

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 22386 ASSET # 11145 DATE 14 Aug 96

ITEM DATA:

Manufacturer YST Model 35

Description Conductance meter Serial # 400014379

Accessories _____

ACTION REQUESTED Cal

CUSTODIAN Darrell D. ... Div 20

Turned in by: _____ Phone _____

CHARGE # 20-5708-573 Date Required _____

INSTRUMENT USED ON: NUCLEAR DOD NASA GLP SPPE
 OTHER

COPY OF CALIBRATION CERTIFICATE Yes No

CONDITION RECEIVED: _____ Out of tolerance, repaired to specifications
_____ In tolerance, minor adjustments/repairs made
_____ In tolerance, no adjustments/repairs
_____ Out of tolerance, adjusted to specifications
_____ Received into system, introduced or reactivated
_____ Calibration interval
_____ Reliability code

ACTION TAKEN: (Calibration/Repair/Parts) Real
1K - 1000 multibits
10K - 100 multibits
100K - 10 multibits
1K - 1000 microamps
10K - 100 microamps
100K - 10 microamps

CAL ENVIRONMENT:
Temperature 72 °F Humidity 51 %RH

CALIBRATED/REPAIRED:
By [Signature] Cal Procedure mtg (page 10)
Date _____ Accuracy _____
Cal Interval _____ Time to complete: _____
Next Cal due _____ Cal _____ Repair _____
Standards used (Asset#) 181 180 179 178 177 176

DATE COMPLETED 19 Aug 96
DATE PICKED UP 8/21/96 PICKED UP BY [Signature]

22386

SOUTHWEST RESEARCH INSTITUTE
 Department of Quality Assurance
 Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 26576 ASSET # 001K/15 DATE 25 Aug 97

ITEM DATA:

Manufacturer YSI Model 35
 Description conductance meter Serial # 00D014329
 Accessories _____

ACTION REQUESTED cal

CUSTODIAN Dick, Daniel

Turned in by: _____ Phone 609

CHARGE # 205703.561 Date Required _____

INSTRUMENT USED ON: DOD/NASA NUCLEAR GLP SPPE ISO
 OTHER _____

COPY OF CALIBRATION CERTIFICATE Yes No

NEW WORK Yes No If yes, an evaluation shall be made to verify capabilities.
 By _____ Date _____

CONDITION RECEIVED: _____ (F) Out of tolerance, repaired to specifications
 _____ (G) In tolerance, minor adjustments/repairs made
 _____ (J) In tolerance, no adjustments/repairs
 _____ (K) Out of tolerance, adjusted to specifications
 _____ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) _____
1Ω - 999 milliohms
10Ω - 100 milliohms
100Ω - 10 milliohms
1K - 1000 microhms
10K - 100 microhms
100K - 10 microhms

CAL ENVIRONMENT:
 Temperature 72 °F Humidity 45 %RH

CALIBRATED/REPAIRED:
 By [Signature] Cal Procedure AMFB man cal procedure
 Date 28 AUG 97 Accuracy _____
 Cal Interval 12 Reliability Code: _____
 Next Cal due 28 AUG 98 Cal Time 1.5 Repair Time _____
 Standards used (Asset#) 176 177 108 179 180 81

DATE COMPLETED 28 AUG 97
 DATE PICKED UP 9/10/97 PICKED UP BY [Signature]

26576

OK

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 31061 ASSET # 001445 DATE 31 Aug 98

ITEM DATA:

Manufacturer YSI Model 35
Description conductance meter Serial # 90004379
Accessories _____

ACTION REQUESTED Cal

CUSTODIAN DUPLO, Donnell Dunn

Turned in by: _____ Phone 6090

CHARGE # 70-1402-571 Date Required _____

INSTRUMENT USED ON: (DOD/NASA) (NUCLEAR) (GLP) (SPPE) (ISO)
 OTHER _____

COPY OF CALIBRATION CERTIFICATE (Yes) (No)

NEW WORK Yes No If yes, an evaluation shall be made to verify capabilities.

By MAE! Date 08-31-98

Work involves proprietary/confidential information or equipment (Yes) (No)

CONDITION RECEIVED: _____ (F) Out of tolerance, repaired to specifications
_____ (G) In tolerance, minor adjustments/repairs made
✓ (J) In tolerance, no adjustments/repairs
_____ (K) Out of tolerance, adjusted to specifications
_____ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) _____

CAL ENVIRONMENT: Temperature 72 °F Humidity 40 %RH

CALIBRATED/REPAIRED:
By U. Morale Cal Procedure MAF²/m CLCP-CM-002
Date 10 Sep 98 Accuracy MAF
Cal Interval 12 Reliability Code: 5
Next Cal due 10 Sep 99 Cal Time 2.0 Repair Time _____
Standards used (Asset#) 184, 185

DATE COMPLETED 10 Sep 98
DATE PICKED UP 9/22/98 PICKED UP BY [Signature]

