

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NONCONFORMANCE REPORT

Project No. 20.06002.01.322

NCR No. 2005-03

PART 1: DESCRIPTION OF NONCONFORMANCE:

Thermometer (Model: 15-166A, Serial Number: H98-149, Asset Number: 007298) was found to be out of tolerance during a normally scheduled calibration.

Initiated by: Darrell S. Dunn

Date: 3/22/2005

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:


Accept data obtained in tests using this thermometer as is.

Basis of Disposition:

The thermometer was out of tolerance at temperatures above 100 °C. The thermometer has specified limits of +/- 0.5 °C. At 150 °C the thermometer had a measurement error of 0.9 °C. Corrosion tests have requirements of +/- 2 °C and a measurement error of 0.9 °C would not have a significant effect on corrosion measurements.

Action to Correct Nonconformance:

A limited calibration was performed by the SwRI Calibration Laboratory, however, the thermometer will be removed from service.



Target date for completion: 4/11/2005

Proposed by: Darrell S. Dunn

Date: 3/22/2005

PART 3: APPROVAL

Element Manager: 

Date: 3/22/2005

Director of QA: 

Date: 3/23/2005

Comments/Instructions:

PART 4: CLOSE OUT

Thermometer has been removed from service and from the recall list. SwRI Calibration Laboratory. Thermometer is now identified on the list as "inactive." No further action required. (See attached SwRI Cal. lab. assets list.)

Distribution:

Verified by:  Date: 4/26/05

SOUTHWEST RESEARCH INSTITUTE

6220 CULEBRA ROAD • POST OFFICE DRAWER 28510 • SAN ANTONIO, TEXAS, 78228-0510 • TEL (210) 522-5215 • FAX (210) 522-3699

To: Darrell Dunn, Div 20, Ext 6090
From: Walt Hill, Metrology Group Leader
Institute Calibration Laboratory

Date: Jan. 10, 2005
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: Fisher Scientific **Model:** 15-166A

Description: Thermometer **Serial Number:** H98-149

Asset Number: 7298 **User ID Number:**

Last Calibration: Jun 08, 2004

Date Received for Service: Jan. 03, 2005 **Work Order Number:** 444062199

Service Requested: Scheduled calibration

Remarks: Out of tolerance at 150 Degrees C. Boarderline at 100 Degrees C. See Data Sheet.

OUT OF TOLERANCE



SOUTHWEST RESEARCH INSTITUTE™

6220 Culebra Road, P.O. Drawer 28510
Institute Quality Systems
Institute Calibration Laboratory
Phone: 210-522-5215 Fax 210-522-3692



Certificate of Calibration

Submitted By: DIV20

Address: B57

Contact: DARRELL DUNN

Manufacturer Model: FISHER SCIENTIFIC 15-166A

Description: THERMOMETER

Serial No: H98-149

Asset No: 007298

Procedure: TEMPERATURE, JAN/04

Work Order: 444062199

Date Issued: Jan 10, 2005

Calibration Date: Jan 10, 2005

****Calibration Due:** Jul 10, 2005

Calibration Location: Bldg. 64

Environment: Temp. 73.0°F Hum. 40 %RH

***As Found:** OUT OF TOLERANCE

***As Left:** LIMITED CALIBRATION

This certificate documents traceability to the National Institute of Standards and Technology (NIST) and the International System of Units (SI). The Laboratory quality system conforms to ISO/IEC 17025, 1999 and ANSI/NCSL Z540-1-1994 which are equivalent to relevant requirements of the ISO 9000-1994 series of standards. This certificate may not be reproduced, except in full, without the written approval of the Southwest Research Institute Calibration Laboratory. The results of this calibration relate only to the individual instrument described above. This certificate shall not be used to claim product endorsement by the American Association for Laboratory Accreditation (A2LA) or any agency of the U. S. Government

Uncertainty evaluation includes the item under test and is calculated in accordance with the ISO "Guide to the Expression of Uncertainty in Measurement" (GUM). The uncertainty represents an expanded uncertainty using a coverage factor of k=2 to approximate a 95% confidence level. See Remarks or attached Calibration Report with the same Work Order number for calibration data.

*The client has sole responsibility for determination of in/out of tolerance or compliance/noncompliance. An in/out of tolerance opinion is provided for your convenience based only on the Test Instrument (TI) reading(s) and limits as reported. The reported uncertainty relates only to the results at the time of calibration and does not imply any short or long term stability of the TI.

**Calibration interval is determined by the client and does not assure the instrument will remain within tolerance until this date. Any number of factors may cause the instrument to be out of tolerance before the next calibration date.

Remarks: Limited Cal - See Data Sheet

Standards Used

Asset	Manufacturer	Model	Description	Cal Due
009414	HART SCIENTIFIC	1502A	TEMPERATURE READOUT	Mar 30, 05
010692	HART SCIENTIFIC	5618	PLATINUM RTD	Feb 16, 05

Approved by: Walt Hill
Metrology Group Leader
m:\a2la1.rpt Rev date 11, May 04

Measurements by: Bob Trollinger
Metrology Technician

Southwest Research Institute
Calibration Laboratory
Measurement Report

Work Order:	444062199	Mfr.	Fisher-Scientific	Technician	blt
Asset No.	007298	Model	15-166A (ASTM 1C)		
Serial No.	H98-149	Type.	THERMOMETER	Cal Date.	10-Jan-05
Remarks:	Accuracy Reference ANSI Z236.1-1983				
Limited Calibration - Out of tolerance above 100 Degrees C Reads Low.					

Function/Range	Test Point	TI Reading	Difference	+/-Limit	+/-Uncertainty	Found/Left
	°C	°C	°C	°C	°C	Result
Temperature	-18.9	-19.0	-0.1	0.5	0.12	Pass
	0.1	0.5	0.4	0.5	0.12	Pass
	49.9	49.5	-0.4	0.5	0.12	Pass
	99.5	100.0	0.5	0.5	0.12	Pass
	149.0	149.9	0.9	0.5	0.12	Fail
END OF REPORT						

003247	DARRELL DUNN	KESSLER	ASTM 1C	THERMOMETER	115749	I
003248	DARRELL DUNN	KESSLER	ASTM 1C 76MM	THERMOMETER	115814	I
003778	DARRELL DUNN	KESSLER	ASTM 82C	THERMOMETER	32922	I
004092	DARRELL DUNN	PROTO	6104	TORQUE SCREWDRIVER	314047	I
004199	DARRELL DUNN	TROEMNER	200G	WEIGHT, CLASS 1	63813	I
004313	DARRELL DUNN	KEITHLEY	6517	ELECTROMETER	0599913	I
004987	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C96-616	I
004989	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C96-649	I
004992	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C96-727	I
004994	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C96-784	I
004996	DARRELL DUNN	FISHER SCIENTIFIC	15041C	THERMOMETER	9253474	I
005434	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C96-783	I
007168	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	C98-101	I
007298	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	H98-149	I
007299	DARRELL DUNN	FISHER SCIENTIFIC	15-166A	THERMOMETER	H98-168	I
007300	DARRELL	FISHER	15-166A	THERMOMETER	H98-180	I

NCR
2006-03 *