

BREATH TEST/TOXICOLOGY LAB
ARGUMENT SUMMARY¹

I. GLOBAL SUPPRESSION

The failures of the Lab and breath test program are systemic and permeate every step of the breath testing process. Their breadth and depth sweeps so broadly that every test administered statewide is irreversibly tainted thereby. Accordingly, every such test should be suppressed under ER 702/703, RCW 46.61.506(3)-(4) and/or the 14th Amendment to the United States Constitution and Article 1, section 3, of the Washington State Constitution, without any further case specific showing required. *Generally, State v. Cannon*, 130 Wn.2d 313, 325 (1996); *State v. Copeland*, 130 Wn.2d 244, 270 (1996).

A. ANN MARIE GORDON SOLUTIONS.

Lab Manager Ann Marie Gordon lied in solution certification declarations stating that she had tested solutions she had not. Supervisor Ed Formoso conspired with her, testing solutions in her name, in addition to his own tests. Double testing by a single analyst skews any results obtained and violates the protocols.² Nonetheless, all certifications including Gordon's signature still include "her" perjured data in the characterization of solution properties. The certified properties are therefore tainted by perjury and their values remain unknown.³ Not only does this result in the reporting of inaccurate breath test results but violations of protocols meant to ensure the accuracy and reliability of breath test results.⁴ The prosecution is, or should be, fully aware of each of these facts.

The State and Federal Due Process Clauses, as well as CrRLJ 8.3, prohibit the use of such tainted evidence, and the breath tests administered in reliance thereon, in a prosecution against a Citizen.⁵

Moreover, as enunciated by the Snohomish County District Court:⁶

In those circumstances where Ann Marie Gordon's name appears as one of the analysts who

¹ Author Ted Vosk. For full argument see briefing. References made to District/Municipal Court rulings or Prosecutorial Stipulations are meant to be illustrative and exemplary only. They are not cited as binding authority. GR 14.1.

² Memorandum in Support of Motion to Suppress (MS), p.29.

³ MS, p.26-30.

⁴ MS, p.28-30.

⁵ MS, p.102-15.

⁶ *State v. Lang*, # C616184 at 9 (Sno. Co. S. Dist. Ct. – 11/30/07); *State v. _____*, # ____ (Spokane Co. Dist. Ct. 01/14/08).

tested a simulator solution in the certification process, the State cannot establish that the simulator solution was certified according to methods approved by the State Toxicologist. RCW 46.61.506(3) requires such methods to be utilized in order to have a valid result. Additionally the state cannot meet their *prima facie* burden regarding a simulator solution result pursuant to RCW 46.61.506(4)(vii) because the simulator solutions at issue here were certified in violation of the mandatory protocol approved by the State Toxicologist to ensure reliable breath alcohol testing. Under these circumstances, a motion to suppress the result of a breath test will be granted.

The District Court's ruling is well supported by the law and facts.⁷ *Ludvigsen v. City of Seattle*, 162 Wn.2d 660 (2007); *State v. Roche*, 114 Wn.App. 424, 446 (2002); WAC 446-16-030(8); WAC 446-16-050.

B. BREATH TESTS ARE GENERALLY INADMISSIBLE UNDER ER 702/703 AND RCW 46.61.506(3).⁸

Whether one labels Gordon's and Formoso's conduct as fraudulent misrepresentation and perjury, or extremely deceitful and completely dishonest, the fact that the Laboratory management engaged in such dishonest conduct is an appalling reflection on the credibility of the laboratory.⁹ Logan's failure to inform anyone that Gordon was not testing her own solutions constitutes a deliberate cover-up by the State Toxicologist and his claims that he did not consider that Gordon was signing certifications is not credible.¹⁰ Supervisor Melisa Pemberton engaged in the same conduct as Formoso on at least one occasion and then denied it while under oath in Skagit County.

At least 7 other toxicologists engaged in multiple incidents of false swearing, signing declarations under penalty of perjury reporting solution values that were false.¹¹ Some even resigned the declarations a second time with the same false values after the review by Gullberg and Denton missed the errors. Moreover, at least one analyst submitted a false declaration in the King County proceedings because she failed to check the solution's chromatograms to see if what she swore to was possible.

Due to software and programming errors, values reported for at least 33 solutions between August 2005

⁷ MS, p.141-9; WASHINGTON STATE TOXICOLOGY LABORATORY, PROCEDURE FOR THE PREPARATION OF QUALITY ASSURANCE SOLUTIONS FOR USE WITH A BREATH TEST INSTRUMENT, § B, versions (2004) – (2007); WASHINGTON STATE PATROL BREATH TEST SECTION, TRAINING OUTLINE FOR DATAMASTER AND PBT, OPERATOR BASIC, 27 (2004); Rod Gullberg, *Using a Weighted Mean to Compute the Values of Simulator Solution Standards*, 14(3) J. Anal. Toxicol. 196 (1990); Testimony of Dr. Logan, KC5, p.99.

⁸ MS, p.115-138.

⁹ MS, p.26-32; *Dept. of Licensing v. Arnston*, # omitted, at 17-8 (12/04/07).

¹⁰ MS, p.32-4; *State v. Gilbert*, # C00669127, at 6 (Skagit Co. Dist. Ct. 10/23/07).

¹¹ MS, p.34-7.

and August 2007 were wrong.¹² Subsequently, at least 170 additional non-software related errors affecting 88 different solutions were identified.¹³ These include entering incorrect measurement data, signing off on the wrong data, mixing up data for different solutions, entering incorrect control values and failing to identify the controls used. Toxicologists never checked to see if the data they were reporting matched the results of their measurements.

Based on this alone, in December, a consensus developed within the Breath Test Section, and a recommendation was made to King County prosecutors, that they should at least consider suppressing all breath tests involving solutions 07025 and earlier.¹⁴ According to Trooper Ken Denton:¹⁵

...there was a consensus among us that maybe it would be better to wipe the slate clean, and we should maybe talk to the prosecutors, which we did, about moving over from 07025 on...[recommending that the prosecutors] should look at [suppressing breath tests using these solutions] closely because this is a black eye, it doesn't look good, and perhaps we're better moving on with a clean slate from this point forward.

More to the point, Rod Gullberg has made clear "that he has a lack of confidence in breath tests which involved QAP (quality assurance procedure) and field solutions prior to and including solution number 07025 due to the various errors" discussed above.¹⁶

In addition to this carelessness, the Lab failed to adhere to rudimentary scientific standards accepted throughout the scientific community.¹⁷ Adherence to such standards is required in order for a Lab to be deemed technically competent to carry out tests and/or calibrations and able to generate technically valid results.¹⁸

These standards dictate that:

1. "Calculations and data transfers shall be subject to appropriate checks in a systematic manner."¹⁹

¹² MS, p.45-9, 54-9.

¹³ MS, p.37-50.

¹⁴ Testimony of Trooper Denton, KC3, p.175.

¹⁵ Testimony of Trooper Denton, KC3, p.175-6.

¹⁶ *State v. Benson-Schreiber*, # C603710, at 2 (Mason Co. Dist. Ct. – 04/16/08).

¹⁷ MS, p.50-78.

¹⁸ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E), v (1999); NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Handbook 150*, v (2001).

