U.S. Consumer Product Safety Commission
LOG OF MEETING

OF
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2003 JUL 24 A 7:3

SUBJECT: Discussion of Ignition Sources Used in Barrier Fabric Testing

DATE OF MEETING: July 8, 2003

LOG ENTRY SOURCE: Linda Fansler, LS LF

DATE OF LOG ENTRY: July 14, 2003

LOCATION: U. S. Consumer Product Safety Commission, Laboratory Sciences, 10901 Darnestown Rd. Gaithersburg, MD

CPSC ATTENDEE(S):

Dale Ray, EC, Upholstered Furniture Project Manager
Andrew Stadnik, AED, Laboratory Sciences
Linda Fansler, LS
Gail Stafford, LS
Weiying Tao, LS
Allyson Tenney, ES
Rik Khanna, ES

NON-CPSC ATTENDEE(S):

Dr. Herman Forsten, DuPont
Ms. Audrey Thompson, DuPont
Ms. Jessica Franken, INDA, Association of the Nonwoven Industry
Ms. Patty Adair, American Textile Manufacturers Institute
Mr. Phillip J. Wakelyn, National Cotton Council of America

6 (b) CLEARED: 7-24-03
✓ No Mfrs Identified
Excepted
Mfrs Notified
Comments Processed

SUMMARY OF MEETING: CPSC staff met with Dr. Herman Forsten of DuPont to discuss testing barrier fabrics with alternate ignition sources. CPSC staff is familiar with using a No. 5 wooden crib from the British Standard BS5852 as an igntion source but wanted to discuss DuPont's use of a gas burner to test barrier fabrics and materials. DuPont is conducting this testing as part of an effort by a American Furniture Manufacturers Association Flammability Task Group.

Dr. Forsten described the burner used at DuPont and reviewed some of their test results. The propane fed "T"shaped burner is applied for 40 seconds to the back of the mockup. Members of the Task Group feel this approach more closely resembles the challenge to the barrier from a burning cover fabric.

Dr. Forsten indicated a few tests have been conducted on sheet and high loft barrier fabrics. Some of the barrier fabrics tested self-extinguished, providing protection to the CAL 117 foam beneath. Dr. Forsten stated that additional tests are planned to further refine this burner approach.

Proposed TB-117 Barrier Burn Test

- Scouting work by AFMA Flammability Task Group

Objective:

- CBHF formed task group to develop a test method for qualifying barrier fabric for use with rev. TB-117

- Aim to develop gas burner test (to avoid wood cribs)

Status:

- Using rev. TB-117 composite test frame, barrier is tested over new TB-117 foam

- Ignition source is a modified "T" burner 12" with 11 holes evenly spaced on each side of "T".

- Burner uses propane @6.5 lpm (1/2 the TB-133 square burner flow rate)

Status (cont.)

- Burner positioned 1″ from back and 1/2″ above seat.
- Flames are impinged directly against back for 40sec.
- Measure: - wt. loss
  - temperature rise in foam
  - after flame

Tests Conducted

- Have evaluated several barriers:
  - Hi-loft batting types
  - Nonwoven sheet structures

Compared "T" Burner to Crib #5

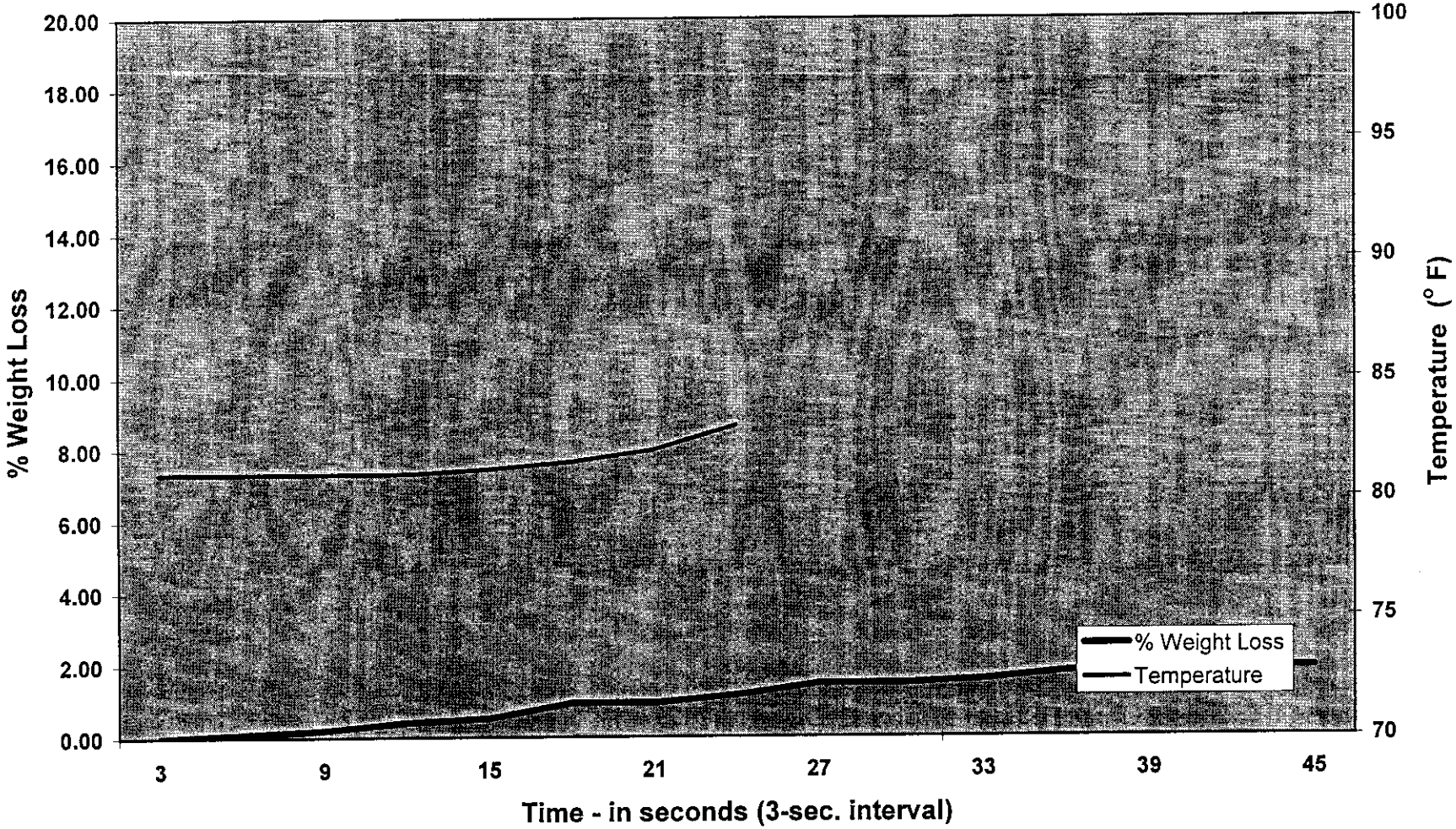
- A good barrier can pass either test
- "T" burner involves a much larger area similar to what might be expected for burning cover fabric
- Crib #5 burn confined to small area and not typical of small flame ignition effect

