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EMECO INDUSTRIES INC.
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Project No.: 100077856GRR-001B
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Test Report For:
EMECO INDUSTRIES INC.
CALIFORNIA TB-133
FURNITURE SEATING FIRE TEST
111 Navy Chair


Dorian Bako
Project Manager


James Jantz
Reviewer

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CALIFORNIA TB-133 TEST PROCEDURE

Flammability Test Procedure for Seating
Furniture for use in Public Occupancies

Test Procedure:

The submitted sample was tested according to the procedure outlined in the Bureau of Home Furnishing's Technical Bulletin Number 133, dated January, 1991.

Test Ignition Source:

Square Gas Burner as described in Appendix C.

Test Sample Conditioning:

Pre-conditioned 48 hours at $70 \pm 5^{\circ}\text{F}$ and relative humidity of less than 55%.

Test Criteria:

Seating furniture fails to meet the requirements of Technical Bulletin 133 under Group A if any of the following criteria are exceeded:

Criteria Group A:

1. Temperature increase of 200°F or greater at the ceiling thermocouple.
2. A temperature increase of 50°F or greater at the four (4) foot thermocouple.
3. Greater than 75% opacity at the four (4) foot smoke opacity monitor.
4. Carbon monoxide concentration shall not continuously exceed 1000 ppm for five (5) minutes.
5. Greater than 3 lbs. weight loss in the first ten (10) minutes of test.

Seating furniture fails to meet the requirements of Technical Bulletin 133 under Group B if any of the following criteria are exceeded:

Criteria Group B:

1. A maximum rate of heat release of 80 kW or greater.
2. A total heat energy release of 25 MJ or greater in the first 10 minutes of the test.
3. Greater than 75% opacity at the four (4) foot smoke opacity monitor.
4. Carbon Monoxide concentration shall not continuously exceed 1000 ppm for five (5) minutes.

Date Received: 04/02/10
Date Tested: 04/09/10

Test Sample Description (per EMECO INDUSTRIES INC.):

Product: 111 Navy Chair
Model Number: 1011
Condition of Samples: Production
Fabric Type: N/A
Fabric Color: N/A
Blocking Description (if present): N/A
Filler Description (order of layering): Plastic
Seat Cushion Dimensions: Not Stated
Back Cushion Dimensions: Not Stated
Arm Description (if present): N/A
Additional Comments: None Stated

Test Procedure:

Conduct the California TB-133 Seating Product Burn Test on the **111 Navy Chair**. Determine if the submitted sample meets the test requirements.

Acceptance Criteria:

The acceptance level criteria are listed in the summation table on the following page.

Conclusion:

The test results show that the **111 Navy Chair** passed both Criteria A and Criteria B of the California TB-133 Burn Test.