31061

CALIBRATION CHECK FORM

Date Calibrated 10 Sep 98 Work Order 31061
 Technician V Morales
 Unit Under Test CONDUCTANCE Meter
 Manufacturer VSI Model 35 SN 90D04379 SN 1445

STEP	FUNCTION OR RANGE	APPLIED	TOLERANCE		MEASURED VALUES		P/F
			MIN	MAX	AS FOUND	RELEASED	
	2000 millimho	1Ω	980	1019 m	985m		Pas ↓
	200 millimho	10Ω	99.5	100.4 m	99.9m		
	20 millimho	100Ω	9.95	10.04 m	10.0m		
	2000 micromho	1KΩ	995	1004 m	1000 m		
	200 micromho	10KΩ	99.5	100.5 m	100.0 m		
	20 micromho	100KΩ	9.95	10.05 m	10.0 m		

SOUTHWEST RESEARCH INSTITUTE
Department of Quality Assurance
Calibration Laboratory • 522-5215

WORK ORDER

CERTIFICATE # 35947 ASSET # 001445 DATE 09 Sept. 99

ITEM DATA:

Manufacturer Ysi Model 35
Description Conductance meter Serial # 90 0014379
Accessories _____

ACTION REQUESTED cal

CUSTODIAN DIV. 30, Darrell Dunn

Turned in by: _____ Phone 6090

CHARGE # 20.04 Date Required _____

INSTRUMENT USED ON: (DOD/NASA) (NUCLEAR) (GLP) (SPPE) (ISO)
 OTHER _____

COPY OF CALIBRATION CERTIFICATE (Yes) (No)

NEW WORK Yes No If yes, an evaluation shall be made to verify capabilities.

By MAA Date 09-09-99

Work involves proprietary/confidential information or equipment (Yes) (No)

CONDITION RECEIVED: _____ (F) Out of tolerance, repaired to specifications
_____ (G) In tolerance, minor adjustments/repairs made
 (J) In tolerance, no adjustments/repairs
_____ (K) Out of tolerance, adjusted to specifications
_____ (S) Received into system, introduced or reactivated

ACTION TAKEN: (Calibration/Repair/Parts) _____

CAL ENVIRONMENT: Temperature 75 °F Humidity 39 %RH

CALIBRATED/REPAIRED:
By VM Cal Procedure CL-259 Sep 99
Date 13 Sep 99 Accuracy MTS
Cal Interval 12 Reliability Code: 6
Next Cal due 13 Sep 00 Cal Time 15 Repair Time _____
Standards used (Asset#) 184, 185

DATE COMPLETED 13 Sep 99
DATE PICKED UP 9/16/99 PICKED UP BY [Signature]

35947

CALIBRATION CHECK FORM

Date Calibrated 13 Sep 99 Work Order 35947 Cal By V. Monch

Procedure No./Date: CL-259, SEP 99 Unit Under Test: CONDUCTANCE METER

Mfg: YSI Model: 35 SN 900014379 AN 001445

STEP	FUNCTION OR RANGE	APPLIED	TOLERANCE		MEASURED VALUES		P/F
			MIN	MAX	AS FOUND	RELEASED	
	20micromho	100.00kohm	9.95	10.05	10.00		<div style="font-size: 2em;">↓</div> Pass
	200micromho	10.00kohm	99.5	100.5	100.0		
	2000micromho	1.00kohm	995	1005	1000		
	20millimho	100.00ohm	9.95	10.05	10.00		
	200millimho	10.00ohm	99.5	100.5	99.8		
	2000millimho	1.00ohm	980	1020	99.8 99.85 10M		

SOUTHWEST RESEARCH INSTITUTE

Calibration Laboratory

WORK ORDER

Processed by RCRUZ at 8:44:40AM on 10/24/00

I4213

||||| ||||| ||||| ||||| ||||| ||||| |||||

Work Order No 444041094

Arrived 10/24/00

Asset No. 001445 Manufacturer YSI

Model 35

Instrument Type/Class CONDUCTANCE METER

Serial No. 90D014379

Accessory No. Calibration Procedure

Location B57

Div/Client DIV20

Custodian DARRELL DUNN

Mail Stop B57

Tel. 6090

Charge/Project No.

Delivered By / Telephone DARRELL DUNN

IN4CAL

Special Instructions _____

WORK NOTES

Date	Hours	Remarks/Notes
<u>OCT 25 2000</u>	<u>1.5</u>	<u>Date Sheet/Calibrate</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

REPAIR PARTS

Date	Hours	Part Name	Part Number	Failure Description	Cost
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

WORK SUMMARY

Failure Description None

Repair Action None

Calibration Procedure CL-259, Sep 99 Temp 72F Hum. 43%

Tech Plum/Amos Totals Cal Hours 1.5 Repair Hours _____ Parts Cost _____

Standards Used 84, 185,

Date Picked Up 10/25/2000

Picked Up By Darrell Dunn

444041094



Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238
(210) 522-5215
Department of Quality Assurance
Calibration Laboratory



Certificate #
0972-01

Certificate of Calibration

25 October 2000

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: YSI 35
Description: CONDUCTANCE METER
Serial Number: 90D014379
Asset Number: 001445

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. The results of this calibration relate only to the individual item as described above. Standards used in this calibration, described in the referenced calibration procedure with associated uncertainties or tolerances, are traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and available for examination upon request. This certificate is not to be reproduced, except in full, without the written approval of the Southwest Research Institute Department of Quality Assurance Calibration Laboratory.