¹⁹ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E) § 5.4.7.1 (1999); SOCIETY OF FORENSIC TOXICOLOGISTS/AMERICAN ACADEMY OF FORENSIC

2. “Where computers...are used for the...processing, evaluation, recording, reporting, storage or retrieval of calibration or test data, the reference material producer shall ensure that...computer software is validated wherever possible, especially when developed in-house, and is adequate for use.”²⁰
3. Even where “off-the-shelf software (e.g. word-processing, database and statistical programs) in general use” are being utilized “laboratory software configuration/modifications should be validated.”²¹
4. “A certified reference material (CRM), or SRM, suitable for the preparation of a standard to which calibration material can be compared, must be certified by a method generally recognized by the scientific community as one that validates the CRM for this purpose.”²²
5. A “reference material producer shall use documented procedures based on accepted statistical principles for the assignment of property values.”²³
6. “When the experimenter is clearly aware that a gross deviation from prescribed experimental procedure has taken place, the resultant observation should be discarded, whether or not it agrees with the rest of the data and without recourse to statistical tests for outliers.”²⁴
7. “A single result or an entire set of results is suspected to be a statistically invalid result (an outlier) if its deviation either in accuracy or precision from others in the set or other sets, respectively, is greater than can be justified by statistical fluctuations pertinent to a given frequency distribution.”²⁵
8. If data is to be discarded, the lab must develop “policies on treatment and investigation of statistical outliers” “based on accepted statistical principles.”²⁶
9. The most commonly used measure is the ratio of the difference between the suspected outlier and the mean of the data to the standard deviation $C = |X_{ol} - M| / SD$.²⁷
10. Weighted mean should be used when combining “[m]eans based on different number of measurements with differing precisions.”²⁸
11. When based upon precision, the weighted mean is commonly given by $WM = \sum_i (w_i M_i) / \sum_i w_i$ where

SCIENTISTS, *Forensic Toxicology Laboratory Guidelines*, § 10.1 (2006); INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Reference Material Producers*, ISO Guide 34:2000(E) § 5.13.1 (2000).

²⁰ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Reference Material Producers*, ISO Guide 34:2000(E) § 5.13.2(a) (2000); INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E) § 5.4.7.2(a) (1999); NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Handbook 150* §5.4.7.1(a) (2001).

²¹ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E) Note to § 5.4.7.2 (1999). See also, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Handbook 150* §5.4.7.1 (2001).

²² SOFT/ABFT *Forensic Toxicology Laboratory Guidelines* § 9.3.1 (2006).

²³ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Reference Material Producers*, ISO Guide 34:2000(E) § 5.15.1 (2000). See also, INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E) § 5.7.1 (1999); NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Special Publication 260-100*, 20 (1993).

²⁴ AMERICAN SOCIETY FOR TESTING AND MATERIALS, STANDARD PRACTICE FOR DEALING WITH OUTLYING OBSERVATIONS, ASTM DESIGNATION E 178 – 02, § 4 (2002).

²⁵ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *Reference Materials – General and Statistical Principles for Certification*, ISO Guide 35:2006(E) § 10.5.5 (2006). See also, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Special Publication 260-100*, 79 (1993).

²⁶ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Reference Material Producers*, ISO Guide 34:2000(E) § 5.15.1(a) (2000).

²⁷ NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Special Publication 260-100*, 80 (1993); AMERICAN SOCIETY FOR TESTING AND MATERIALS, *Standard Practice for Dealing with Outlying Observations*, ASTM Designation E 178 – 02, § 6.1-§ 6.2 (2002).

²⁸ NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Special Publication 260-100*, 78 (1993).

$$w_i = n_i / SD_i.$$
²⁹

12. "The reference material producer shall, periodically [at least annually] and in accordance with a predetermined schedule and procedure, conduct internal audits of its activities to verify that its operations continue to comply with the requirements of the quality system and [recognized scientific standards]."³⁰

None of these standards were followed. Data and calculations were never checked for accuracy. Valid data was discarded whenever it didn't yield exactly what the Lab wanted it to. Unreliable data was utilized even though the instruments it was collected on were malfunctioning. And proper techniques of statistical analysis were eschewed.

Inexplicably, in 20 years the solution certification/breath test calibration process had never been audited.³¹ A Lab's inability to pass an audit should draw into question the Lab's ability to perform reliable measurements.³² The only audit the solution certification/breath test calibration has ever undergone, conducted in October 2007, the Lab failed miserably. The Lab admits that it will not be able to pass an appropriate audit until mid-summer 2008.

Perhaps most alarming, the State reports all breath test results without correcting for the bias that is attendant to virtually every breath test administered.³³ This may be the most basic of all the standards touched on.³⁴ According to universally recognized standards and leading experts in the field of breath testing:

1. "In general, the result of a measurement is only an approximation or estimate of the value of the specific quantity subject to measurement...the result is complete only when accompanied by a quantitative statement of its uncertainty."³⁵
2. "It is assumed that a correction (or correction factor) is applied to compensate for each recognized systematic effect that significantly influences the measurement result."³⁶

²⁹ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *Reference Materials – General and Statistical Principles for Certification*, ISO Guide 35:2006(E) App. B.7 (2006); NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, *NIST Special Publication 260-100*, 78 (1993).

³⁰ INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Reference Material Producers*, ISO Guide 34:2000(E) § 4.12 (2000); INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, *General Requirements for the Competence of Testing and Calibration Laboratories*, ISO/IEC 17025:1999(E) § 4.14 (1999); AMERICAN SOCIETY OF CRIME LAB DIRECTORS, LAB INTERNATIONAL ACCREDITATION PROGRAM, 14 (2006).

³¹ MS, p.50-78.

³² Testimony of Barry Logan, A1, p.156.

³³ MS, p.16-24, 91-3.

³⁴ MS, p.16-24, 91-3

³⁵ NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, GUIDELINES FOR EVALUATING AND EXPRESSING THE UNCERTAINTY OF NIST MEASUREMENT RESULTS, NIST TECHNICAL NOTE 1297, §2.1 (1994); NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, STANDARD REFERENCE MATERIALS, HANDBOOK FOR SRM USERS, NIST SPECIAL PUBLICATION 260-100, 4 (1993).

³⁶ NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, GUIDELINES FOR EVALUATING AND EXPRESSING THE UNCERTAINTY OF NIST MEASUREMENT RESULTS, NIST TECHNICAL NOTE 1297, §5.2, App. D 1.1.6 – 8 (1994).

3. “The forensic scientist must have the relevant information and perform the computations before trial [and] [t]hese must [] be disclosed to attorneys for both sides prior to trial.”³⁷
4. BAC results must be corrected for bias before they are reported.³⁸

Unfortunately, because of his inadequate understanding of the application of bias to breath testing, Dr. Logan was shown not only to be incompetent but responsible for the failure of the State’s breath test program to report accurate results correctly adjusted for bias.³⁹ As a result, the majority of reported breath test results may not only be incorrect but misleading.⁴⁰

Despite the overwhelming evidence demonstrating the unreliability of all breath tests in Washington and the impact on innocent and guilty alike,⁴¹ the State routinely argues that Breath Test Section QAP Protocols and statutory requirements ensure accurate and reliable breath test results. The claim is without foundation, however, as each of these provisions requires accurate QAP and Field simulator solution values to provide anything other than illusory safeguards.⁴² Even when QAP and statutory provisions have been complied with, errors, carelessness and improper scientific practices in the simulator solution certification process render the reported results of an individuals’ breath test unreliable.⁴³

As an example, the State regularly points to the satisfaction of the $\pm 5\%$ requirement during a QAP to assure Courts and juries that tests are accurate. Rod Gullburg randomly tested 5 DataMasters that had passed their QAPs and been placed in the field for accuracy against solution 07007.⁴⁴ The EVC for this solution is .0828. To be within $\pm 5\%$ of this value, the mean of each instrument’s results must be between .0869 – .0787. The mean of the measurements for DataMaster 5 as determined from the graph is approximately .077. This is well outside the required range yielding an inaccuracy of approximately 7%. Until the solution certification process itself has been made scientifically sound, breath test results statewide remain unreliable.

³⁷ Rod Gullberg, *Common Legal Challenges and Responses in Forensic Breath Alcohol determination*, 16(2) *Forens. Sci. Rev.*, 92, 93 (2004).