Pathforward:

- Review results with CBHF Barrier Task Group
- Look to obtain agreement to quantify procedure

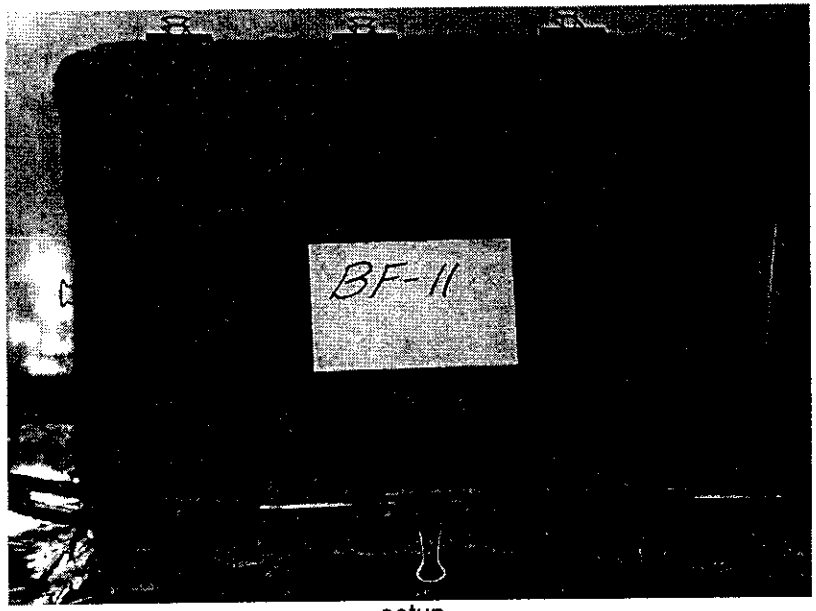
Vertical Panel Burn-through of BF-11 on Cal-117

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Item BF-11 on Cal-117



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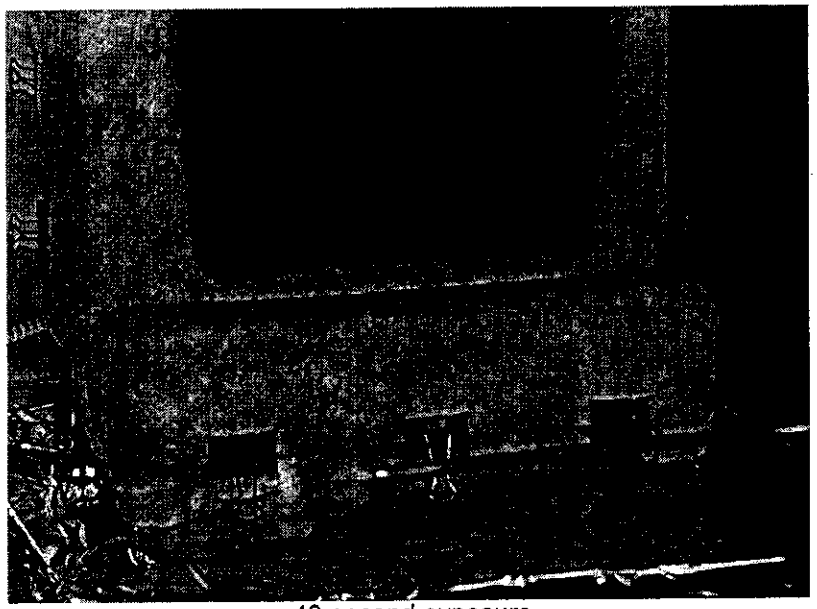
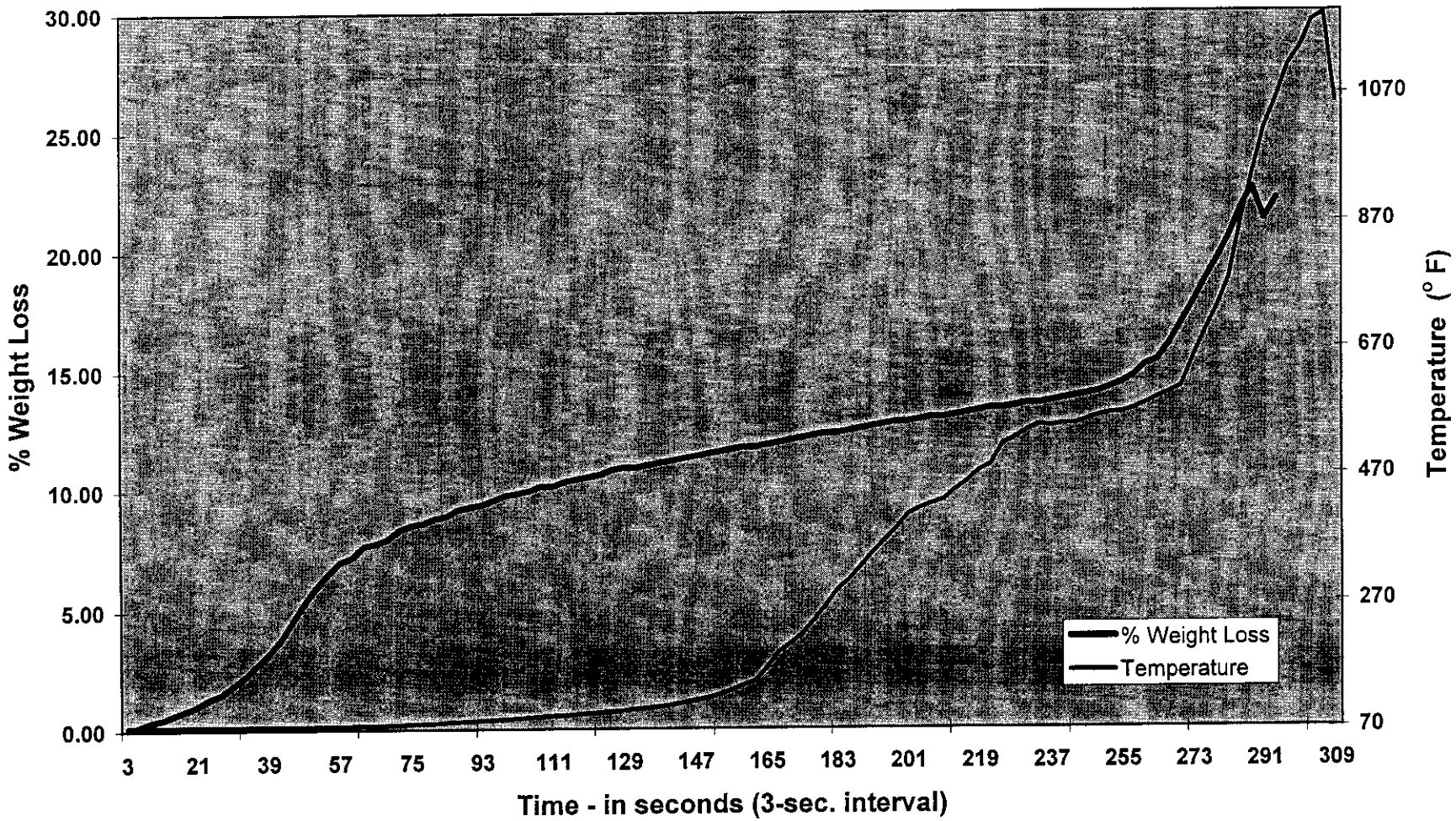

