

No. A11-560

STATE OF MINNESOTA
IN SUPREME COURT

In Re: Source Code Evidentiary Hearings
in Implied Consent Matters

RESPONDENT'S BRIEF AND APPENDIX

Jeffrey S. Sheridan (#183222)
Marsh J. Halberg (#39548)
Pamela King (#303902)
Derek A. Patrin (#291328)
Lee M. Orwig (#388161)
SOURCE CODE COALITION

320 Eagandale Office Center
1380 Corporate Center Curve
Eagan, Minnesota 55121
(651) 686-8800

ATTORNEYS FOR APPELLANTS

LORI SWANSON
Attorney General
State of Minnesota

DAVID S. VOIGT
Deputy Attorney General
Atty. Reg. No. 0251860

KRISTI NIELSEN
Assistant Attorney General
Atty. Reg. No. 0329770

445 Minnesota Street, Suite 1800
St. Paul, Minnesota 55101-2134
(651) 757-1350

ATTORNEYS FOR RESPONDENT

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LEGAL ISSUES

- I. Did the district court err in applying the statutory presumption of admissibility to determine whether the Intoxilyzer 5000EN results are admissible?

The district court recognized the statutory presumption of admissibility and determined the Intoxilyzer 5000EN test results are unaffected by any error in the source code and are admissible.

State v. Dille, 258 N.W.2d 565 (Minn. 1977)

State, Dep't of Public Safety v. Habisch, 313 N.W.2d 13 (Minn. 1981)

Kroning v. State Farm Auto Ins. Co., 567 N.W.2d 42 (Minn. 1997)

- II. Did the district court violate Appellants' due process rights by excluding further evidence about alleged source code errors that were considered and rejected?

The district court ruled that there are no source code errors that affect the reliability of Intoxilyzer test results, and evidence of alleged problems with the source code are not allowed on tests expressing a numerical value.

Fedziuk v. Commissioner of Public Safety, 696 N.W.2d 340 (Minn. 2005)

Heddan v. Dirkswager, 336 N.W.2d 54 (Minn. 1983)

- III. Did the district court abuse its discretion when it ruled that other evidence regarding a deficient sample is admissible?

The district court ruled that deficient sample tests should be excluded unless other evidence exists supporting a deficient sample.

State, Dep't of Highways v. Lauseng, 183 N.W.2d 926 (Minn. 1971)

State v. Netland, 762 N.W.2d 202 (Minn. 2009)

PROCEDURAL HISTORY

- May 2, 2006 The first district court Order requiring source code to be produced is issued by Judge Richard G. Spicer.
- July 26, 2007 Supreme Court denies the Commissioner's request for a writ of prohibition, holding that the science underlying the breath testing device was not being challenged, but only the specific subject's breath test result, on the sole basis of source code. *In re Commissioner of Public Safety*, 735 N.W.2d 706, 710-11 (Minn. 2007) (*Underdahl I*).
- March 3, 2008 Commissioner files suit in federal court against CMI, Inc., the manufacturer of the Intoxilyzer, to obtain access to the source code. The case docket is *State of Minnesota, by Michael Campion, Commissioner of Public Safety v. CMI of Kentucky, Inc., a Kentucky corporation*, No. CV-08-603 (DWF/AJB).
- April 30, 2009 Supreme Court rules that it is not an abuse of discretion for a district court to find source code in the possession of the State, but it is an abuse of discretion to order source code be produced without a showing of how it may relate to the outcome of the case. *State v. Underdahl*, 767 N.W.2d 677 (Minn. 2009) (*Underdahl II*).
- July 16, 2009 Judge Donovan Frank issues an "Order Approving Consent Judgment and Permanent Injunction and Memorandum," providing access to the source code for Authorized Minnesota Litigants.
- August 9, 2009 Timothy Black, an expert hired by attorney Derek Patrin on behalf of his Authorized Minnesota Litigant clients, travels to Owensboro, Kentucky and reviews the source code for less than seven hours.
- January 11, 2010 Supreme Court issues an Order consolidating hearings in which the issue is source code. The Order states that Judge Jerome B. Abrams was to decide the issue of "the challenges to the reliability of the Intoxilyzer 5000EN based upon the source code of the instrument." *In re Minnesota Intoxilyzer*

5000EN Source Code Litigation Order, No. A09-2109 (Minn. Jan. 11, 2010)¹.