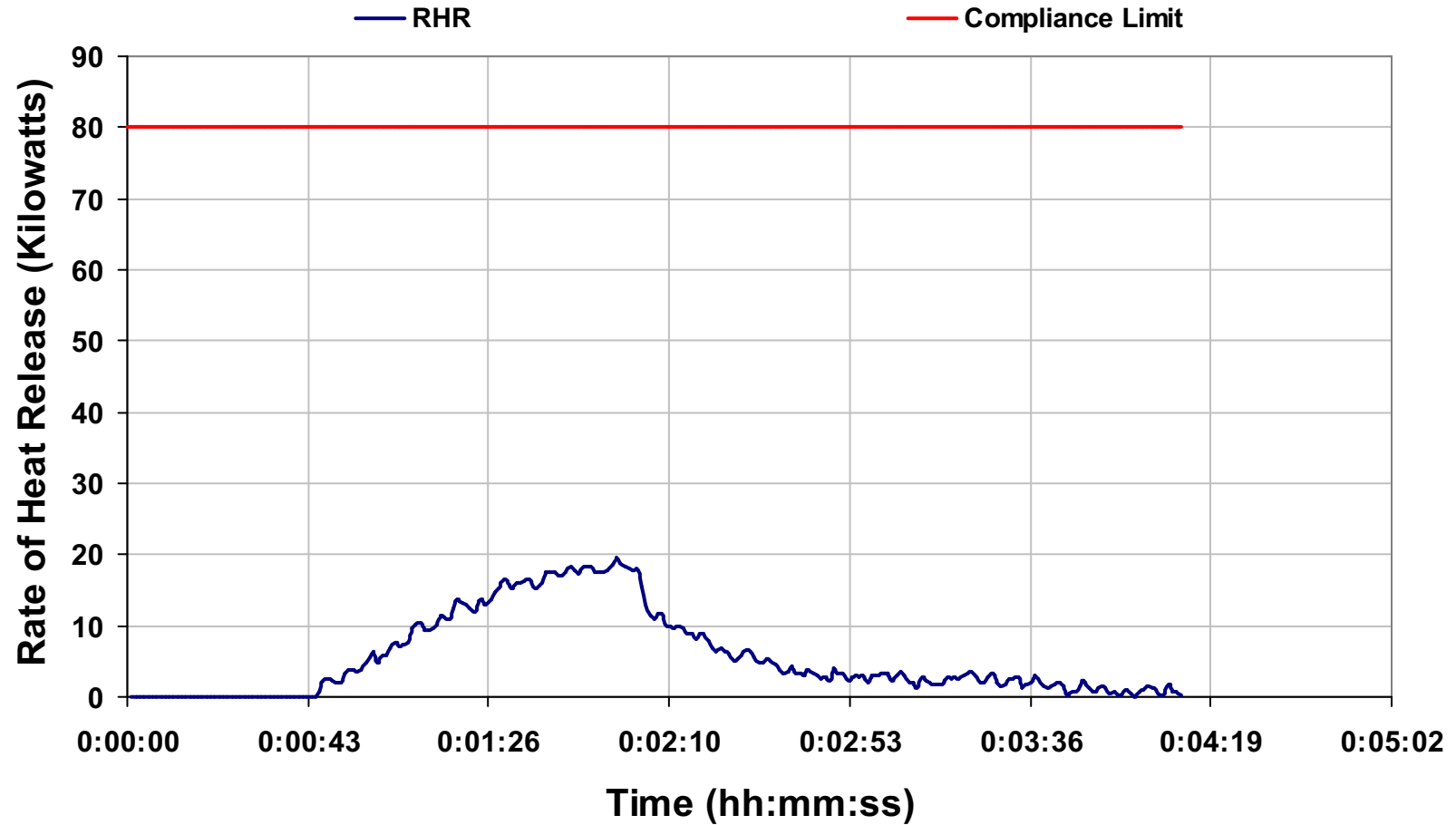
Test Equipment:

Asset No.:	Description:	Cal Due:
138245	SCALE	05/06/2010
138051.9	SMOKE DENSITY MONITOR 0-100%	VBU
138051.26	CARBON MONOXIDE / DIOXIDE ANALYZER	VBU
138051.18	OXYGEN ANALYZER	06/01/2010
138181	DPI DIFFERENTIAL PRESSURE TRANSDUCER	02/03/2011
138112	GRADUATED RULE 36"	08/27/2013
138051.4	FLOW METER 0-15 SLM PROPANE	06/23/2010
138185	STOPWATCH	12/08/2010