40-second exposure

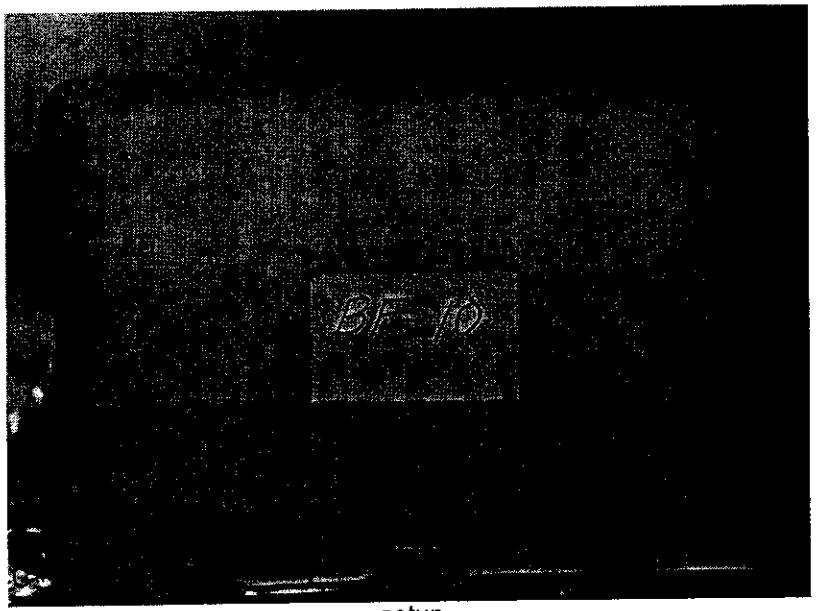
Vertical Panel Burn-through of BF-10 on Cal-117