³⁸ A.W. Jones, *Dealing with Uncertainty in Chemical Measurements*, 14(1) *Newsl. Int. Assoc. Chem. Testing*, 11 (2003).

³⁹ MS, p.81-5.

⁴⁰ MS, p.16-24, 91-3.

⁴¹ “[E]very test conducted with an improperly certified or defective solution is affected in some way” and the errors may cause the guilty to go free in the same manner they cause the innocent to be incarcerated. *State v. Amach*, # C00627921, at 10-11 (King Co. Dist. Ct. 1/30/08).

⁴² MS, p.89-91.

⁴³ MS, p.89-91.

⁴⁴ MS, p.92.

“The issue of human error in the forensic laboratory is analyzed under ER 702.” *State v. Kalakosky*, 121 Wn.2d 525, 541 (1993). The aforementioned errors and failures infect every single simulator solution and breath test administered statewide. Under ER 702/703 and RCW 46.61.506(3), the work product of the Lab has been so compromised by ethical lapses, systemic inaccuracy, negligence and violations of scientific principles that simulator solutions, and the breath tests that necessarily rely upon them, would not be: (1) helpful to the trier of fact; (2) reasonably relied upon by an expert; or (3) considered accurate and/or reliable in any scientific field.⁴⁵ Accordingly, all breath tests must be suppressed until the solution certification/breath test calibration program is, at a minimum, able to pass an appropriate audit demonstrating technical competence.

C. BREATH TEST INADMISSIBILITY UNDER RCW 46.61.506(4)(a)(vi) - (vii).⁴⁶

Due to the aforementioned errors and failures, the alcohol and vapor concentrations of simulator solutions cannot be known nor can the actual bias of individual DataMasters. As a result, the State cannot make a prima facie showing that the requirements of RCW 46.61.506(4)(a)(vi) - (vii) have been met.

D. BREATH TESTS FAIL TO SATISFY THE DUE PROCESS STANDARD OF RELIABILITY.⁴⁷

“The private interest in the accuracy of a criminal proceeding that places an individual's life or liberty at risk is almost uniquely compelling.” *Ake v. Oklahoma*, 470 U.S. 68, 78, 105 S.Ct. 1087 (1985). Practices that directly threaten the accuracy of the fact-finding process betray these concerns and generally run afoul of due process requirements.⁴⁸ See e.g., *Thompson v. Louisville*, 362 U.S. 199, 80 S.Ct. 624 (1960); *Tot v. United States*, 319 U.S. 463, 63 S.Ct. 1241 (1943); *Mooney v. Holohan*, 294 U.S. 103, 55 S.Ct. 340 (1935). Due process requires that evidence be excluded wherever it is “essential to safeguard the integrity of the truth-seeking process.”⁴⁹ *Brewer v. Williams*, 430 U.S. 387, 425, 97 S.Ct. 1232 (1977)(Burger, J., dissenting); *Moore*

⁴⁵ MS, p.115-138; *State v. Amach*, # C00627921, at 28 (King Co. Dist. Ct. 1/30/08); *State v. Stevens*, # C701706 at 17 (Sno. Co. S. Dist. Ct. 11/30/07).

⁴⁶ MS, p.141-9.

⁴⁷ MS, p.138-41.

⁴⁸ *State v. Ferguson*, 2 S.W.3d 912, 914 n.3 (Tenn. 1999)(“As a general rule...a trial lacks fundamental fairness where there are errors which call into question the reliability of the outcome.”).

⁴⁹ *State v. Michaels*, 642 A.2d 1372, 1381 (N.J. 1994) (To satisfy due process, “[C]ourt has a responsibility to ensure that evidence admitted at trial is sufficiently reliable.”); *State v. Haley*, 689 A.2d 671, 674 (N.H. 1997)(“The private interest affected by a pretrial hearing on the admissibility of evidence is important because...a conviction may hinge on the admission or exclusion of certain evidence.”).

v. Illinois, 434 U.S. 220, 227, 98 S.Ct. 458 (1977).

“The integrity of the adversary process depends both on the presentation of reliable evidence and the rejection of unreliable evidence.”⁵⁰ *Taylor v. Illinois*, 484 U.S. 400, 414-5, 108 S.Ct. 646 (1988). Due process does not permit a conviction based on evidence lacking the requisite degree of reliability. *California v. Green*, 399 U.S. 149, 163 n.15, 90 S.Ct. 1930 (1970); *Green*, 399 U.S. at 186 n.20 (Harlan, J., concurring). “[R]eliability is the linchpin in determining the admissibility” of evidence under the Fourteenth Amendment.⁵¹ *Manson v. Brathwaite*, 432 U.S. 98, 114, 97 S.Ct. 2243 (1977). Exclusion of evidence is appropriate where it serves the legitimate interest of “ensuring that only reliable evidence is introduced at trial.” *U.S. v. Scheffer*, 523 U.S. 303, 309, 118 S.Ct. 1261 (1998).

In a prosecution for DUI, “our legal system has a particularly strong ‘basic fairness’ obligation to see that the evidence that is regularly used by the State...meets a threshold of well-established scientific reliability.” *State v. Dilliner*, 569 S.E.2d 211, 224 (W.Va. 2002)(Starcher, J., concurring). “In order for the results of a blood alcohol test to be admissible, the state must prove that the reliability of the test satisfies due process and fairness.” *State v. Honeyman*, 560 So.2d 825, 829 (La. 1990).

Clearly, any evidence concerning simulator solutions, or breath test results dependant thereon, lacks the requisite degree of reliability to satisfy the constraints of due process. Accordingly, due process requires that the breath tests in the matter before the court be suppressed.

DECISION POINTS

07025: WSP Breath Test Section advises King County prosecutors that they should seriously consider suppressing all breath tests utilizing QAP and field solutions 07025 and earlier. Gullberg “has a lack of confidence in breath tests which involved QAP (quality assurance procedure) and field solutions prior to and including solution number 07025 due to the various errors” discussed above.

⁵⁰ *Bolden v. State*, 967 S.W.2d 895, 899 (Tex.App. 1998)(In determining whether a state’s rule of evidence violates due process, “[T]he social interest involved...requires consideration be given to the integrity of the adversary process, which depends both on the presentation of reliable evidence and the rejection of unreliable evidence, the interest in fair and efficient administration of justice, and the potential prejudice to the truth-determining function of the trial process.”). *Bellotti*, 435 U.S. at 789 (“Preservation of the individual citizen’s confidence in government is [of the highest] important[ce].”).

⁵¹ *State v. Michaels*, 642 A.2d 1372, 1381 (N.J. 1994)(“Competent and reliable evidence remains at the foundation of a fair trial, which seeks ultimately to determine the truth about criminal culpability. If crucial inculpatory evidence is alleged to have been derived from unreliable sources due process interests are at risk.”).

- 07056: First solution certified under October protocols which include data entry checks, calculation verifications, and verification and validation of software. Knoy and Capron refused to swear to correctness of solutions prior to this even where solutions had been reviewed by Gullberg and Denton.
- 08001: First solution certified under the December protocols which are more rigorous than any previously adopted and include criteria for the rejection of data. First solution fully certified after chromatograph 1 repaired.
- July '08: Lab expects to be in at least partial compliance with ISO standards and should be able to pass a standard audit.
- Jan. '09: Lab expects to be fully accredited to ASCLD/ISO standards.

