



## Particulate Count Report

February 17, 2021

Dear Your Name Here,

Anthem Services, LLC performed a particulate count survey at Anywhere Avenue located in Pasadena Maryland on February 16<sup>th</sup> 2021. Readings were collected in several rooms on all levels of the property by Sean Walter a member of the International Association of Certified Indoor Air Consultants (IAC2#IAC2-10-1711). We used a PCE-PCO 2 to gather the particulate counts as well as relative humidity and temperature readings. This inspection is intended to be a rudimentary way of quickly discovering significant indoor pollutants like mold, pollen, dander and other allergens. It is limited in its ability to determine what particular particles are and it cannot detect certain elements like natural gas, formaldehyde or radon gas. This survey is limited to the readily accessible areas of the property and is based on the condition of the property at the precise time and date of the survey. Mold can exist in inaccessible areas such as behind walls and under carpeting, and allergen counts can change by season, wind direction and temperature. As such, the report is not a guarantee that mold or allergens do or do not exist.

### Visual Assessment:

Anthem Services, LLC performed a visual inspection within the residence for the presence of visible microbial growth or evidence of moisture intrusion as well as factors that can contribute to poor air quality. During the assessment of the structure, the following observations were made:

- Air scrubbers and dehumidifiers were not in use/ present upon arrival to the property.
- HVAC system was turned on.
- Windows were closed prior to and during the inspection (with the exception of testing functionality).

### Pertinent photos Collected at the time of inspection:



Front exterior



Rear Exterior



Survey collection information:

The PCE-PCO 2 particle counter is zeroed at the beginning and end to ensure accuracy of samples collected, this acts as a self calibration. Three samples are then collected per room surveyed, each sample was collected by vacuum for 22 seconds at 2.83L per minute and all readings are reported in m3. Samples are also collected outside for reference.

Conclusion:

No significant elevations of particulate were recorded inside the property, exterior counts were also very low. Indoor PM 2.5 counts were all below 15 with most being below 10, and Indoor PM 10 counts were all below 25 with some being below 15. This indicated overall good- fair air quality within the home.

While the EPA sets limits for maximum amounts for 24 hours meant for working conditions (40 CFR 50.6) and has an Air Quality Index; the US index uses: ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. This creates an apples to oranges comparison. However, the European Air Quality index offers recommended levels of Particulate Matter as can be seen in the chart below:

European Air Quality Index	Good	Fair	Moderate	Poor	Very poor	Extremely poor
Particles less than 2.5µm (PM <sub>2,5</sub> )	0-10 µg/m <sup>3</sup>	10-20 µg/m <sup>3</sup>	20-25 µg/m <sup>3</sup>	25-50 µg/m <sup>3</sup>	50-75 µg/m <sup>3</sup>	75-80 µg/m <sup>3</sup>
Particles less than 10µm (PM <sub>10</sub> )	0-20 µg/m <sup>3</sup>	20-40 µg/m <sup>3</sup>	40-50 µg/m <sup>3</sup>	50-100 µg/m <sup>3</sup>	100-150 µg/m <sup>3</sup>	150-1200 µg/m <sup>3</sup>

Suggestions to minimize indoor pollutants and mold:

As a courtesy Anthem Services, LLC provides a list of common problems that can contribute to poor air quality.

- Indoor humidity levels should be kept as low as possible, this can be done by minimizing the use of humidifiers, removing indoor plants or watering a little as possible, removing fish tanks, installing fans that vent directly to the exterior for bathrooms and stoves and allowing them to run for 45 minutes after showering, bathing or cooking, running air conditioners and regularly changing filters (Merv 9+ recommended)
- Keeping gutter systems clean and ensuring they are sealed. Ensuring they discharge at least 6 feet from the foundation to land graded away from the home. Ideally home grading would allow for a 6 inch drop over the first 10 feet away from the foundation. Ensure that no standing water is against foundation.
- All caulking should be checked for cracking or damage and repaired as needed.
- Roofing systems should be inspected annually by a qualified roofing contractor and repairs should be

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made proactively.

- All plumbing fixtures and drains should be checked regularly for leaks and repaired.
- Sump pump systems should discharge at least 6 feet from the foundation and should be checked regularly to minimize the risk of failure.
- Recommend running a dehumidifier within the basement at all times, consider discharging into sump pit.
- Recommend regularly changing vacuum filters and HVAC filters.
- Regularly “airing out” a home on clear, low humidity days can be beneficial to indoor air quality

Thank you for choosing Anthem Services, LLC to perform your Particulate count survey, more information regarding particulate can be found at :<https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>

Sean Walter

A handwritten signature in blue ink, appearing to read "S. Walter".