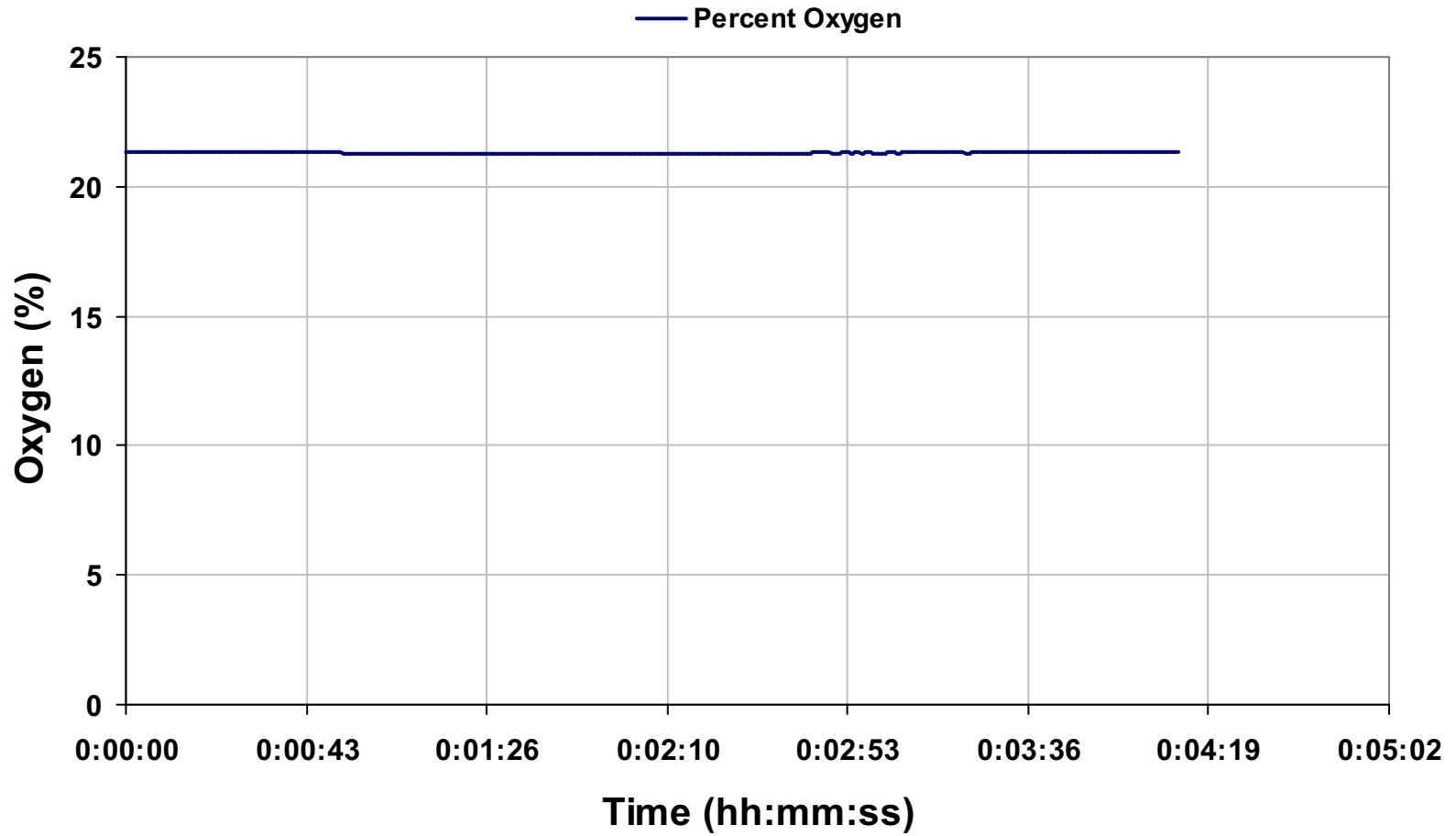
CALIFORNIA TB-133 FIRE TEST SUMMATION

	Criteria	Actual Value	Pass/Fail
8' Temp. Increase, (maximum), °F	$\leq 200^{\circ}\text{F}$	84 °F	Pass
4' Temp. Increase, (maximum), °F	$\leq 50^{\circ}\text{F}$	6 °F	Pass
4' Smoke Opacity, (maximum), %	$\leq 75\%$	3 %	Pass
CO concentration (maximum), ppm	N/A	296 ppm	N/A
Time CO is greater than 1,000 ppm (min:sec):	< 5:00	0:00	Pass
Pre-test weight of chair	N/A	12.50 lb	N/A
Weight loss at 10 minutes	$\leq 3\text{ lbs}$	0.10 lbs	Pass
Post-test weight of chair	N/A	12.40 lbs	N/A
Flame out (min:sec)	N/A	3:37	N/A
Max. Rate of Heat Release (kW)	$\leq 80\text{ kW}$	20 kW	Pass
Total Heat Energy Release in 1 st 10 mins. (MJ)	$\leq 25\text{ MJ}$	1.4 MJ	Pass