This laboratory is accredited by the American Association for Laboratory Accreditation (A2LA) and the results of this calibration certificate were determined in accordance with the terms of accreditation unless stated otherwise below.

The uncertainty of the calibration was sufficient to determine that the item met the manufacturer's published specifications unless stated otherwise below.

Ambient Conditions: Temperature: 72.0 Degrees Fahrenheit Humidity: 43 % RH

Calibration Date: 25 Oct 00 **Calibration Procedure:** CL-259, SEP 99

Condition as Received: IN TOLERANCE

Condition as Released: IN TOLERANCE

Remarks:

Approved by:

Jim Patterson, Supervisor, or Walt Hill, Metrologist

Certificate # 444041094

m:A2la.rpt Rev date 22 May 00

Measurements performed by:

Tom Hannon, Technician

Page 1 of 1

SOUTHWEST RESEARCH INSTITUTE

Calibration Laboratory

WORK ORDER

Received by JIBARRA, 1/8/02 11:36:03AM

||||| ||||| ||||| ||||| ||||| ||||| |||||

Arrived 1/8/02

Work Order **444046663**

Asset No. 001445 Manufacturer YSI

Model 35

Equipment Type CONDUCTANCE METER

Serial No. 90D014379

Accessory No.

Interval 12 M

Calibration Procedure CL-259, 9/99

Location B57

Div/Client DIV20

Custodian DARRELL DUNN

Mail Stop B57

Tel 6090

IN4CAL

Special Instructions 20.00751.006

Notify before adjustments or repairs. () Provide data with certificate () Certificate Typ _____

Charge/Project No. 00751.006 1.20

Requester / Telephone DARRELL DUNN/ X6090

This information is correct for the work requested.

WORK NOTES

Date	Hours	Remarks/Notes
<u>Jan 24 2002</u>		<u>Calibrate</u>

Date	Hours	Part Name	Part Number	Failure Description	Cost

WORK SUMMARY

Failure Description None

Repair Action

Tech Cal Hrs. Repair Hrs Parts Cost Temp 72 F Hum. 42 %

Standards Used 185 184

Date Picked Up 1/29/02

Picked Up By

444046663



Southwest Research Institute
6220 Culebra Road
San Antonio, TX 78238
(210) 522-5215
Department of Quality Assurance
Calibration Laboratory

Certificate of Calibration

24 January 2002

Issued to: DARRELL DUNN DIV20 B57
Manufacturer/Model: YSI 35
Description: CONDUCTANCE METER
Serial Number: 90D014379
Asset Number: 001445
Work Order Number: 444046663

This certifies the above item was calibrated in compliance with MIL-STD-45662A and ANSI/NCSL Z540-1-1994. Standards used in this calibration, described in the referenced calibration procedure with associated uncertainties or tolerances, are traceable to the National Institute of Standards and Technology (NIST). Supporting documentation relative to traceability is on file and is available for examination upon request. This certificate is not to be reproduced, except in full, without the written approval of the Southwest Research Institute Department of Quality Assurance Calibration Laboratory.

The uncertainty of the calibration was sufficient to determine that the item met the manufacturer's published specifications unless stated otherwise below.

Ambient Conditions: Temperature: 72.0 Degrees Fahrenheit Humidity: 42 % RH


Calibration Date: 24 Jan 02 Calibration Procedure: CL-259, SEP 99

Condition as Received: IN TOLERANCE

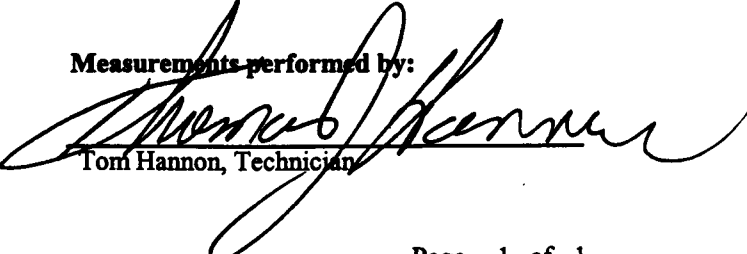
Condition as Returned: IN TOLERANCE

Remarks:

Approved by:


Walt Hill, Supervisor
Institute Calibration Laboratory

Measurements performed by:


Tom Hannon, Technician