II. CASE SPECIFIC ISSUES REQUIRING AUTOMATIC SUPPRESSION.

The State often frames its argument around a single simulator solution. Ordinarily such an approach would be appropriate. The extraordinary circumstances surrounding the State Toxicology Lab's production of simulator solutions, however, requires consideration of the entirety of the circumstances surrounding that process. See collectively, *Ludvigsen v. City of Seattle*, 162 Wn.2d 660 (2007); *City of Fircrest v. Jensen*, 158 Wn.2d 384, 397-9 (2006); *State v. Copeland*, 130 Wn.2d 244 (1996); *State v. Cannon*, 130 Wn.2d 313, 325 (1996); *State v. Kalakosky*, 121 Wn.2d 525 (1993); *State v. Roche*, 114 Wn.App. 424, 446 (2002). An overly restrictive focus on any particular solution would be akin to losing sight of the forest through the trees and serve only to obfuscate the truth.

Should the court deem it appropriate to engage in a solution specific analysis, however, the Court must keep in mind that every test has 5 simulator solutions associated with it: the external standard solution utilized at the time of the test and four QAP solutions used to certify the DataMaster for service. The solution summary below sets forth individual solutions and some of the issues affecting each. For purposes of this analysis, I *assume* that what is reported can be accepted at face value despite the Lab's demonstrated patterns of perjury, false swearing, carelessness and reckless disregard for the truth. Based on the analysis above, such an assumption is clearly unreasonable. It is required, however, for any individual solution analysis to be engaged in.

The State often relies upon *State v. Kim*, 134 Wn.App. 27 (2006) for the proposition that "the State

[does] not [] have to show that the test complied with the WSTL's internal policies and procedures for purposes of admissibility.” *Kim*, 134 Wn.App.at 31. As a general proposition the defense does not disagree with this contention. In *Kim*, the defendant argued that a blood test should be suppressed because the State failed to prove compliance with the Toxicologist’s protocols. The defendant, however, offered absolutely no evidence or reason to believe that the protocols had not been complied with. All *Kim* stands for is that in the absence of such a showing, the State has no burden to demonstrate compliance. When a Citizen can show an affirmative violation of the protocols, however, the violation may be properly relied upon by the Court as a basis for suppression. “When deviations from additional⁵² testing procedures or machine maintenance protocols are so serious as to render test results unreliable, a court has discretion to exclude them.” *Ludvigsen v. City of Seattle*, 162 Wn.2d 660 (2007).

SOLUTION SPECIFIC ANALYSIS⁵³

AS: Quick find auto suppression issues. Explanation of each can be found following the table.

OS: Other science issues.

OC: Obvious carelessness.

FS: False swearing.

OI: Other issues.

CE: Programming/software error in equivalent vapor concentration (EVC) or liquid solution concentration (AC).

CY: Programming error in reported coefficient of variation.

N/A: Nothing obvious on quick check apparent.

^F Solution batches marked with this symbol were only checked for the specific issues identified. Other issues identified elsewhere in this table in other solutions may be present but were not investigated.

Solution	Type	Issues
08006	Field	N/A
08005 ^F	QAP	OC: (1) Chromatograph 1 programmed with the wrong units.
08004 ^F	QAP	OC: (1) Chromatograph 1 programmed with the wrong units.
08003 ^F	QAP	OC: (1) Chromatograph 1 programmed with the wrong units.
08002 ^F	QAP	OC: (1) Chromatograph 1 programmed with the wrong units.
08001	Field	OS: (1) Weighted mean required. OC: (1) Chromatograph 1 programmed with the wrong units.
07060	Field	OS: (1) Mitchell’s .158 calibration standard does not quantify within $\pm .01$ of its target value (.143); (2) Weighted mean required; (3) Chromatograph 1 (12/14). OC: (1) Chromatograph 1 programmed with the wrong units (12/27).
07059	QAP	OS: (1) Weighted mean required.

⁵² Not contained in the test of RCW 46.61.506(4).

⁵³ There may be other issues present. These are just quickly identified, obvious issues. Moreover, the chart includes only those solutions I have examined as part of litigation. The only inference to be drawn from a solution’s absence from this table is that I have not been asked to look at it yet.

Solution	Type	Issues
07058	QAP	OS: (1) Weighted mean required.
07057	QAP	OS: (1) Weighted mean required.
07056	QAP	OS: (1) Weighted mean required.
07049	QAP	AS: (1) Louis no blank. OS: (1) Weighted mean required.
07048	QAP	OS: (1) Weighted mean required.
07047	QAP	OS: (1) Weighted mean required.
07046	QAP	OS: (1) Weighted mean required.
07045	Field	AS: (1) Low ISTD area (Brian Capron); (2) Nuwayhid no blank. OS: (1) Weighted mean required; (2) Chromatograph 1.
07044	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Johnston entered incorrect solution EVC into chromatograph.
07043	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07042	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07041	QAP	OS: (1) Chromatograph 1.
07040	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07039	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07038	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07037	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
07032	Field	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10 – zerox from earlier run/calibration copied and filed with solution (see solution 07031 – same copied result filed). OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Louis’ declaration, labeled “Certification for Lot 07032”, actually certifies under penalty of perjury “Lot Number 07031”.
07031	Field	AS: (1) Louis no blank; (2) Peterson improperly discarded valid data;* (3) Louis no contemporaneous control w/i 10 – zerox from earlier run/calibration copied and filed with solution (see solution 07032 – same copied result filed). OS: (1) Weighted mean required. * Both under the Lab’s 12/08 protocols and the analysis engaged in DoL v. Arnston, valid data was improperly discarded. In Defendant’s brief, the argument is made that there were 4 outliers, requiring rejection of all data. The argument was based on the Lab’s Protocols and Dr. Pollisar’s testimony that “the leave one out method [is] more powerful in detecting outliers. You’re more likely to detect a real outlier with that method than [“including the suspect...in the calculation of the mean and the standard deviation”].” ⁵⁴ Rod Gullberg was not present for this testimony and so was unaware of it. As a result, he includes the suspected outlier in his outlier analysis under the protocols. In order to give the State the benefit of every doubt, I have adopted Gullberg’s interpretation. This changes the rationale for suppression but does not change the fact that the solution was invalidly certified.
07030	Field	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10 – zerox from earlier run/calibration copied and filed with solution (see solution 07029 – same copied result filed). OS: (1) Weighted mean required; (2) Chromatograph 1.

⁵⁴ Testimony of Dr. Pollisar, KC7, p.187.

Solution	Type	Issues
07029	Field	AS: (1) Nuwayhid no blank; (2) Louis no blank; (3) Louis no contemporaneous control w/i 10 – zerox from earlier run/calibration copied and filed with solution (see solution 07030 - same copied result filed). OS: (1) Weighted mean required; (2) Chromatograph 1; (3) Ball's .079 calibration standard does not quantify within $\pm .01$ of its target value (.097).
07028	Field	AS: (1) Capron discarded valid data; (2) Nuwayhid no blank; (3) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required.
07027	Field	OS: (1) Weighted mean required; (2) Chromatograph 1.
07026	Field	OS: (1) Weighted mean required; (2) Chromatograph 1.
07025	Field	OS: (1) Weighted mean required.
07024	Field	AS: (1) Nuwayhid no blank; (2) Louis no blank; (3) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Knoy entered incorrect test date. OI: (1) Gross never submitted a declaration swearing that she tested solution.
07023	Field	AS: (1) Gross discarded valid data; (2) Louis no blank; (3) Nuwayhid no blank; (4) Formoso no blank. OS: (1) Weighted mean required; (2) Chromatograph 1. CE: Incorrect EVC. CV: Incorrect.
07019	QAP	OS: (1) Weighted mean required. OC: (1) Peterson and Capron sign off on wrong data; (2) Date of preparation originally incorrect. FS: (1) Peterson falsely swears to wrong preparation date.
07018	QAP	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10.
07017	Field	AS: (1) Louis no blank; (2) Capron's blank contains peaks; (3) Johnston's blank contains peaks; (4) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Black entered incorrect test date. CE: Incorrect EVC. CV: Incorrect.
07016	Field	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10.
07015	Field	AS: (1) Low ISTD area (Brian Capron); (2) Formoso no blank. OS: (1) Weighted mean required; (2) Chromatograph 1. CE: Incorrect EVC. CV: Incorrect.
07014	QAP	N/A
07013	QAP	OC: (1) Flaherty reported incorrect data. FS: (1) Flaherty's declaration originally reports incorrect AC. CE: Incorrect AC. CV: Incorrect.
07012	QAP	OC: (1) Flaherty reported incorrect data. CV: Incorrect.
07011	QAP	AS: (1) Miranda no blank. OS: (1) Weighted mean required.