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Item BF-10 on Cal-117



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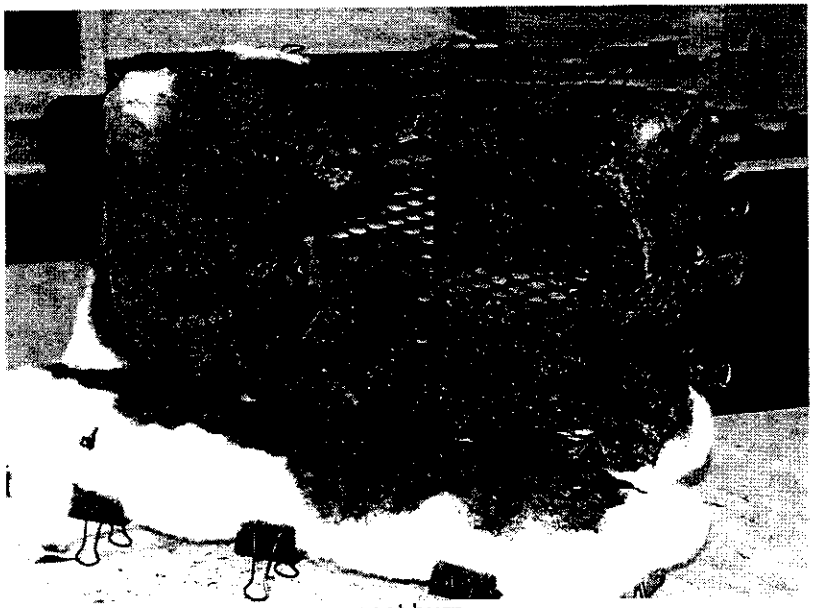
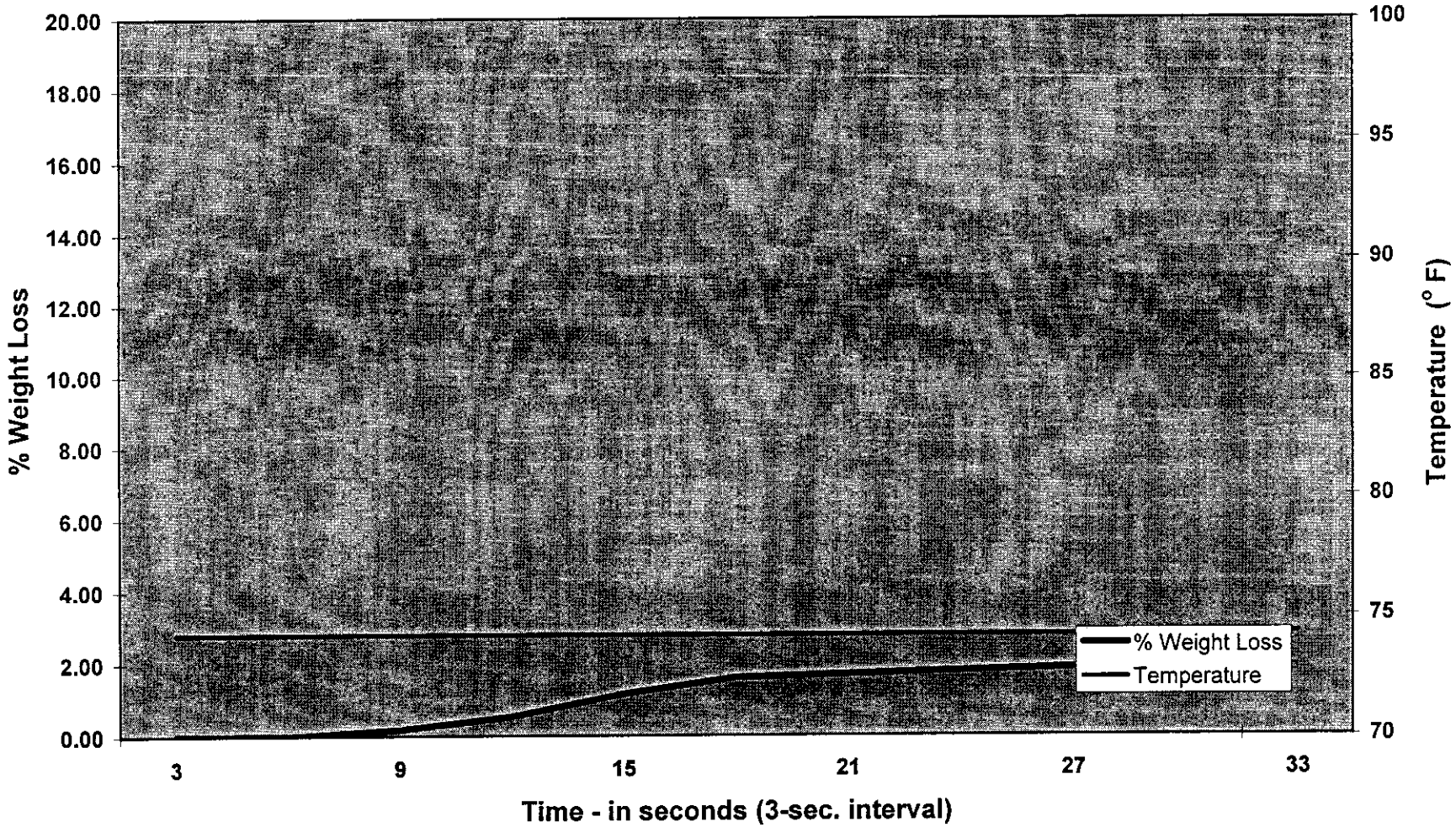


post burn

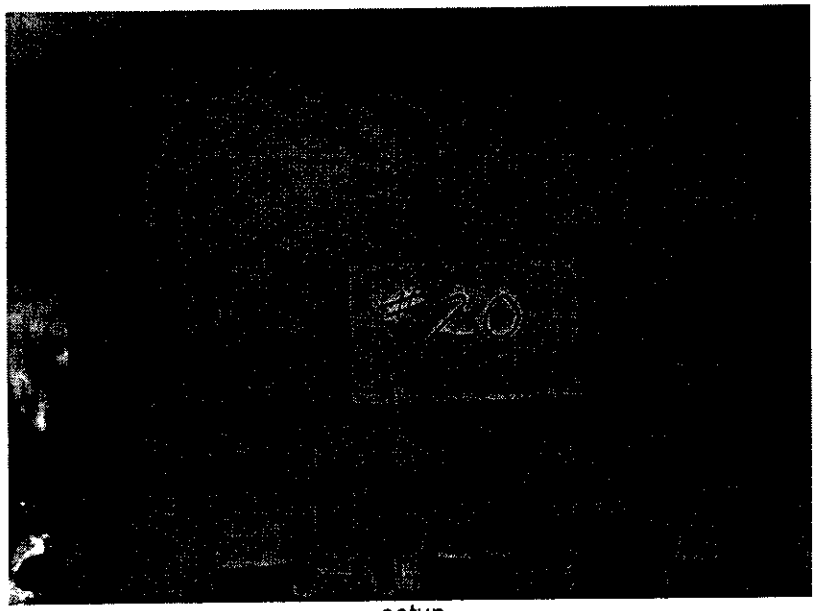
Vertical Panel Burn-through of #20 on Cal-117

