



# RADON REFERENCE LABORATORY

## STATEMENT OF CALIBRATION



**Client Information:**

Arundel Home Inspection LLC  
636 Benfield Road  
Severna Park, Maryland 21146  
Attn: John Dirks Jr.

**BMI Control Information:**

Statement No.: 15349101  
Issue Date: February 18, 2011  
Calibrated on: February 18, 2011  
Calibrated by: PHJ  
Calibration site: BMI Dayton

**Description of Continuous Radon Monitor:**

**Manufacturer:** Sun Nuclear **Model:** 1027 **Serial No.:** 1860189

The monitor was found to be in good physical condition.

**Initial Checks:**

<u>Visual Inspection</u>	<u>Batteries</u>	<u>Power Adapter</u>	<u>High Voltage</u>	<u>Software Version</u>
Ok	Changed	11.4 VDC (Ok)	1309 VDC (Ok)	N5A

**Result of Background Exposure (24 hr):** 0.1 pCi/liter

**Radon Chamber Conditions:**

<u>Exposure Duration</u>	<u>Radon Concentration</u>	<u>Relative Humidity</u>	<u>Temperature</u>
48 hr	25.9 ± 1.3 pCi/liter	49.6 ± 0.6 %	70.2 ± 0.1 °F

The values listed above for the radon concentration, relative humidity and temperature are the means and standard deviations of the hourly average measurements of these parameters. The calibration of Bowser-Morner's Radon Monitoring System is maintained through comparisons with the USEPA radon laboratory in Las Vegas using a NIST traceable radium standard. The estimated total uncertainty of Bowser-Morner's average chamber concentration is ± 6.4% at the 95% confidence level.

**Results of Calibration:**

<u>Average Monitor Reading</u>	<u>Relative Error As Received</u>	<u>Relative Error After Change of Calibration Factor</u>
27.9 pCi/liter	7.3%	-2.4%

Based on the results of the calibration, the monitor's internal calibration factor was changed to the most accurate available setting. The background value listed above should be subtracted from the radon measurement and the result multiplied by the correction factor of 1.025.

The calibration was performed using BMI procedure number 39-001.

Authorized Signature Phillip H. Jenkins Sr. Health Physicist

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