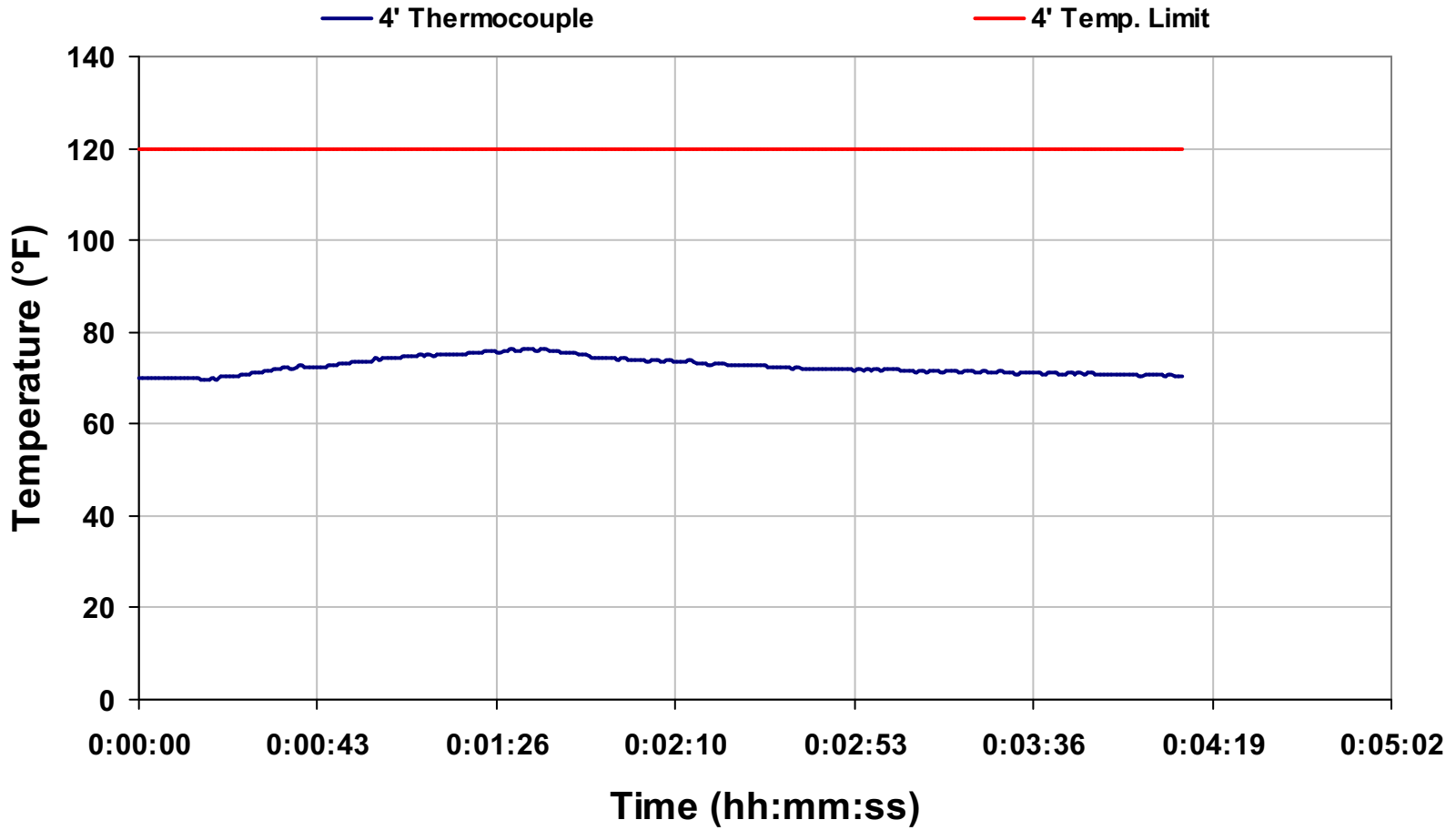
Rate of Heat Release