Solution	Type	Issues
07010	Field	AS: (1) Louis no blank; (2) EF no blank; (3) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Miranda entered incorrect measurement value for solution; (2) Louis and Black entered incorrect test date. CE: Incorrect EVC. CV: Incorrect.
07009	QAP	OS: (1) Chromatograph 1.
07008	Field	AS: (1) Louis no contemporaneous control w/i 10. OC: (1) Black reported incorrect data.
07007	Field	AS: (1) AMG solution; (2) Louis no blank; (3) Nuwayhid no blank; (4) AMG no blank; (5) Long's blank contains peaks; (6) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. CE: Incorrect EVC. CV: Incorrect. OI: (1) Miranda's/Knoy's chromatograms suggest Miranda tested for Knoy.
07006	Field QAP	AS: (1) AMG solution; (2) Piquette no blank; (3) AMG no blank; (4) Nuwayhid no blank; (5) Long's blank contains peaks. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Field solution used for QAP; (2) Louis entered incorrect test date; (3) Johnston entered incorrect test date. CV: Incorrect.
07005	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. FS: (1) Original declarations were falsely sworn to.
07004	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. FS: (1) Original declarations were falsely sworn to.
07003	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. FS: (1) Original declarations were falsely sworn to.
07002	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. FS: (1) Original declarations were falsely sworn to.
07001	Field	AS: (1) AMG solution; (2) AMG no blank; (3) Louis no blank; (4) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Pemberton entered incorrect test date; CE: Incorrect EVC. CV: Incorrect.
06054	Field	AS: (1) AMG solution; (2) Louis no blank; (3) EF no blank; (4) AMG no blank; (5) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. CE: Incorrect EVC. CV: Incorrect.
06053	QAP	OS: (1) Weighted mean required.
06052	QAP	OS: (1) Weighted mean required.
06051	QAP	N/A
06050	QAP	OS: (1) Weighted mean required.

Solution	Type	Issues
06049	Field	<p>AS: (1) AMG solution; (2) Louis no contemporaneous control w/i 10; (3) Formoso no blank; (4) AMG no blank; (5) Long's data contains a measurable shoulder; (6) Nuwayhid's data was improperly discarded.*</p> <p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>OC: (1) Nuwayhid failed to line out and explain originally discarded data; (2) Control value recorded different from value measured.</p> <p>CE: Incorrect EVC.</p> <p>CV: Incorrect.</p> <p>* Nuwayhid's data was discarded for having a measurable shoulder, an indication of a contaminant. This would require rejection of Long's data which she failed to do. If Long's data was acceptable, there is no justification for the rejection of Nuwayhid's data.</p>
06048	Field	AS: (1) Louis no contemporaneous control w/i 10.
06047	QAP	<p>OS: (1) Weighted mean required.</p> <p>FS: (1) All declarations contain uncorrected false swearing.</p>
06046	QAP	<p>AS: (1) Nuwayhid no blank; (2) Formoso no blank.</p> <p>OS: (1) Weighted mean required.</p> <p>FS: (1) All declarations contain uncorrected false swearing.</p>
06045	QAP	<p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>FS: (1) All declarations contain uncorrected false swearing.</p>
06044	QAP	<p>AS: (1) Formoso no blank.</p> <p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>FS: (1) All declarations contain uncorrected false swearing.</p>
06043	Field	<p>AS: (1) Low ISTD area (Brian Capron); (2) Nuwayhid no blank; (3) EF no blank; (4) AMG no blank; (5) Louis no blank; (6) Piquette no blank; (7) Louis no contemporaneous control w/i 10.</p> <p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>OC: (1) Long entered incorrect test date.</p> <p>CE: Incorrect EVC.</p> <p>CV: Incorrect.</p>
06042	QAP	<p>AS: (1) Nuwayhid no blank; (2) Formoso no blank.</p> <p>OS: (1) Weighted mean required.</p> <p>FS: (1) All declarations contain uncorrected false swearing.</p>
06041	Field	<p>AS: (1) AMG solution; (2) The control included by Louis is from a different run on a different day; (3) Louis no control; (4) Louis no blank.</p> <p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>OC: (1) Capron entered incorrect measurement value for solution.</p> <p>CE: Incorrect EVC.</p> <p>CV: Incorrect.</p>
06040	QAP	OS: (1) Weighted mean required.
06039	QAP	<p>OS: (1) Weighted mean required; (2) Chromatograph 1.</p> <p>OC: (1) Originally certified without lot # or expiration for control.</p>
06038	QAP	<p>OS: (1) Weighted mean required.</p> <p>OC: (1) Originally certified without lot # or expiration for control.</p>
06037	QAP	<p>AS: (1) FileMaker Pro (software) forensically indefensible error.</p> <p>OS: (1) Weighted mean required.</p> <p>CE: Incorrect EVC.</p>

Solution	Type	Issues
06036	Field	AS: (1) Capron's data contains a measurable shoulder.* OS: (1) Weighted mean required; (2) Chromatograph 1. CE: Incorrect EVC. CV: Incorrect. * See footnote for solution 06049.
06035	QAP	AS: (1) Low ISTD area (Brian Capron). OC: (1) Preparation date incorrect in worksheet. FS: (1) Capron's falsely swears to wrong preparation date.
06034	QAP	AS: (1) Low ISTD area (Brian Capron). OS: (1) Weighted mean required. OC: (1) Preparation date incorrect in worksheet. FS: (1) Capron's falsely swears to wrong preparation date.
06033	QAP	OC: (1) Preparation date incorrect in worksheet. FS: (1) Capron's falsely swears to wrong preparation date.
06032	QAP	OS: (1) Weighted mean required. OC: (1) Preparation date incorrect in worksheet. FS: (1) Capron's falsely swears to wrong preparation date.
06031	Field	AS: (1) AMG solution; (2) Louis no blank; (3) Nuwayhid discarded data. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Knoy entered incorrect test date. CE: Incorrect EVC. CV: Incorrect. OI: All of "Johnston's" are labeled w/ Piquette's name.
06030	Field QAP	AS: (1) Low ISTD area (Brian Capron); (2) AMG solution; (3) Louis no blank; (4) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Field solution used as QAP. CE: Incorrect EVC. CV: Incorrect.
06029	Field	AS: (1) Low ISTD area (Brian Capron); (2) AMG solution. OS: (1) Weighted mean required; (2) Chromatograph 1. CE: Incorrect EVC. CV: Incorrect.
06028	QAP	AS: (1) Noble discarded valid data - forensically indefensible error. OS: (1) Weighted mean required; (2) Chromatograph 1. FS: (1) Noble falsely swore to reason for discarding data in declaration to KC Court: admitted on stand she had sworn to statement of fact that was false.
06027	Field	AS: (1) AMG solution; (2) Johnston's blank contains peaks; (3) EF no blank; (4) AMG no blank; (5) Louis no blank; (6) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Louis entered incorrect test date; (2) Long entered incorrect test date. CE: Incorrect EVC. CV: Incorrect.

