



SCOPE OF ACCREDITATION TO ISO/IEC 17025:2017
& ANSI/NCSL Z540-1-1994

ASSOCIATED ENVIRONMENTAL SYSTEMS
15 Wellman Ave.
North Chelmsford, MA 01863
Justin Ingram Phone: 978 772 0022

CALIBRATION

Valid To: July 31, 2026

Certificate Number: 3964.01

In recognition of the successful completion of the A2LA evaluation process (including an assessment of the organization's compliance with A2LA's Calibration Program Requirements), accreditation is granted to this laboratory to perform the following calibrations^{1,4}:

I. Electrical – DC/Low Frequency

| Parameter/Equipment | Range | CMC ^{2,5} (±) | Comments |
|--|---|----------------------------|--------------------|
| DC Voltage ^{3,7} – Generate, Fixed Points | 110 mV 1 V 15 V | 0.8 mV 0.02 V 0.08 V | Process calibrator |
| DC Resistance ^{3,7} – Generate | (0 to 10) Ω (1 to 100) Ω (10 to 1000) Ω | 0.007 Ω 0.09 Ω 0.7 Ω | Process calibrator |
| DC Current ³ – Generate | Up to 22 mA | 0.12 mA | Process calibrator |
| Electrical Calibration of Thermocouple Indicating Systems ³ – | | | |
| Type J | (0 to 1200) °C | 1.4 °C | Process calibrator |
| Type K | (0 to 1372) °C | 1.7 °C | |
| Type T | (-200 to 0) °C (0 to 400) °C | 0.72 °C 0.82 °C | |

| Parameter/Equipment | Range | CMC ² (±) | Comments |
|--|------------------|----------------------|--------------------|
| Electrical Calibration of RTD Indicating Systems ³ – Pt 385 100 Ω | (-200 to 250) °C | 0.72 °C | Process calibrator |

II. Thermodynamics

| Parameter/Equipment | Range | CMC ^{2,6} (±) | Comments |
|---|--|---|--|
| Relative Humidity ³ – Measure | (10 to 95) % RH | 3.6 % RH | Hygrometer |
| Temperature ³ – Measure | (-80 to 0) °C (0 to 200) °C (0 to 760) °C (0 to 1100) °C (-73 to 0) °C (12 to 45) °C (0 to 100) °C | 1.4 °C 2.5 °C 2.3 °C 1.7 °C 0.35 °C 0.29 °C 0.41 °C | Process calibrator with J, K and T thermocouples Fluke 2638A hydra data logger with Class A RTD |

¹ This laboratory offers commercial and field calibration service.

² Calibration and Measurement Capability Uncertainty (CMC) is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards or nearly ideal measuring equipment. CMCs represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of $k = 2$. The actual measurement uncertainty of a specific calibration performed by the laboratory may be greater than the CMC due to the behavior of the customer's device and to influences from the circumstances of the specific calibration.

³ Field calibration service is available for this calibration. Please note the actual measurement uncertainties achievable on a customer's site can normally be expected to be larger than the CMC found on the A2LA Scope. Allowance must be made for aspects such as the environment at the place of calibration and for other possible adverse effects such as those caused by transportation of the calibration equipment. The usual allowance for the actual uncertainty introduced by the item being calibrated, (e.g. resolution) must also be considered and this, on its own, could result in the actual measurement uncertainty achievable on a customer's site being larger than the CMC.

⁴ This scope meets A2LA's *P112 Flexible Scope Policy*.

- ⁵ The stated measured values are determined using the indicated instrument (see Comments). This capability is suitable for the calibration of the devices intended to measure or generate the measured value in the ranges indicated. CMCs are expressed as either a specific value that covers the full range or as a percent or fraction of the reading plus a fixed floor specification.
- ⁶ The type of instrument or material being calibrated is defined by the parameter. This indicates the laboratory is capable of calibrating instruments that measure or generate the values in the ranges indicated for the listed measurement parameter.
- ⁷ This parameter can be used to simulate sensors and the report may indicate the sensor parameter.



Accredited Laboratory

A2LA has accredited

ASSOCIATED ENVIRONMENTAL SYSTEMS

North Chelmsford, MA

for technical competence in the field of

Calibration

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This laboratory also meets the requirements of ANSI/NCCL Z540-1-1994 and R205 – Specific Requirements: Calibration Laboratory Accreditation Program. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 20th day of May 2024.

A blue ink signature of Mr. Trace McInturff, written over a horizontal line.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3964.01
Valid to July 31, 2026
Revised February 25, 2026

For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.