DECLARATION OF FIONA COUPER

I, FIONA COUPER, declare under penalty of perjury under the laws of the state of Washington that the following is true and correct:

1. I am over the age of eighteen years, have personal knowledge of the facts stated herein or knowledge based on information and belief after reviewing records maintained by the Washington State Patrol (WSP), and am competent to testify to these stated facts. I make this declaration based on my education, training, experience, and consultation with WSP personnel.

2. I have a Bachelor of Science degree with Honors (B.Sc. Hon) in Pharmacology/Toxicology and a Ph.D. degree in Forensic Medicine/Forensic Toxicology. Prior to my current position, I served as the Chief Toxicologist for the District of Columbia, Office of the Chief Medical Examiner, from November 2001 through February 2008. A true and correct copy of my curriculum vitae is attached as Exhibit A.

3. I currently serve as the director for the WSP's Forensic Laboratory Services Bureau and as the State Toxicologist. As the State Toxicologist, my responsibilities include directing the WSP's Toxicology Laboratory Division.

4. As State Toxicologist, I adopted WAC 448-16-060, which approves the method for determining whether two breath samples agree to within +/- ten percent of the calculated mean.

5. Relevant to the Draeger Alcotest 9510 instrument, WAC 448-16-060 states that whether two breath test samples agree to within +/- ten percent of their mean using the following calculations: the sum of the four breath test results is divided by 4 to obtain the mean result, which is rounded to four decimal places. To calculate the acceptability range (+/- ten percent of mean), the mean is then multiplied by 0.9 and 1.1, and truncated to three decimal places.

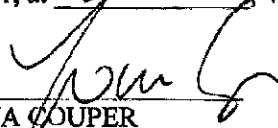6. Relevant to the calculation of the mean, the Draeger Alcotest 9510 instrument collects the following data during a breath test: alcohol concentration in two breath test samples,

1   each measured using infrared spectroscopy and electrochemical analysis. This yields a total of

2   four individual breath test results that are truncated at the thousandth decimal place.

3   7.   The data collected from a breath test on a Draeger Alcotest 9510 is available on

4   the WSP's Discovery Materials Site (WebDMS) website. The address for the website is

5   https://wsp.wa.gov/breathtest/wdms_home.htm

6   8.   The Draeger Alcotest 9510 calculates whether two breath test samples agree to

7   within +/- ten percent of their mean using the following calculations: the sum of the four breath

8   test results is divided by 4 to obtain the mean result, which is truncated to four decimal places.

9   To calculate the acceptability range (+/- ten percent of mean), the mean is then multiplied by 0.9

10   and 1.1, and truncated to three decimal places.

11   9.   The data to calculate the mean of the four breath test results under WAC 448-16-

12   060 is available on WedDMS. A person could use the breath test data on WebDMS to calculate

13   the mean for the four breath test results (from a specific breath test) under WAC 448-16-060's

14   formula.

15   10.   If a person submitted a breath test sample on the Draeger Alcotest 9510

16   instrument, and the four breath test results were 0.091, 0.094, 0.090 and 0.092 g/210 L the mean

17   calculation under WAC 448-16-060 is 0.091 + 0.094 + 0.090 + 0.092 = 0.367 g/210 L; 0.367/4

18   = 0.09175 g/210 L, rounded to four decimal places is 0.0918 g/210 L. The calculations for

19   determining the acceptability range (+/- ten percent of mean) are 0.0918 x 0.9 = 0.08262 g/210

20   L (truncated to 0.082 g/210 L) and 0.0918 x 1.1 = 0.10098 g/210 L (truncated to 0.100 g/210 L).

21   11.   If a person submitted a breath test sample on the Draeger Alcotest 9510

22   instrument, and the four breath test results were 0.091, 0.094, 0.090 and 0.092 g/210 L, the mean

23   calculation under the Draeger Alcotest 9510's formula is 0.091 + 0.094 + 0.090 + 0.092 = 0.367

24   g/210 L; 0.367/4 = 0.09175 g/210 L. truncated to four decimal places is 0.0917 g/210 L. The

25   calculations for determining the acceptability range (+/- ten percent of mean) are 0.0917 x 0.9 =

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1   0.08253 g/210 L (truncated to 0.082 g/210 L) and 0.0917 x 1.1 = 0.10087 g/210 L (truncated to

2   0.100 g/210 L).

3   EXECUTED this 18ᵗʰ day of June , 2021, at Seattle , Washington.

5   FIONA COUPER