Solution	Type	Issues
06026	Field	AS: (1) AMG solution; (2) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Gullberg doesn't recognize Louis' control outside 10.
06025 ^F	Field	AS: (1) Low ISTD area (Brian Capron); (2) AMG solution. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Long entered incorrect test date. CE: Incorrect EVC. CV: Incorrect.
06024	QAP	AS: (1) Formoso no blank.
06022	QAP	AS: (1) Formoso no blank. OS: (1) Weighted mean required.
06021	QAP	OS: (1) Weighted mean required.
06020	Field	AS: (1) AMG solution; (2) Nuwayhid no blank; (3) EF no blank; (4) AMG no blank; (5) Louis no blank; (6) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Swenson ran duplicate tests requiring data to be discarded. CV: Incorrect. OI: (1) Chromatograms show pattern suggesting Johnston tested for Capron.
06019	Field	AS: (1) AMG solution; (2) Formoso no blank; (3) AMG no blank; OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Johnston entered incorrect test date; (2) Nuwayhid improper documentation of discarded data. CV: Incorrect.
06018	Field	AS: (1) AMG solution; (2) EF no blank; (3) AMG no blank; (4) Hoff discarded data.* OS: (1) Weighted mean required. OC: (1) Johnston entered incorrect test date. CE: Incorrect EVC. CV: Incorrect.
06017	QAP	OS: (1) Weighted mean required.
06016	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Nuwayhid entered incorrect measurement value for control.
06015	QAP	AS: (1) Hoff no blank. OS: (1) Weighted mean required. OC: (1) Hoff entered incorrect data value; (2) All declarations originally report incorrect AC; (3) Hoff's declarations has never been corrected. CE: Incorrect EVC. CV: Incorrect.
06014	QAP	AS: (1) No Lot # or expiration date for external control. OS: (1) Weighted mean required.
06013	QAP	AS: (1) Aikins no blank. OS: (1) Weighted mean required. OC: (1) Akins reported incorrect data. CV: Incorrect.
06012	QAP	AS: (1) Akins' blank contains peaks. OS: (1) Weighted mean required. OC: (1) Capron entered incorrect test date.

Solution	Type	Issues
06011	QAP	AS: (1) Aikins no blank. OS: (1) Weighted mean required. OC: (1) Capron entered incorrect test date.
06010	QAP	AS: (1) Aikins no blank. OS: (1) Weighted mean required. OC: (1) Capron entered incorrect test date.
06008	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1.
06007	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Capron entered incorrect test date.
06006	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Capron entered incorrect test date.
06004	QAP	AS: (1) Nuwayhid no blank. OS: (1) Weighted mean required.
06003	Field QAP	AS: (1) Outside QAP range as reported; (2) AMG solution; (3) Mixed up solution - test date precedes preparation date for Nuwayhid; (4) Mixed up solution - test date precedes preparation date for Gruendell; (5) Hoff no control; (6) Hoff no blank; (7) Formoso no blank; (8) AMG no blank. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) "AMG" reported incorrect data; (2) Akins incorrect test date; (3) Field solution used as QAP. CV: Incorrect.
06002	Field	AS: (1) AMG solution; (2) EF no blank; (3) AMG no blank. OS: (1) Weighted mean required. OC: (1) Akins entered incorrect test date. CV: Incorrect.
05045	QAP	OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Declarations dated before solution tested.
05040	QAP	AS: (1) No lot # or expiration for control; (2) Formoso no blank. OS: (1) Weighted mean required. OC: (1) Capron incorrect test date; (2) Capron incorrect data value; (3) All analysts certified despite original reported AC falling outside required range; (4) All analysts certified solution despite fact that original value for CV was 25 times greater than permissible; (5) Error not discovered for 2 months. CE: Incorrect EVC. CV: Incorrect.
05039	QAP	AS: (1) No lot # or expiration for control. OC: (1) Capron entered incorrect test date.
05038	QAP	AS: (1) No lot # or expiration for control; (2) Formoso no blank. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Capron entered incorrect test date.
05037	QAP	AS: (1) No lot # or expiration for control. OS: (1) Weighted mean required; (2) Chromatograph 1. OC: (1) Capron entered incorrect test date.

Solution	Type	Issues
05036	Field	<u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Akins entered incorrect measurement value for control; (2) Capron and Hoff entered incorrect test date. <u>CE</u> : Incorrect EVC. <u>CV</u> : Incorrect.
05033	QAP	<u>AS</u> : (1) Gross' blank contains peaks. <u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Gross entered wrong batch ID into chromatograph.
05032	QAP	<u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Miranda reported incorrect data; (2) Gross entered wrong batch ID into chromatograph. <u>CE</u> : Incorrect EVC. <u>CV</u> : Incorrect.
05031	QAP	<u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Gross entered wrong batch ID into chromatograph; (2) Miranda entered incorrect test date.
05030	QAP	<u>OS</u> : (1) Weighted mean required. <u>OI</u> : (1) Miranda's and Gross' chromatograms show pattern suggesting Miranda tested for Gross.
05028	Field	<u>AS</u> : (1) AMG solution; (2) WM no blank; (3) WM no control. <u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Confusion in recording of appropriate blank. <u>CV</u> : Incorrect.
05024	QAP	<u>OS</u> : (1) Weighted mean required; (2) Chromatograph 1. <u>OI</u> : (1) No signature in the worksheet or a declaration by any analyst indicating she personally prepared the solution. <u>CV</u> : Incorrect.
05023	Field	<u>AS</u> : (1) AMG solution. <u>OS</u> : (1) Weighted mean required. <u>CV</u> : Incorrect.
05017	Field QAP	<u>AS</u> : (1) AMG/Pemberton solution; (2) Miranda no blank; (3) Nuwayhid no blank; (4) Formoso no blank. <u>OS</u> : (1) Weighted mean required. <u>OC</u> : (1) Field solution used for QAP; (2) Capron entered incorrect test date. <u>CV</u> : Incorrect.
05016	Field	<u>AS</u> : (1) Low ISTD area (Brian Capron); (2) AMG solution. <u>OS</u> : (1) Weighted mean required. <u>CV</u> : Incorrect.
05015	Field	<u>AS</u> : (1) Low ISTD area (Brian Capron); (2) AMG solution. <u>OS</u> : (1) Weighted mean required. <u>CV</u> : Incorrect.
05014	QAP	<u>AS</u> : (1) Low ISTD area (Louis); (2) Louis no blank; (3) Louis wrong control value recorded.
05013	QAP	<u>AS</u> : (1) Multiple Low ISTD areas: samples and calibration (Louis); (2) Formoso no blank; (3) Louis wrong control value recorded.

