

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NONCONFORMANCE REPORT

Project No. 20.06002.01.081

NCR No. 2003-04

PART 1: DESCRIPTION OF NONCONFORMANCE:

YSI conductance meter (Serial Number 90D014379, Asset number 001445) was found to be out of tolerance during initial calibration.

Initiated by: Darrell S. Dunn

Date: 3/27/2003

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:

No data are affected by the out of tolerance condition.

Basis of Disposition:

Only the 2000 millimho range was found to be in the out of tolerance condition. No data was obtained with this instrument using the 2000 millimho range.

Action to Correct Nonconformance:

Instrument was adjusted and returned in tolerance.

Target date for completion: 4/4/2003

Proposed by: Darrell S. Dunn

Date: 3/27/2003

PART 3: APPROVAL

Element Manager: [Signature] Date: 3/28/03

Director of QA: [Signature] Date: 4/1/2003

Comments/Instructions:

PART 4: CLOSE OUT

Comments: *No further action required.
No data was obtained in the out of tolerance range.*

Verified by: [Signature] Date: 4/2/03

Distribution:

QA Director B. Sagar
D. Dunn P. Mackin
M. Shustrom
All Element Managers
Orig To NCR Folder



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: YSI 35
Description: CONDUCTANCE METER
Serial No: 90D014379
Asset No: 001445
Procedure: CL-259, SEP 99

Work Order: 444051755
Date Issued: Jan 24, 2003
Calibration Date: Jan 23, 2003
**Calibration Due: Jan 23, 2004
Calibration Location: N/A
Environment: Temp. 72.0°F Hum. 35 %RH
*As Found: OUT OF TOLERANCE
*As Left: IN TOLERANCE

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/NCCL 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. The calibration process provides a Test Uncertainty Ratio (TUR) of less than or equal to 25% (4:1) of the test limit unless otherwise stated in remarks or an attachment

*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: CAL'D WITHOUT PROBE

Standards Used

Asset	Manufacturer	Model	Description	Cal Due
001505	HEWLETT-PACKARD	3458A/OPT-002	MULTIMETER	Apr 05, 03
000185	GENERAL RADIO	1433G	DECADE RESISTOR	Feb 25, 03
000109	GENERAL RADIO	1433-K	DECADE RESISTOR	Feb 25, 03
000184	GENERAL RADIO	1433-T	DECADE RESISTOR	May 17, 03

Approved by: Walt Hill
Metrology Group Leader
m:\Nona21a1.rpt Rev date 15, August 02

Measurements by: Tom Hannon
Metrology Technician

Southwest Research Institute
 Calibration laboratory
 Measurement Report

Work Order: 444051755	Mfr. YSI	Technician Thomas Hannon
Asset No. 001445	Model 35	
Serial No. 90D014379	Type. CONDUCTANCE METER	Cal Date. 22-Jan-03
Remarks:		

Function/Range	Test Point	TI Reading	Difference	Test Limits+/-	Uncertainty	Found/Left
micromho	micromho	micromho	micromho	micromho	micromho	Results
20.00	10.00	10.01	0.01	0.05	0.002	Pass
200.0	100.0	100.1	0.1	0.5	0.002	Pass
2000	1000	1000	0	5.0	0.002	Pass
millimho	millimho	millimho	millimho	millimho	millimho	
20.00	10.00	10.00	0.00	0.05	0.002	Pass
200.0	100.0	100.1	0.1	0.50	0.002	Pass
2000	1000	1022	22	20.00	0.002	Fail

END OF REPORT

OUT OF TOLERANCE**To:** Darrell Dunn, Div. 20, B57**From:** Walt Hill, Metrology Group Leader
Institute Calibration Laboratory**OUT OF TOLERANCE****Date:** Jan. 22, 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.

OUT OF TOLERANCE**Manufacturer:** Ysi **Model:** 35**Description:** Conductance Meter **Serial Number:** 90D014379**Asset Number:** 1445 **User ID Number:****OUT OF TOLERANCE****Last Calibration:** Jan. 24, 2002**Date Received for Service:** Jan. 06, 2003 **Work Order Number:** 444051755**Service Requested:** Scheduled calibration**OUT OF TOLERANCE****Remarks:** Out of tolerance
2000 millimho Range**OUT OF TOLERANCE**

Southwest Research Institute
Calibration laboratory
Measurement Report

Work Order: 444051755	Mfr. YSI	Technician Thomas Hannon
Asset No. 001445	Model 35	
Serial No. 90D014379	Type. CONDUCTANCE METER	Cal Date. 23-Jan-03
Remarks:		

Function/Range	Test Point	TI Reading	Difference	Test Limits+/-	Uncertainty	Found/Left
micromho	micromho	micromho	micromho	micromho	micromho	Results
20.00	10.00	10.01	0.01	0.05	0.002	Pass
200.0	100.0	100.1	0.1	0.5	0.002	Pass
2000	1000	1000	0	5.0	0.002	Pass
millimho	millimho	millimho	millimho	millimho	millimho	
20.00	10.00	10.00	0.00	0.05	0.002	Pass
200.0	100.0	100.1	0.1	0.50	0.002	Pass
2000	1000	1000	0	20.00	0.002	Pass

END OF REPORT

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