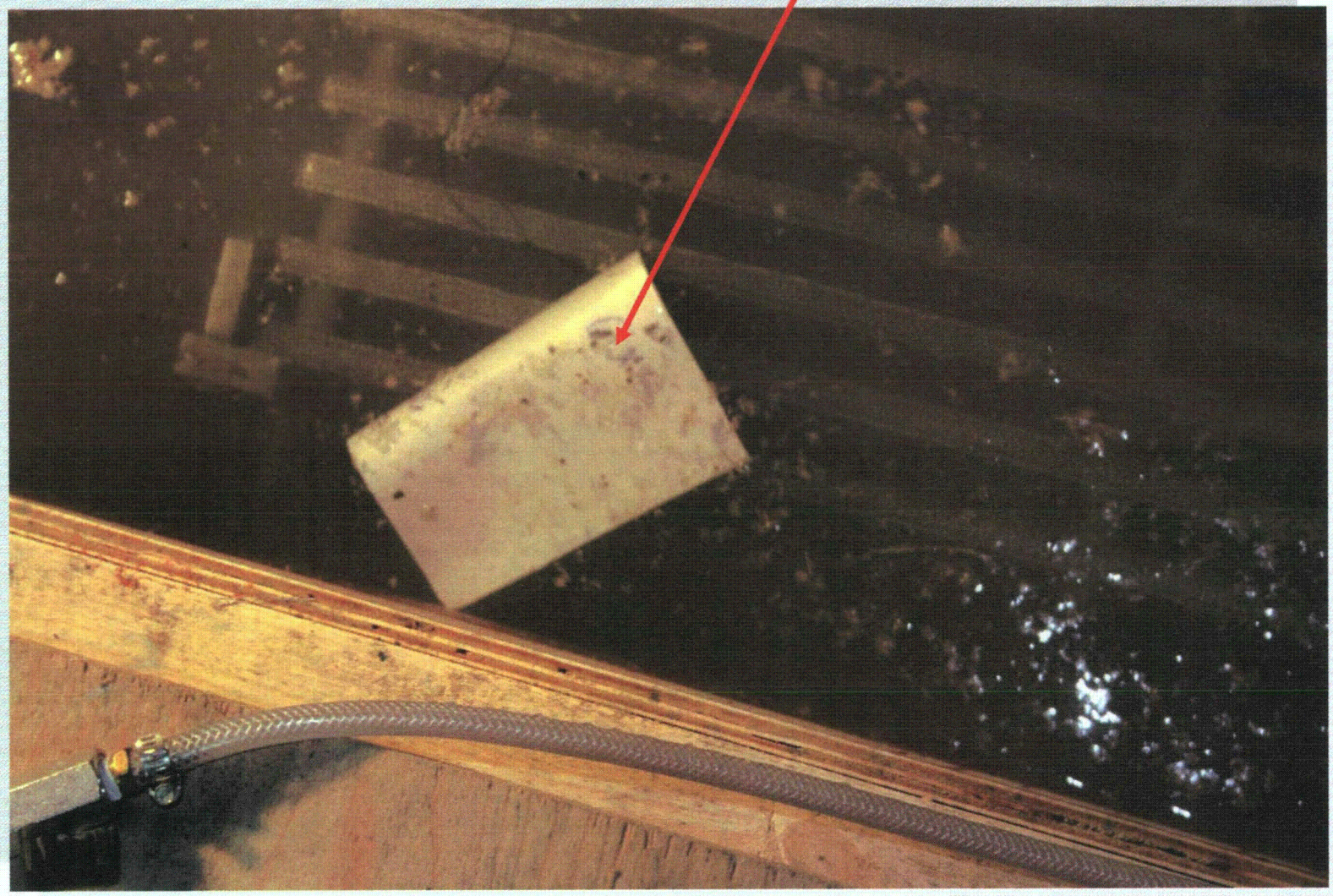
Test 3 Labels

Series 1000 Electromark labels – 6”x6” clear vinyl



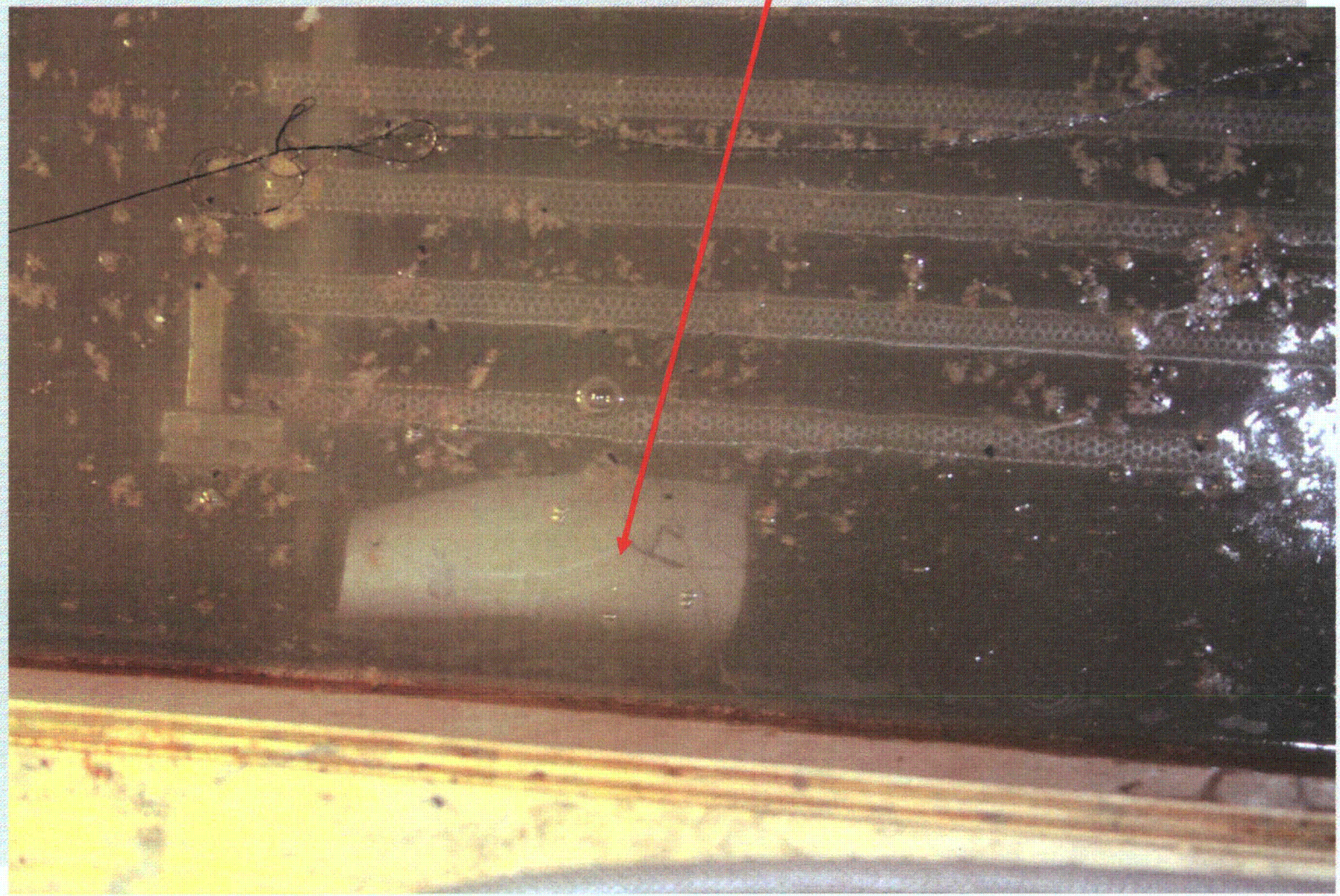
Test 3 Labels