Solution	Type	Issues
05012	QAP	AS: (1) Louis no blank. OS: (1) Weighted mean required. OC: (1) Confusion concerning control value entered by Louis.
05011	QAP	OC: (1) Confusion concerning control value entered by Louis.
05008	Field QAP	AS: (1) AMG solution; (2) Outside QAP range when corrected for perjury; (3) Louis no blank; (4) Formoso no blank; (5) AMG no blank; (6) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Field solution used for QAP; (2) Louis entered incorrect test date.
05006 ^F	Field	AS: (1) AMG solution; (2) Louis no blank; (3) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Louis entered incorrect test date. CV: Incorrect.
05004	QAP	OS: (1) Weighted mean required.
05001	QAP	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10.
04043	QAP	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10. OS: (1) Miranda's control has an extraneous peak suggesting a contaminant.
04041	QAP	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10.
04040	QAP	AS: (1) Capron's blank contains peaks. OS: (1) Weighted mean required. OC: (1) Capron entered incorrect test date. FS: (1) Capron's falsely swears to wrong AC. OI: (1) Only two declarations for this solution – Marshall's indicates 04037.
04036	Field	AS: (1) Louis no blank; (2) Louis no contemporaneous control w/i 10. OC: (1) Louis entered wrong solution batch into chromatograph.
04026	Field	AS: (1) AMG solution; (2) Low ISTD area (Brian Capron); (3) Low ISTD area (Gruendell); (4) Low ISTD area (Louis); (5) Low ISTD area (Nuwayhid); (6) Low ISTD area (Miranda); (7) Low ISTD area (Formoso); (8) Low ISTD area (Gordon); (9) Low ISTD area (Wilson); (10) Louis no contemporaneous control w/i 10. OS: (1) Weighted mean required. OC: (1) Capron entered incorrect measurement value for control. CV: Incorrect.
04025	Field	AS: (1) Louis low ISTD area; (2) Louis no blank; (3) Louis no contemporaneous control w/i 10. OS: (1) Louis' chromatogram contains an extraneous peak suggesting the presence of a contaminant. OC: (1) Louis entered incorrect test date.
04002	Field	AS: (1) Louis low ISTD area; (2) Louis no blank; (3) Louis no contemporaneous control w/i 10; (4) Louis' data is mixed from two completely different machines. OC: (1) Louis entered incorrect test date.
04001	Field	AS: (1) AMG solution; (2) Louis no blank; (3) Louis no control; (4) Mixed up solutions - Louis' data is mixed from two separate dates and two completely different machines; (5) Louis low ISTD area.

Solution	Type	Issues
03046	Field	AS: (1) Louis low ISTD area; (2) Louis no blank; (3) Louis no contemporaneous control; (4) Louis' data is mixed from two completely different machines.
03041	Field	AS: (1) Louis low ISTD area; (2) Louis no blank; (3) Louis no contemporaneous control; (4) Louis' data is mixed from two completely different machines.
03040	Field	AS: (1) Louis low ISTD area; (2) Louis no blank; (3) Louis missing contemporaneous control; (4) Louis' data is mixed from two completely different machines.
03026	Field	AS: (1) Louis no blank; (2) Louis' data is mixed from two completely different machines. OC: (1) Thatcher entered incorrect test date. CV: Incorrect.
02019	QAP	AS: (1) Thatcher mixed up solutions.
02018	Field	AS: (1) Thatcher mixed up solutions.

AMG Solution: See Section I.A above.

False Signing of Worksheet: After testing a solution each analyst must enter their data into the worksheet and “sign on the corresponding signature line, and their signature will reflect that the results are the results of tests that they personally performed.”⁵⁵

Low ISTD Area:⁵⁶ Prior to 10/23/04 the lower ISTD area limit was 2,000.⁵⁷ From 10/23/04 to 10/10/06 the lower ISTD area limit was 1,000.⁵⁸ Subsequent to 10/10/06 it was 900.⁵⁹ Where there is an identifiable physical malfunction of a chromatograph during the certification process that calls into question the values of the data collected, the data should be discarded and rerun.⁶⁰ When certifying a solution, if a chromatograph returns an ISTD area below the lower limit, it is an indication that the gas chromatograph has a

⁵⁵ WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of .08 Simulator External Standard Solution For Use With A Breath Test Instrument*, §H (2007); WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of Quality Assurance Solutions For Use With A Breath Test Instrument*, §H (2007).

⁵⁶ MS, p.12, 43-4.

⁵⁷ WASHINGTON STATE TOXICOLOGY LABORATORY, *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §k2 (5/27/03).

⁵⁸ WASHINGTON STATE TOXICOLOGY LABORATORY, *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §k2 (10/23/04).

⁵⁹ WASHINGTON STATE TOXICOLOGY LABORATORY, *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §k2 (10/10/06).

⁶⁰ AMERICAN SOCIETY FOR TESTING AND MATERIALS, STANDARD PRACTICE FOR DEALING WITH OUTLYING OBSERVATIONS, ASTM DESIGNATION E 178 – 02, § 4 (2002).

stuck injection needle.⁶¹ When this occurs, the “result isn’t acceptable”.⁶² Accordingly, the protocols require that any data set that includes an ISTD area below the lower limit must be discarded and rerun.⁶³ As examples, both Brian Capron and Dr. Nuwayhid relied on this in justifying the data they discarded in the certifications of solutions 05009 and 07018.⁶⁴

Control violations: When certifying a simulator solution, “[c]ommercially prepared controls are included in [the] run.”⁶⁵ The controls are used “to ensure the proper operation of the instrument [gas chromatograph] and the reliability of the results obtained.”⁶⁶ Simply because an instrument is found to be measuring accurately at one point in time, however, is no indication that it does so at another point in time. As a result, “[e]ach positive sample should be separated from a commercial control...by no more than ten other samples.”⁶⁷ The periodic reanalysis of controls throughout the run “checks that the instrument maintains its calibration during the course of the run.”⁶⁸ In particular, “a certification run...must include at least one control per 10 samples...After every 10 unknowns, one quality control sample followed by one blank is analyzed.”⁶⁹ This means that “every tenth injection had to be a control value.”⁷⁰ If an analyst fails to “run a control” or “ran the wrong control”, these constitute “errors that violate the protocol and would be the basis for excluding that data.”⁷¹

⁶¹ KC Ex 126 (Declaration of Brian Capron – solution 05009 # 6); KC Ex. 128 (Declaration of Naziha Nuwayhid – solution 07018 # 33); Testimony of Dr. Logan, KC5, p. 169; WASHINGTON STATE TOXICOLOGY LABORATORY, ANALYSIS OF ALCOHOLS IN AQUEOUS AND BIOLOGICAL SAMPLES BY HEADSPACE GAS CHROMATOGRAPHY, §k2, versions (2004) – (2006).

⁶² Testimony of Dr. Nuwayhid, KC6, p.162; Declaration of Brian Capron, KC Ex 126 (Solution 05009 - # 6); Declaration of Dr. Nuwayhid, KC Ex. 128 (Solution 07018 - # 33); Testimony of Dr. Logan, KC5, p. 169; WASHINGTON STATE TOXICOLOGY LABORATORY, ANALYSIS OF ALCOHOLS IN AQUEOUS AND BIOLOGICAL SAMPLES BY HEADSPACE GAS CHROMATOGRAPHY, §k2, versions (2004) – (2006).

⁶³ Declaration of Brian Capron, KC Ex 126 (Solution 05009 - # 6); Declaration of Dr. Nuwayhid, KC Ex. 128 (Solution 07018 - # 33); Testimony of Dr. Logan, KC5, p. 169; Testimony of Dr. Nuwayhid, KC6, p.161-2, 164-5; WASHINGTON STATE TOXICOLOGY LABORATORY, ANALYSIS OF ALCOHOLS IN AQUEOUS AND BIOLOGICAL SAMPLES BY HEADSPACE GAS CHROMATOGRAPHY, §k2, versions (2004) – (2006); *State v. Lycksell*, # C677464, at 5 (Skagit Co. Dist. Ct. 3/28/08); *State’s Stipulation to Suppression of Breath Test Results*, PIERCE COUNTY PROSECUTOR’S OFFICE (2008).

⁶⁴ Testimony of Dr. Nuwayhid, KC6, p.161-2, 165; Declaration of Brian Capron, KC Ex 126 (Solution 05009 - # 6); Declaration of Dr. Nuwayhid, KC Ex. 128 (Solution 07018 - # 33).

⁶⁵ *Procedure For The Preparation Of .08 Simulator External Standard Solution For Use With A Breath Test Instrument*, §E (8/7/07).

⁶⁶ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.64-5.

⁶⁷ *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §J6 (10/10/06); Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.65.

⁶⁸ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.65.

⁶⁹ *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §F (10/10/06).

⁷⁰ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.165-6

⁷¹ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.99-100.

