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CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

NONCONFORMANCE REPORT

Project No. 20-5704-041

NCR No. 93-01

PART 1: DESCRIPTION OF NONCONFORMANCE

The Sartorius Model RC210P (Serial No. 10704379) was found to be out of tolerance in the 200g and 150 g ranges by 0.29 mg and 0.11 mg respectively during the 07/16/93 calibration (6 month interval).

Initiated by: N. Sridhar

Date: August 4, 1993

PART 2: PROPOSED DISPOSITION AND CORRECTIVE ACTION

Disposition:

The out of tolerance finding has not affected any of the results since the previous calibration to any significant degree.

Basis of Disposition:

Almost all the weighings are performed in the 50g range in which the balance was within tolerance. In the one or two cases where a stock solution was prepared using the higher weight ranges, the error of 0.29 mg is negligible compared to the required accuracy of within ± 1 mg.

Action to correct nonconformance: More frequent calibration (3 month intervals) will be initiated for the next few cycles and the interval extended to six months if the balance is found within tolerance.

Target date for completion: 08/30/93

Proposed by: N. Sridhar

Date: August 4, 1993

PART 3: APPROVAL

Element Manager: [Signature] Date: 8/6/93

Director of QA: [Signature] Date: 8/6/93

Comments/Instructions:

PART 4: CLOSE OUT

Comments: Calibration interval was shortened by memo of 8/16/93, (attached)

Verified by: [Signature]

Date: 8/16/93

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

MEMORANDUM

To: Jim Patterson

From: Narasi Sridhar/Darrell Dunn

August 16, 1993

Subject: Changes in Calibration Log

We request the following changes in your calibration log for our instruments:

1. **Orion Model 720A pH/ISE Meter, Serial No. 003368:** Please extend the calibration interval for this instrument from 6 months to 1 year. Our previous calibration records for this instrument shows that no adjustments were needed in the 6 month cycles. Hence the calibration interval can be safely extended to 1 year. We have attached the previous calibration records for your information.
2. **Sartorius Model RC210P Balance, Serial No. 10704379:** Please shorten the calibration interval for this to three months instead of six months. This follows the corrective action mentioned in the nonconformance report dated August 4, 1993 for this instrument. If no adjustments are needed for 1 year, then the calibration interval can be extended upon concurrence from all parties involved.
3. **PARR Temperature Controllers Model 4841 (Serial Nos. 0690 and 0690A):** We request that these two instruments be removed from calibration till future notice. These are only intended to control the temperature of the autoclaves, not to measure the actual temperature. We intend to measure the actual temperature using separate thermocouples which will be independently calibrated along with appropriate meters. We request appropriate stickers (eg. "calibration not required") to put on these two controllers.
4. **Fisher Thermometer Model 14-983-10B (Serial No. 1238001):** We request that this instrument be removed from your calibration log. We intend to discontinue the use of this thermometer for quality affecting work following the nonconformance report corrective action dated August 5, 1993.

If you concur with the above mentioned action items, please send me a note of concurrence with a copy to our Q.A. personnel for their records. Thank you.

cc: P. Nair
G. Cragnolino
R. Brient
B. Mabrito

S O U T H W E S T R E S E A R C H I N S T I T U T E

Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B57 NARASI SRIDHAR

Device No: 1441

Manufacturer: ORION

Model: 720A

Nomenclature: PH/ISE METER

Serial Number: 003368

SwRI No: NONE

Cal interval 6 Mo.

Remarks

Accuracy: MFGR SPECS $-1600.0 \pm +1600.0$
 $\pm 2 mV \text{ or } \pm 0.05\% \text{ of } \Delta E$

Procedure: MFGR

ENVIRONMENT

Temperature: 70 Humidity: 46 Location: ROOM A11 B68 SWRI

CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

LIMITED CALIBRATION- to millivolts only.

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed

Anthony P. ...