Series 1000 Electromark labels – 6"x6" white vinyl



Test 3 Labels

Series 1000 Electromark labels – 6”x6” white vinyl



Test 3 Labels

Series 1000 Electromark labels – 6”x16” white vinyl

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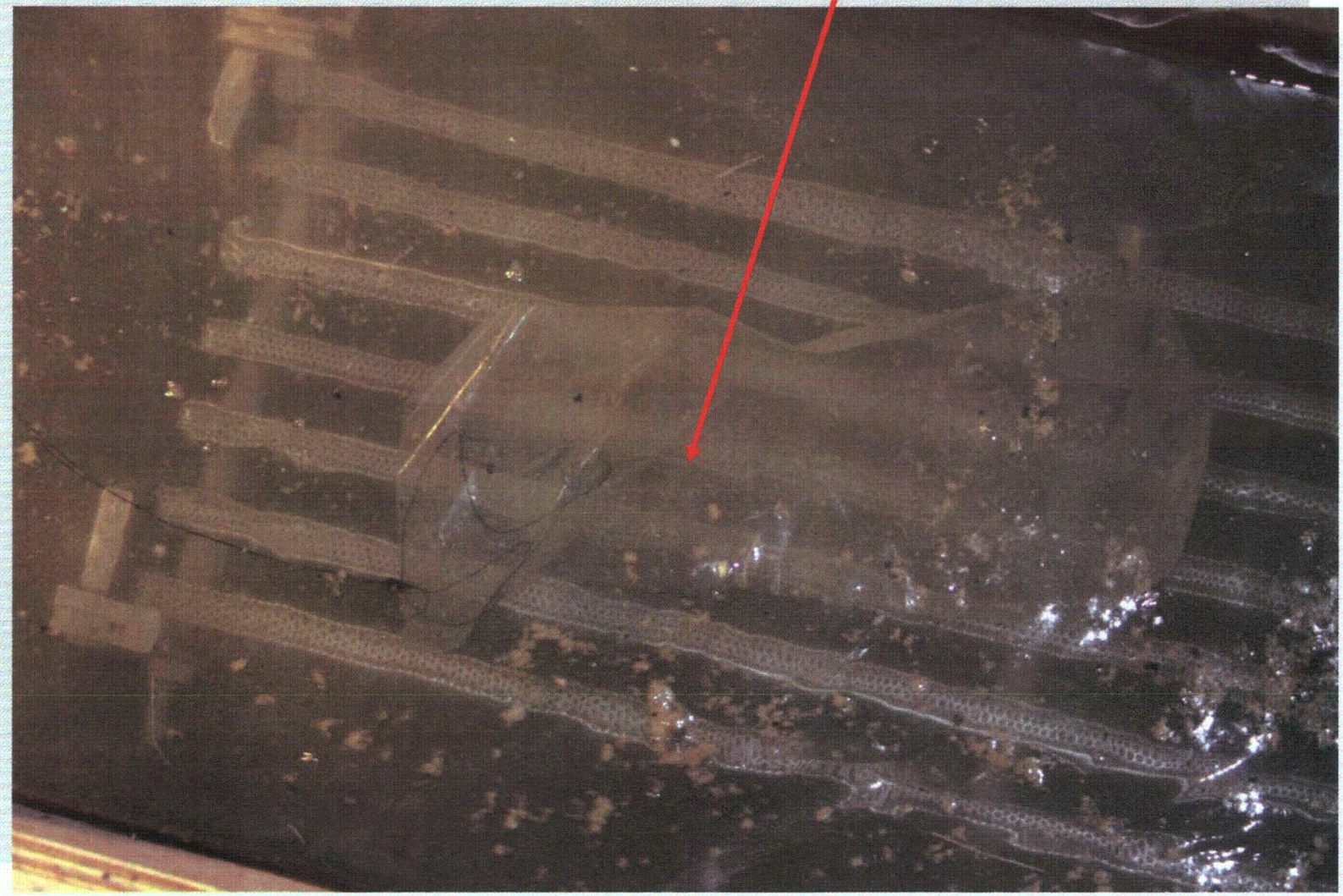

Test 3 Labels

Series 1000 Electromark labels – 6"x16" clear vinyl

Test 3 Labels