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Item #20 on Cal-117



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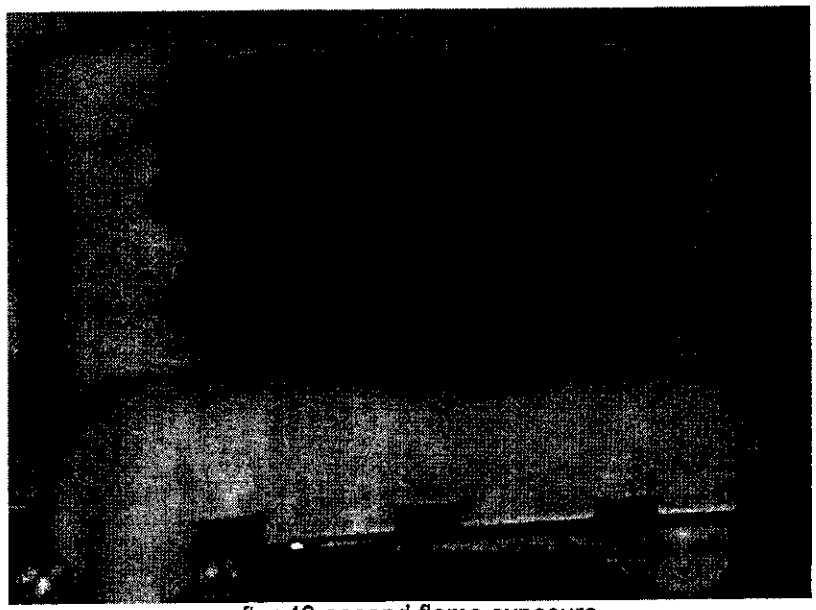
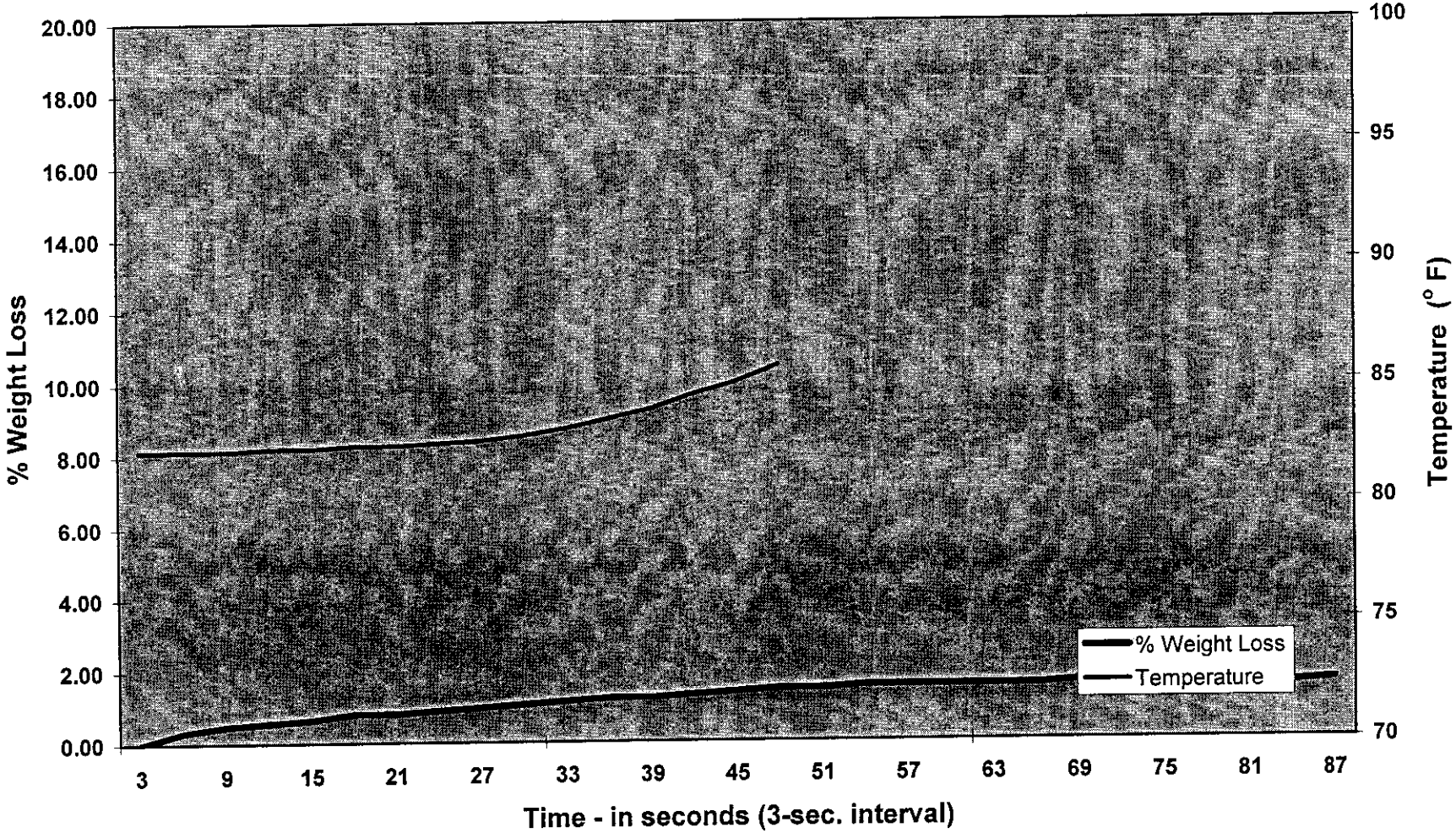