Calibration Date: 08/09/93

Cal interval: 6 Months

Record Number: 00011943

Next Calibration Due: 02/09/94

S O U T H W E S T R E S E A R C H I N S T I T U T E

Department of Quality Assurance
Calibration Laboratory

CERTIFICATE OF CALIBRATION

Issued to: DIV20 B168 NARASI SRIDHAR

Device No: 1441

Manufacturer: ORION

Model: 720A

Nomenclature: PH/ISE METER

Serial Number: 003368

SwRI No:

Remarks

Accuracy: MFGR SPECS

Procedure: MFGR

ENVIRONMENT

Temperature: 70

Humidity: 48

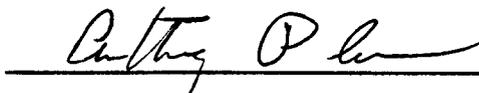
Location: ROOM A11 B68 SWRI

CONCLUSION

Tolerance/Remarks: Received in tolerance, no adjustments made

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

Signed



Calibration Date: 02/15/93

Record Number: 00010657

Next Calibration Due: 08/15/93

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Division 05 - Instrument Repair and Calibration Laboratory CERTIFICATE OF CALIBRATION

ISSUED TO: DIV 20 CNWRA
 MFR/MODEL: ORION 720A
 ITEM DESCRIPTION: PH/ISE METER
 S/N: 003368 SWRI NO. NONE
 PLUG-INS, ETC.: NONE

TOLERANCE: Limited Calibration. Checked in MV Function ONLY.
Reading were within .05%

STANDARDS

Standard No.	MFR Model	Description	S/N	Cal. Due	Cal. Rec. No.
		JOHN FLUKE 8506 A DIGITAL VOLT METER		9/8/02	24/02/92 08633

ENVIRONMENT: Temperature 74°F Humidity 45%
 Location Room A11 BLDG 68 SWRI

PROCEDURE

- Essentially as outlined in MFRS Service Manual
- Applied MV FROM STANDARD TO CHANNEL 1 & 2.
 Reading were within $\pm 0.5\%$
 Accuracy of STANDARD $\pm 50ppm$

CONCLUSION

- Item within tolerance
- Item out of tolerance
- Item ADJ/repared to tolerance
-

Calibration was in accord with requirements of MIL-STD-45662A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

SIGNED: Arthur P. [Signature]
 DATE: 10 FEB 9/2

RECORD NUMBER: 0008843 NEXT CALIBRATION DUE: 10 FEB 93

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Division 05 - Instrument Repair and Calibration Laboratory

Calibration Record

ITEM ORION PH/ISE METER
 MODEL 1720A SN 003368 SWRI NO. _____
 PLUG-INS, ETC. none

TOLERANCE limited calibration, checked in MV function only, readings were within $\pm 0.05\%$

STANDARDS

Standard No.	MPGR Model	Description	S/N	Cal. Due	Cal. Rec. No.
	<u>JOHN FLUKE</u>	<u>8506A DMM/VOLTCOM</u>		<u>13 Apr 91</u>	<u>03354</u>

ENVIRONMENT: Temperature _____ Humidity _____
 Location Room A11, Bldg 68 SWRI

PROCEDURE

- Essentially as outlined in MPGRS Service Manual
- applied MV from standard to channel 1 & 2
readings were within $\pm 0.05\%$
accuracy of standard $\pm 50 \mu\text{PM}$

CONCLUSION

- Item within tolerance
- Item out of tolerance
- Item ADI/repared to tolerance
- _____

Calibration was in accord with requirements of MIL-STD-45662A, MIL-Q-9838A, and MIL-I-45208A. Measurements are traceable to the National Institute of Standards and Technology. Inspection and test data are on file and available for inspection.

SIGNED [Signature]
 DATE 20 Feb 91
 NEXT CALIBRATION DUE: 20 Aug 91

RECORD NUMBER: 0007468