Once a certification run has been completed, the analyst is required to “[r]ecord the results of the testing in the solution certification database, *including the date and results of the contemporary external control [and] Enter the control lot number.*”⁷² Any error or uncertainty in the value of the solution is “established by looking at the control values that are on those certification worksheets because that’s an external validation of the accuracy of the procedures you were using.”⁷³ If “the documentation for the fact that the control was conducted is not available or is missing, these would [] be a basis for excluding the data.”⁷⁴ “It would be a problem if it was not...Because there’s no external validation of the Analyst’s results recorded.”⁷⁵

“The contemporary external control” refers to a control “proximate to the time of the sample -- of the analysis of the sample in question.”⁷⁶ Generally, this “would be interpreted” as the control in the run closest to the sample in question.⁷⁷ Given the language of the protocols, however, “the contemporary external control” encompasses any control separated from a given sample by no more than 10 other samples.⁷⁸

Control zeroxed from earlier run/calibration copied and filed with solution: Asa Louis has used controls that were part of a run/calibration conducted separately before the solution was certified and then simply made copies of the control data and represented them as contemporaneous controls done as part of distinct solution certification runs.

Missing Blanks: “After every 10 unknowns, one quality control sample followed by one blank is analyzed.”⁷⁹ Running a blank sample during the certification of a solution helps ensure that the data collected is reliable.⁸⁰ They do so by alerting analysts when there is a nonzero background reading skewing test results.⁸¹

⁷² *Procedure For The Preparation Of .08 Simulator External Standard Solution For Use With A Breath Test Instrument*, §G2 (8/7/07)(Emphasis added).

⁷³ Testimony of Dr. Logan, *State v. Ahmach* (1/9/08), Transcript p.74-5.

⁷⁴ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.102.

⁷⁵ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.65-6.

⁷⁶ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.66.

⁷⁷ Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.66.

⁷⁸ For example see solutions 05011 and 05012 and the Testimony of Dr. Logan, *State v. Ahmach* (1/8/08), Transcript p.66-70.

⁷⁹ WASHINGTON STATE TOXICOLOGY LABORATORY, *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §F (2004) – (2006); Testimony of Dr. Logan, KC6, p.42.

⁸⁰ Testimony of Dr. Logan, KC5, p.23; KC6, p.40.

⁸¹ SOCIETY OF FORENSIC TOXICOLOGISTS/AMERICAN ACADEMY OF FORENSIC SCIENTISTS, *Forensic Toxicology Laboratory Guidelines*, § 8.5 (2006); CANADIAN SOCIETY OF FORENSIC SCIENCE ALCOHOL TEST COMMITTEE, *Recommended Standards and procedures of The Canadian Society of Forensic Science Alcohol Test Committee*, 36(3) SOC. FORENS. SCI. J. 101, 104, 115-6 (2003).

Blanks Containing Peaks: Analysts must “[e]nsure that all blanks following control samples are devoid of peaks.”⁸² The presence of a peak may be an indication that the run is affected by a contaminant.⁸³

Discarding Valid Data:⁸⁴ If an analyst discards data without “assignable cause for excluding data, it would undermine the process.”⁸⁵ If a single outlier is discovered in a set of data, proper scientific practice dictates that only that value be discarded.⁸⁶ If more than two outliers are discovered, the entire solution batch must be discarded and a new one mixed.⁸⁷ Where data is rejected because something has gone wrong in the certification process, the reason must be documented.⁸⁸ “The protocols are certainly violated if the results of an analyst are not included.”⁸⁹

Failure to quantify within $\pm .01$ of target value: The Protocols require that “each control” and all “other standards quantify within $\pm .01$ gm/100ml of their respective target value.”⁹⁰ If this requirement is not satisfied, the data collected “would not be acceptable.”⁹¹

Outside QAP certification range: Certification of a QAP solution requires the mean AC of the solution to be within one of the following ranges: (1) For a 0.04 solution, 0.047 – 0.052; (2) For a 0.08 solution, 0.092 – 0.102; (3) For a 0.10 solution, 0.123 – 0.133; and (4) For a 0.15 solution, 0.176 – 0.194.⁹²

Measurable shoulder: A measurable shoulder in a chromatogram is an indication of a contaminant that

⁸² WASHINGTON STATE TOXICOLOGY LABORATORY, ANALYSIS OF ALCOHOLS IN AQUEOUS AND BIOLOGICAL SAMPLES BY HEADSPACE GAS CHROMATOGRAPHY, §K1, (2006).

⁸³ KC Ex. 128 at 4.

⁸⁴ MS, p.59-63

⁸⁵ Testimony of Dr. Logan, KC4, p.49.

⁸⁶ WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of .08 Simulator External Standard Solution For Use With A Breath Test Instrument*, G3 (2007); WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of Quality Assurance Solutions For Use With A Breath Test Instrument*, G3 (2007).

⁸⁷ WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of .08 Simulator External Standard Solution For Use With A Breath Test Instrument*, G3 (2007); WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of Quality Assurance Solutions For Use With A Breath Test Instrument*, G3 (2007).

⁸⁸ Testimony of Dr. Logan, KC5, p.99-100; Testimony of Dr. Ashley Emery, KC7, p.50; WASHINGTON STATE TOXICOLOGY LABORATORY, ANALYSIS OF ALCOHOLS IN AQUEOUS AND BIOLOGICAL SAMPLES BY HEADSPACE GAS CHROMATOGRAPHY, § K5 versions (2004) – (2006).

⁸⁹ Testimony of Dr. Logan, KC5, p.24; S3, p.47; *State v. Lycksell*, # C677464, at 4 (Skagit Co. Dist. Ct. 3/28/08); *State’s Stipulation to Suppression of Breath Test Results*, PIERCE COUNTY PROSECUTOR’S OFFICE (2008).

⁹⁰ WASHINGTON STATE TOXICOLOGY LABORATORY, *Analysis of Alcohols in Aqueous and Biological Samples by Headspace Gas Chromatography*, §K3 (2006).

⁹¹ Testimony of Dr. Logan, KC5, p.169.

⁹² WASHINGTON STATE TOXICOLOGY LABORATORY, *Procedure For The Preparation Of Quality Assurance Solutions For Use With A Breath Test Instrument*, versions (2004) – (2007).

can affect the values reported. This requires the data to be discarded and rerun.⁹³

Mixed up solution: The solution tested was not the solution batch identified. This renders the certification completely invalid as the data collected came from two different solutions.⁹⁴

Mixed up solution - test date precedes preparation date: The preparation date of a solution is the date it was created/mixed. Although there are numerous errors in the recordation of the preparation date throughout the certifications, those dates have been verified in others. Where that date has been verified, it is a physical impossibility for the solution to have been tested before its creation date. When the test date on a chromatogram precedes the preparation date, that means that the solution tested could not be the solution batch identified.

Asa Louis: Even though he was gone from the Lab for an entire year from May 2005 through May 2006, Louis has more documented irregularities affecting more solutions than any other analyst in the Lab. The list above contains 107 documented irregularities affecting 44 solutions. All but a handful of these were unknown until well after the King County proceedings. They include utilizing data with low ISTD values, failure to include blanks or contemporary controls, mixing data from different machines and even different dates into a single certification and entering incorrect dates into worksheets. These facts are relevant not only in determining the reliability/credibility of any testimony he has to offer but in the analysis under ER 702/703 concerning: (1) the pervasiveness of the problems in the Lab's certification process; and/or (2) Louis' work in particular which is so riddled with errors and inconsistencies that it is not helpful to the trier of fact.

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⁹³ Declaration of Dr. Nuwayhid, KC Ex. 128, p.4.

⁹⁴ *State v. Amach*, # C00627921, at 9 (King Co. Dist. Ct. 1/30/08)