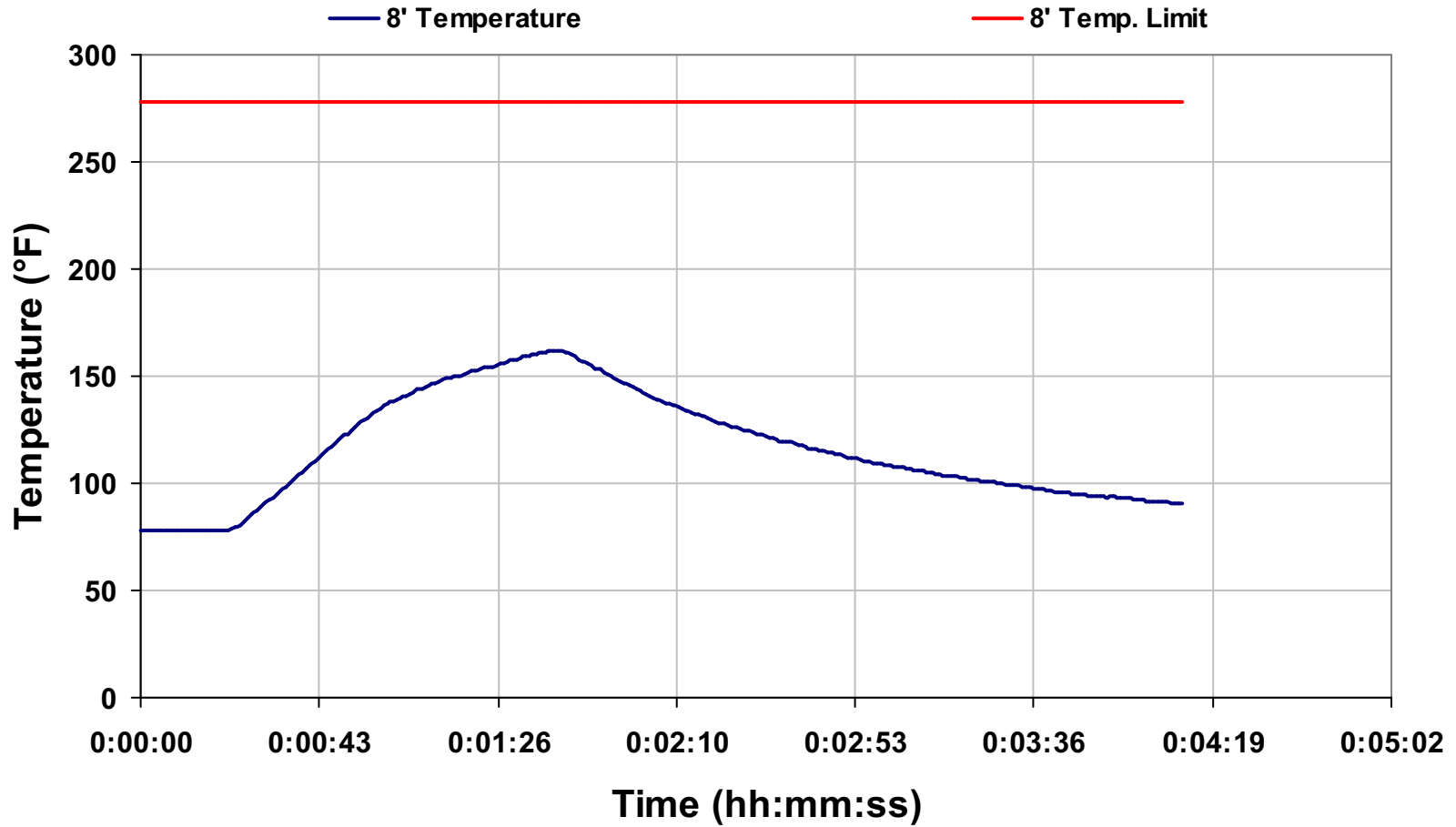
Percent Oxygen



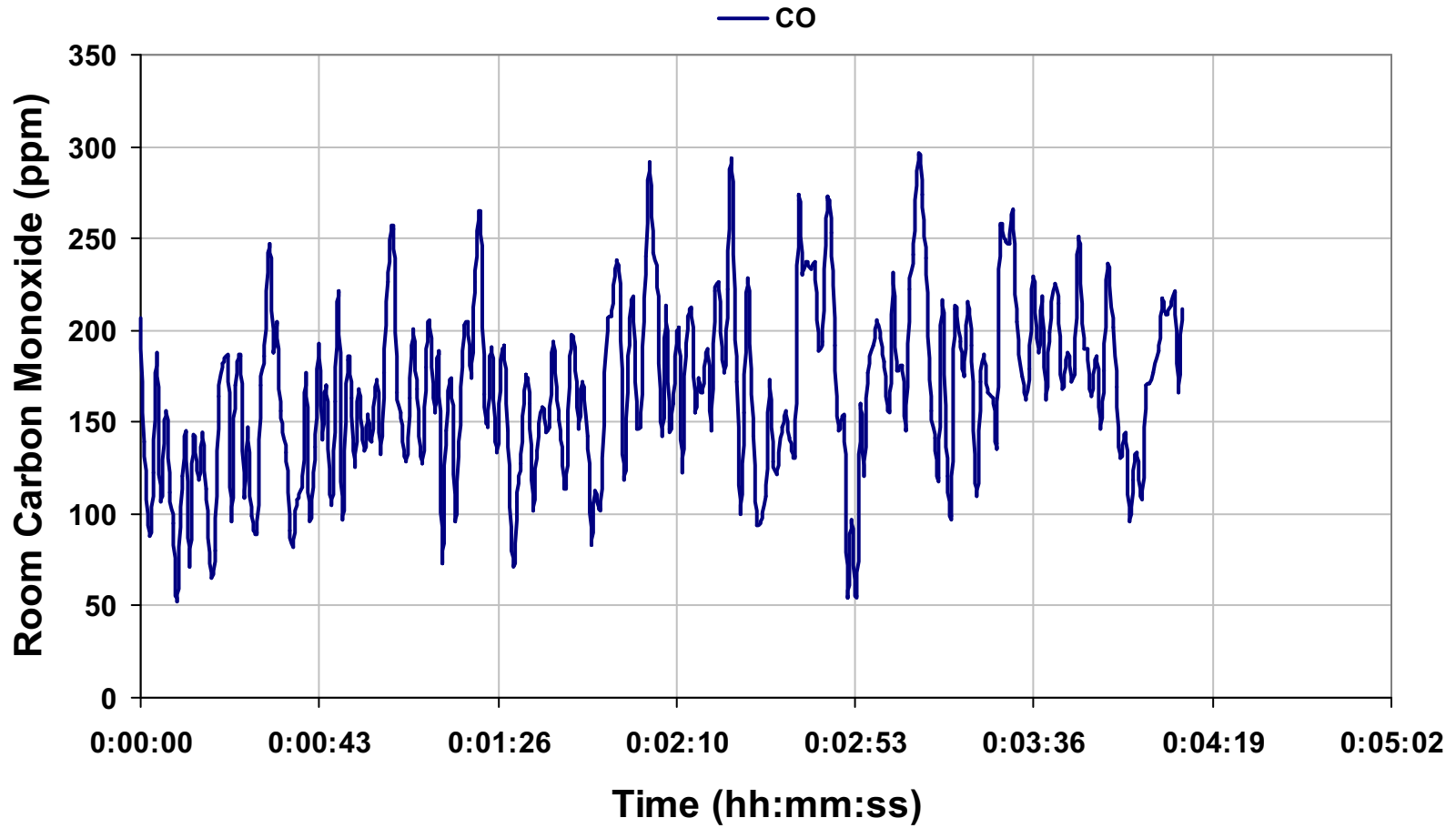