after 40-second flame exposure

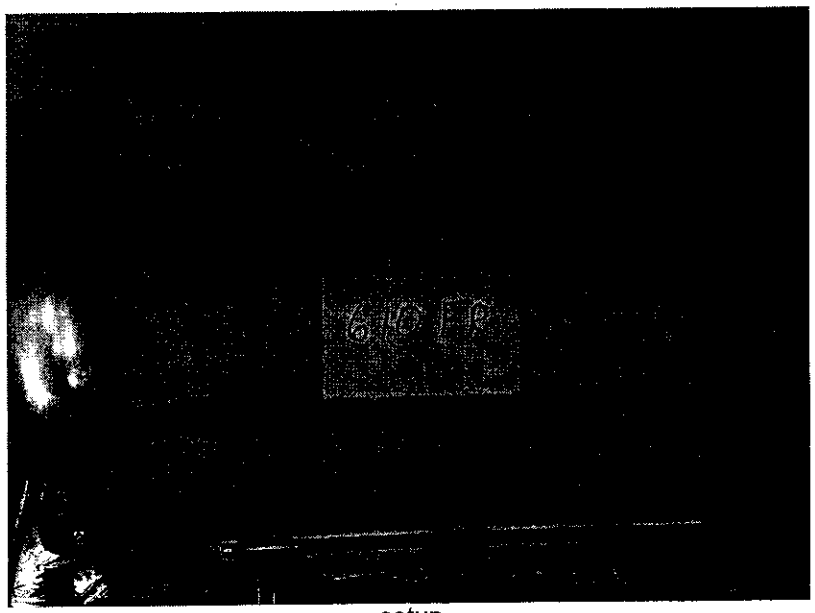
Vertical Panel Burn-through of 610 FR on Cal-117

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Item 610 FR on Cal-117



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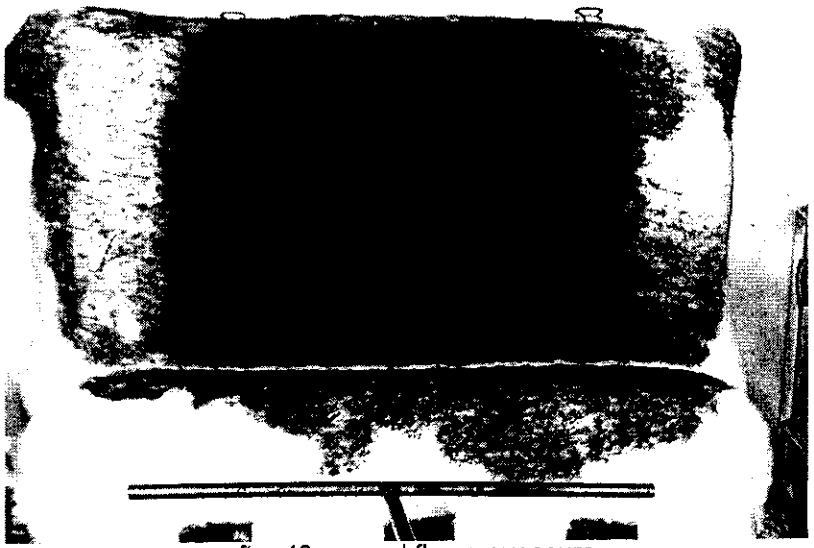
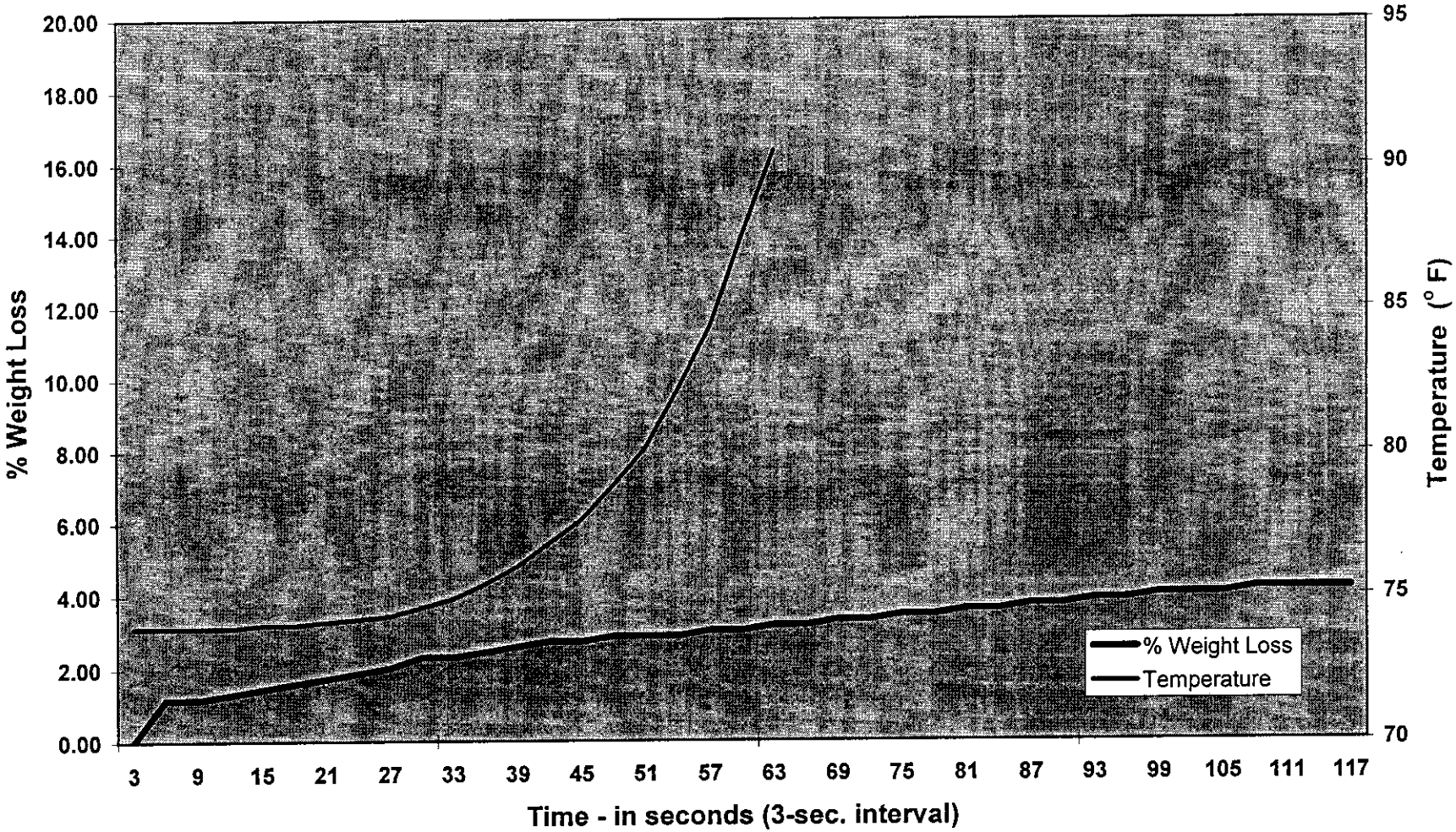