Chief Inspector

(443)921-7593

Radon & Mold #IAC2-10-1711



Particulate Count Field Notes

Address: Anywhere, MD; 21221	
Client: Your Name Here	Date/ Time: 2/15/2021
Weather: Clear	Purpose: Residential transaction
Temperature Ext: 37 F	Temperature Int: 68 F
Relative humidity Ext: 43 %	Relative humidity Int: 52 %
Inspector: Sean Valtun	Signature: <i>[Signature]</i>
In time: 1:15 PM	Out time: 2:57 PM
Particle Counter Model: PCE-PCO 2 Serial #201103012	

Location: LR			
Sample:	1	2	3
PM 2.5 micron	15	13	15
PM 10 micron	25	18	22

Location: Master BR			
Sample:	1	2	3
PM 2.5 micron	13	12	15
PM 10 micron	20	24	20

Location: Rear BR			
Sample:	1	2	3
PM 2.5 micron	12	16	14
PM 10 micron	10	17	15

Location: Family Room			
Sample:	1	2	3
PM 2.5 micron	10	9	4
PM 10 micron	18	13	14

Location: Base - BR			
Sample:	1	2	3
PM 2.5 micron	12	10	12
PM 10 micron	23	20	13

Location: O - Hall			
Sample:	1	2	3
PM 2.5 micron	8	8	9
PM 10 micron	13	15	17

Location: F-EXT			
Sample:	1	2	3
PM 2.5 micron	3	2	3
PM 10 micron	8	4	8

Location: R-EXT			
Sample:	1	2	3
PM 2.5 micron	2	1	2
PM 10 micron	3	3	4





**Werks-Kalibrierschein**  
*Factory Calibration Certificate*

**Kalibrier-Nr**                    **K20201100039**  
*Calibration No.*

**Gegenstand / Object**            Partikelzähler  
    *Particle Counter*  
**Typ / Type**                        PCE-PCO  
**Hersteller / Manufacturer**    PCE Instruments  
**Auftraggeber / Customer**

Die Kalibrierung erfolgt durch Vergleich mit Bezugsnormalen.

Für die Kalibrierung trägt der Aussteller dieses Kalibrierscheins die alleinige Verantwortung.

Für die Einhaltung einer angemessenen Frist zur Wiederholung der Kalibrierung ist der Benutzer verantwortlich.

**Serien-Nr. / Serial number**    201103012  
**Kalibrierdatum**                    13.11.2020  
*Date of calibration*                13 November 2020

**Umgebungsbedingungen**    20,5 °C ±1 K            /    20.5 °C ±1 K  
*Calibration conditions*        40,1 %r. F. ±5 %r. F. /    40.1 %RH ±5 %RH

*The calibration is performed by comparison with reference standards.*

Dieser Kalibrierschein darf nur vollständig und unverändert weiterverarbeitet werden. Auszüge oder Änderungen bedürfen der Genehmigung der ausstellenden Firma. Kalibrierscheine ohne Stempel und Unterschrift haben keine Gültigkeit.

*The issuing company is solely responsible for the performance of the calibration.*

*This calibration certificate may not be reproduced other than in full except with permission of the issuing company. Calibration certificates without signature and seal are not valid.*

*The user is responsible for the observance of a suitable recalibration period.*

**1. Kalibriereinrichtung / Calibration device**

<b>Beschreibung</b> <i>Description</i>	<b>Typ</b> <i>Type</i>	<b>Hersteller</b> <i>Manufacturer</i>	<b>Serien-Nr.</b> <i>Serial number</i>
Partikelzähler <i>Particle Counter</i>	TSI 8530	TSI Corporation	8530165119
Durchflussmessgerät <i>Flow meter</i>	TSI 4100	TSI Corporation	14161742001





**2. Kalibrierverfahren / Calibration procedure**

Die Kalibrierung erfolgte durch Vergleich der Anzeige des Kalibriergegenstandes mit denen durch die Kalibriereinrichtung dargestellten Werte.

*Calibration was carried out by comparing the indication of the calibration item with the values shown on the device.*

**3. Messbedingungen / Measurement conditions**

Vor Beginn der Kalibrierung wurde das Messsystem genullt.

*Before starting the calibration, the measuring system has been zeroed.*

**4. Ergebnisse / Results**

Kalibriergröße <i>calibration value</i>	Sollwert <i>Target value</i>	Ist-Wert <i>Actual value</i>	Ergebnis <i>Result</i>
Wiederholbarkeit <i>Repeatability</i>	≤10%FS	+6%FS	Passed
Partikelgrößenabweichung <i>Deviation of particle size</i>	±30%FS	+10%FS	Passed
Partikelkonzentrationabweichung <i>Deviation of particle density</i>	±30%	+12%	Passed
Durchfluss <i>Air Flow</i>	2.83L±5%	2.86L	Passed

Firmenstempel  
*Company seal*

Ausstellungsdatum  
*Date of issue*

Bearbeiter  
*Person in charge*

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13.11.2020  
13 November 2020

*Li nenglong*