4' Thermocouple Temperature



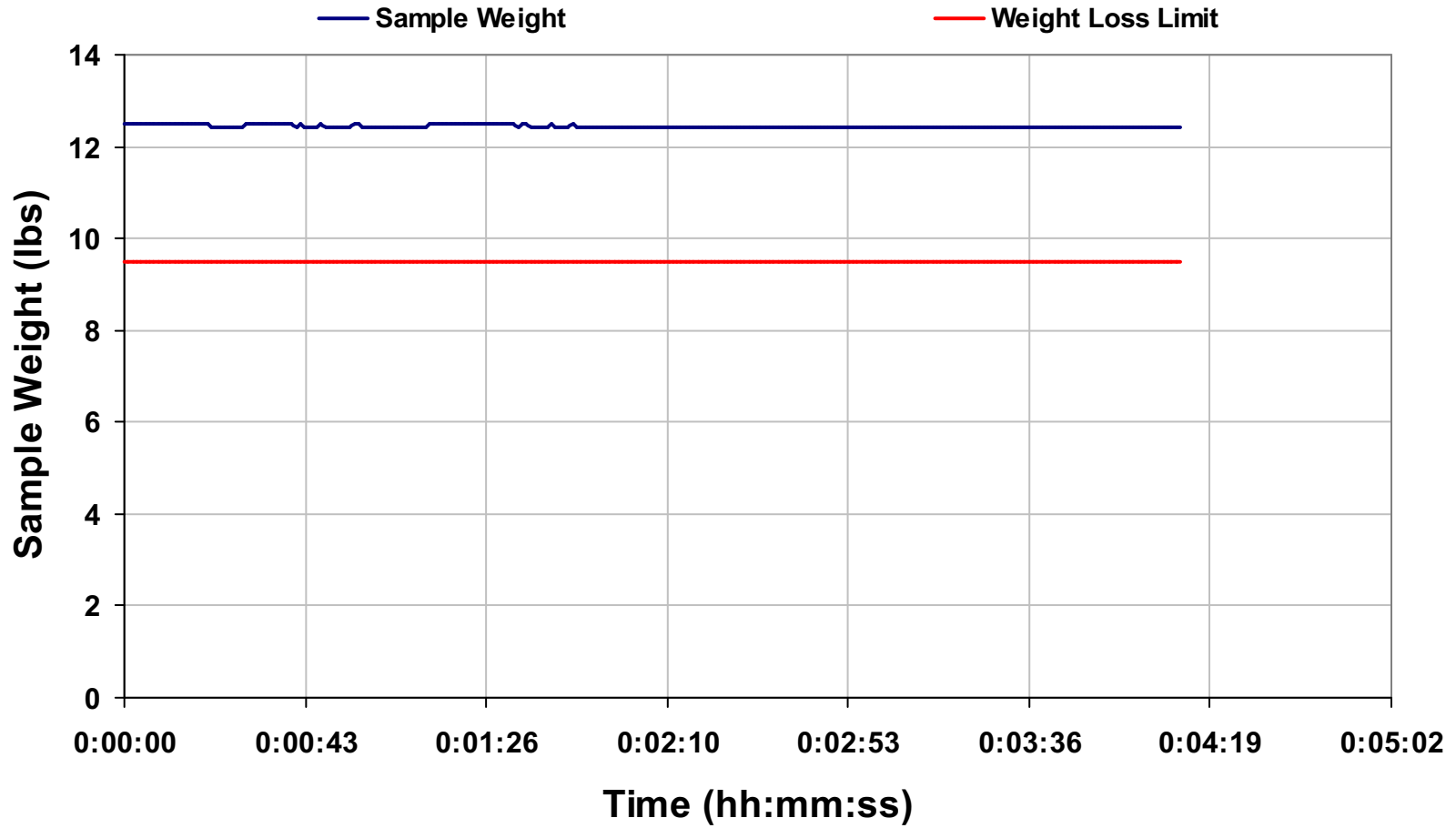
8' Thermocouple Temperature



Room Carbon Monoxide



Sample Weight (scale reading)



Opacity