after 40-second flame exposure

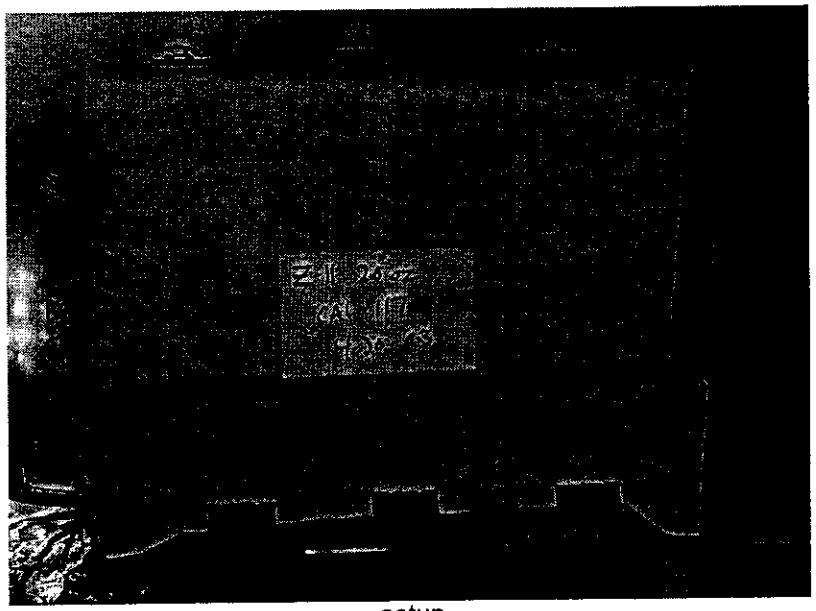
Vertical Panel Burn-through of Z-11 2.0 oz. on Cal-117

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Z-11 2.0 oz. on Cal-117



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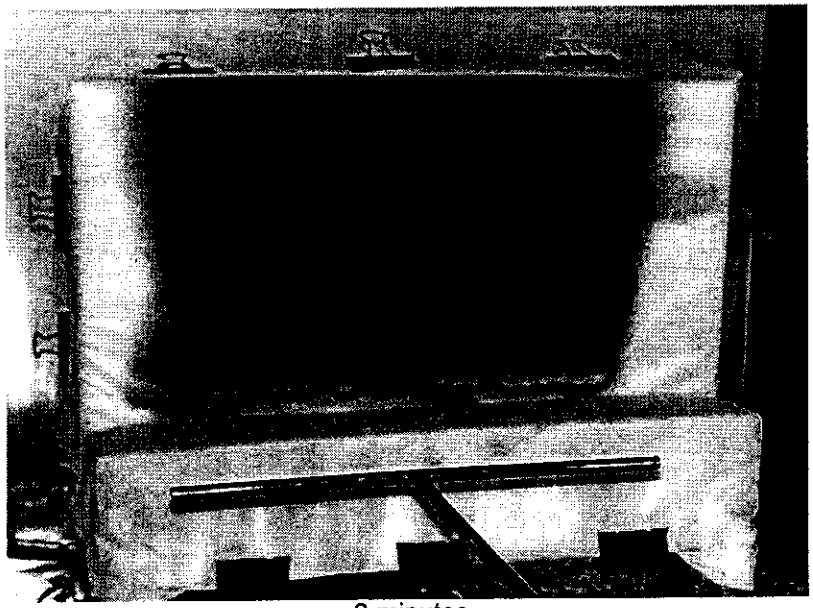
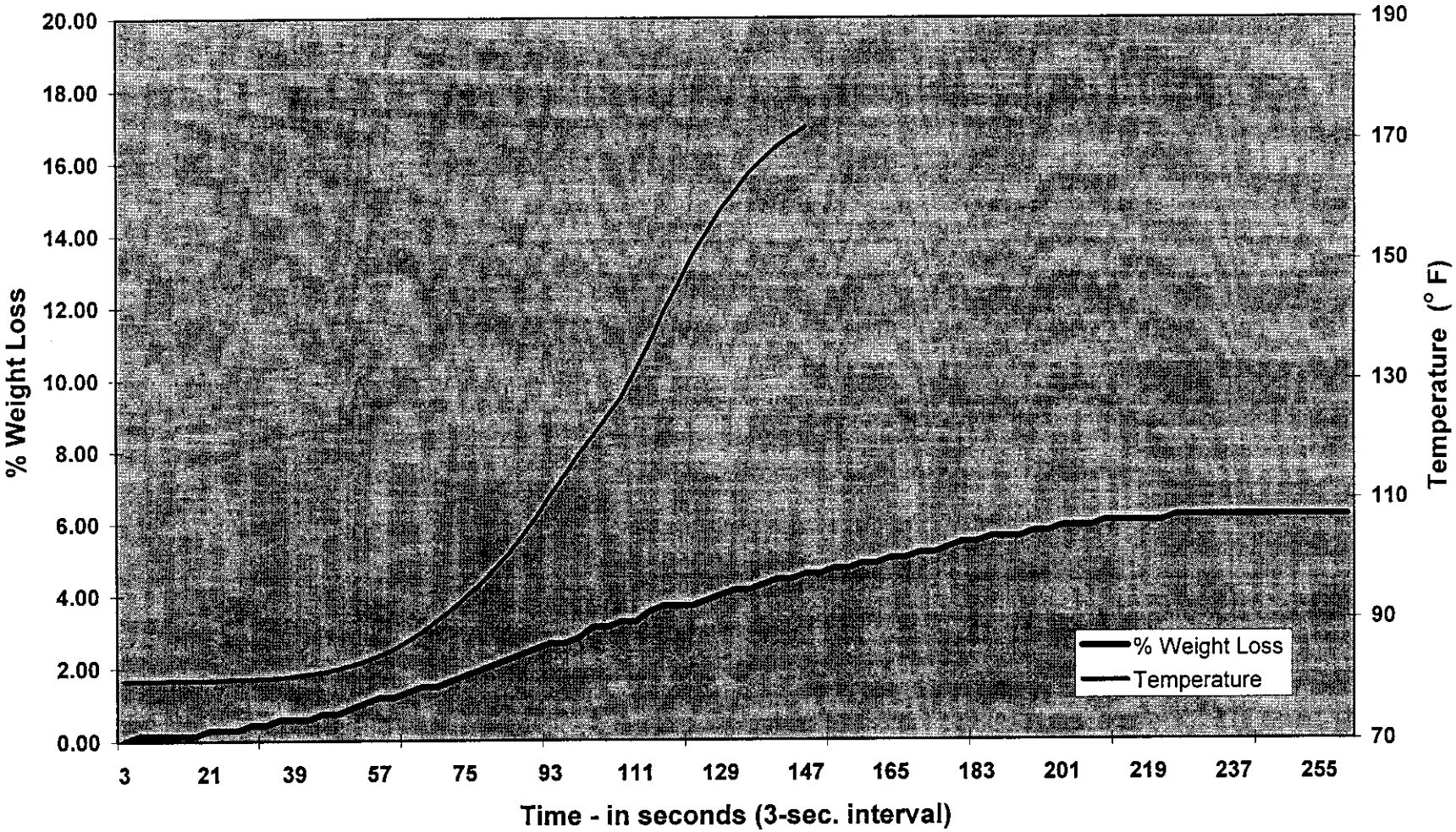


