

# SOUTHWEST RESEARCH INSTITUTE

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**To:** Darrell Dunn, Div. 20/ Bldg. 57

**From:** Walt Hill, Metrology Group Leader  
Institute Calibration Laboratory

**Date:** Jun. 06, 2003

**Subject:** Out-of-tolerance Notice

The purpose of this notice is to alert you of a condition, which may have caused erroneous measurements affecting safety or the quality of products or services your organization provides. The attached as-found readings are provided for your evaluation to determine if the instrument listed below had an impact and if further action is required.

When the as-found results are near the specification limit, +/- a margin less than the measurement uncertainty, it is not possible to state in-tolerance or out-of-tolerance with a 95% level of confidence. It is the Institute Calibration Laboratory policy that the client is made aware of this situation because the end-user is taking some of the risk that the instrument listed below may not meet the end-user measurement requirements.

Your review/evaluation should be conducted in accordance with your organizational quality policy and procedural requirements. If we can be of further assistance, please contact the Calibration Laboratory at 522-5215.

**Manufacturer:** Control Company **Model:** 4085

**Description:** Thermohygrometer **Serial Number:** 21334995

**Asset Number:** 9503 **User ID Number:** None

**Last Calibration:** June 27, 2002

**Date Received for Service:** Jun. 02, 2003 **Work Order Number:** 444053961

**Service Requested:** Scheduled calibration

**Remarks:** Unit failed relative humidity tests.

OUT OF TOLERANCE

Southwest Research Institute  
Calibration Laboratory  
Calibration Report

Work Order	444053962	Mfr	Control Company	Tech:	Mark Romero
Asset No.	009503	Model	4085	Cal Date:	04-Jun-03
Serial No.	21334995	Type	Thermohygrometer		
Remarks:					

Function/Range	Test Point	TI Reading	Difference	+/-Limits	+/-Uncertainty	As Found
HUMIDITY	%RH	%RH	%RH	%RH	%RH	Results
	34.99	61.86	26.87	1.50	0.50	Fail
	50.01	81.30	31.29	1.50	0.50	Fail
	75.21	100.00	24.79	1.50	0.50	Fail
TEMPERATURE	Deg C	Deg C	Deg C	Deg C	Deg C	
	20.17	20.21	0.04	0.20	0.16	Pass
	23.03	23.14	0.11	0.20	0.16	Pass
	24.94	25.10	0.16	0.20	0.16	Pass
END OF REPORT						

# CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

## Memorandum

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**To: SwRI Calibration Lab**

**From: Lietai Yang**

**Date: June 16, 2003**



**Subject: Out-of-Spec Thermo-Hygrometers**

**The following thermo-hygrometers need to be removed from the calibration recall list. A copy of this memorandum will be placed in Division 20 calibration records for these 3 thermo-hygrometers.**

**Conrol Campoany, Model 4085, S/N 21330180**

**Conrol Campoany, Model 4085, S/N 21189381**

**Conrol Campoany, Model 4085, S/N 21334995**

# CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES NONCONFORMANCE REPORT

Project No. 20.06002.01.071

NCR No. 2003-13

**PART 1: DESCRIPTION OF NONCONFORMANCE**

Thermohygrometers were found out-of-tolerance upon recalibration.  
S/N 21330180 (AN 9502), S/N 21189381 (AN 8788), S/N 21334995 (AN 9503), S/N 21318178 (AN 9808)

Initiated by: L. Yang

Date: 6/25/03

Action Required by: L. Yang

**PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION**

Response Due Date: July 9, 2003

Response Person: L. Yang

**Disposition:**  
Accept as is.

**Basis of Disposition:**

No data are affected by the out-of-tolerance conditions. Readings from the hygrometers were not reliable, so they were not used since the previous calibration.

**Action to Correct Nonconformance:**

A new humidity chamber from Thunder Scientific has been purchased and will be used in future measurements

*New thermohygrometers from Vaisala are being purchased.*

Target date for completion: June 25, 2003

Proposed by: Lietai Yang

Date: June 25, 2003

**PART 3: APPROVAL**

Element Manager: *[Signature]* Date: 7/1/03

Director of QA: *[Signature]* Date: 7/1/03

Comments/Instructions:

**PART 4: CLOSE OUT**

Comments:

*Action complete.*

Verified by: *[Signature]*

Date: 7/1/03

**Distribution:**

Original-CNWSA QA DIRECTOR/QA Records

ORIGINATOR - *L. Yang*

PRINCIPAL INVESTIGATOR(S) *[Signature]*

ELEMENT MANAGERS

B. Sagar, and P. Mackin

*L. Yang [Signature]*