2 minutes

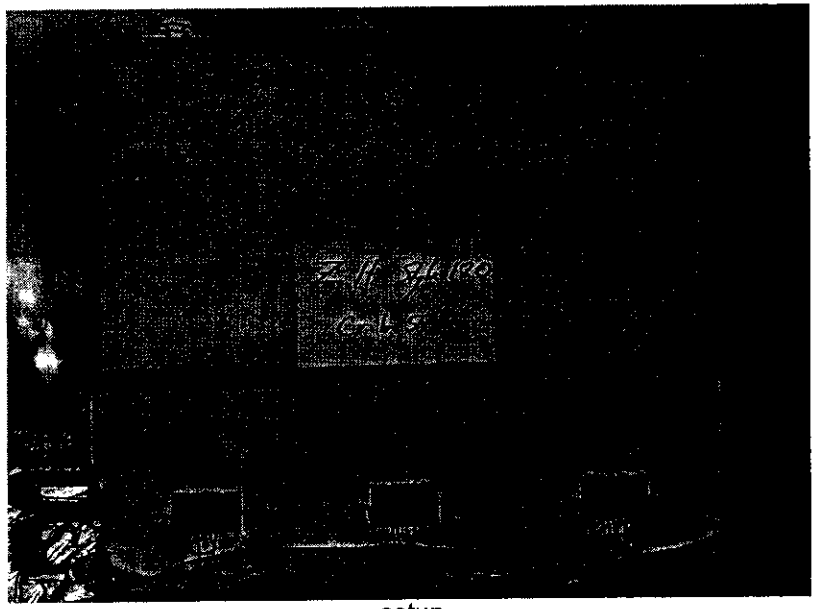
Vertical Panel Burn-through of Z-11 2.0 oz. on Cal-117, crib 5

30-APR-03



Note: "T" burner propane flow = 6.5 l/min.

Z-11 2.0 oz. on Cal-117, crib 5



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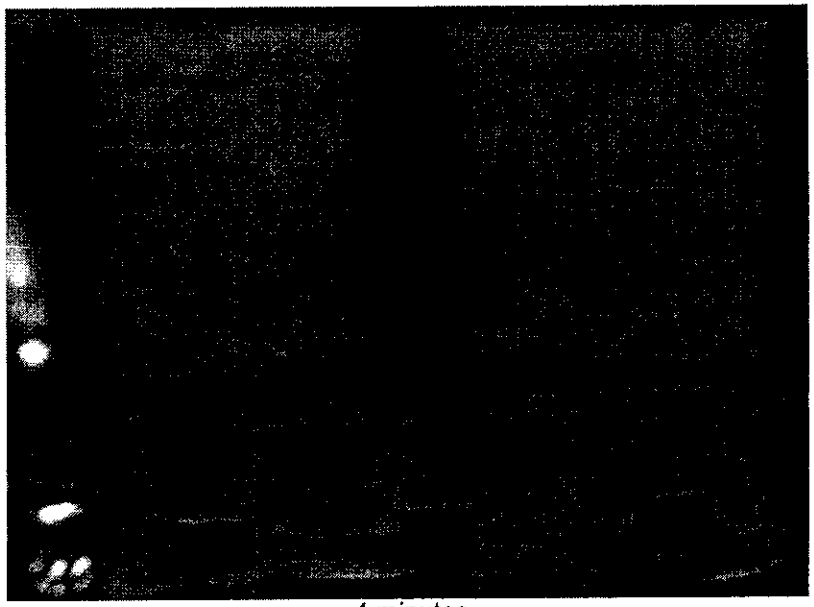

4 minutes