- March 23, 2010 A joint federal and state court hearing is held regarding discovery issues and the scheduling of the case.
- May 3, 2010 Computer Forensic Services (“CFS”) experts for the Coalition² travel to Owensboro, Kentucky to review the source code. Two CFS experts, Matthew Willis and Karl Schubert, travel between Minnesota and Kentucky in review of the source code until September 2010.
- June 16, 2010 Hearing on the Coalition’s motion to amend the scheduling order is held. Coalition argues its experts need more time for review.
- June 23, 2010 District Court issues “Order 8 - Amended Scheduling Order,” which grants the motion to amend the scheduling order and resets the discovery deadlines and the date of the final hearing.
- August 3, 2010 Hearing on a subsequent motion by the Coalition to amend the scheduling order. Coalition argues its experts need more time for review.
- August 11, 2010 District court issues “Order 13 - Amended Scheduling Order, Order for Production of EPROMS and Denial of Motion for Preservation Order,” which grants the motion to amend the scheduling order and resets the discovery deadlines and the date of the final hearing.
- October 1, 2010 CFS report is filed with the court and released to opposing parties. The executive summary of the CFS report concluded:

¹ *In re Minnesota Intoxilyzer 5000EN Source Code Litigation Order*, No. A09-2109 (Minn. Jan. 11, 2010) is reproduced in Respondent’s Appendix at RA1 to RA5.

² A group of defense attorneys joined together to hire an expert to review the source code on behalf of their clients, who were Authorized Minnesota Litigants. This group referred to itself as the Coalition. In total, there are approximately 200 defense attorneys plus Public Defenders who are a part of the Coalition. The Coalition hired the firm of Computer Forensic Services to conduct the source code review on their behalf.

“...CFS determined that the Intoxilyzer 5000EN instruments in use in Minnesota provide valid BrAC³ measurements and function as designed.” Ex. 166 at 5.

October 1, 2010

The Timothy Black report is filed with the court and released to opposing parties. Black’s report stated that he believed other experts would perform an analytical review of the source code, so he chose not to do so. Ex. 14 at 4.

November 9, 2010

District court hears Coalition’s motion to compel the depositions of its own witnesses: Matthew Willis, Karl Schubert and Mark Lanterman. The district court issues “Order 18 - Order Regarding Expert Depositions, Revising Dispositive Motion Briefing Deadlines and Setting Motion Dates for Other Two Issues,” which grants the Coalition’s motion to depose its own experts.

November 12, 2010

Report of Commissioner’s expert, Steven Nuspl, is filed with the court and released to opposing counsel. This report concluded: “All the expert witnesses concur that no such source code errors were found in their reviews. It is also unlikely that such errors will ever be found.” Ex. 100 at 6.

November 23, 2010

The Commissioner’s motion for summary judgment is heard by the district court based upon Appellant’s expert reports showing there was not a defect in the source code that affected the validity and reliability of the Intoxilyzer test results.

December 8-23, 2010

Hearing on the issue of whether there is a defect in the source code that renders the Intoxilyzer tests invalid and unreliable.

March 8, 2011

Order 20 - Order and Memorandum Following Final Evidentiary Hearing (“Order 20”) is filed, stating that when there is a numerical value expressed, the alcohol concentration is unaffected by any actual or alleged defect in the source code.

³ “BrAC” refers to Breath Alcohol Concentration. T. 1497.

April 28, 2011 The Court of Appeals grants Appellants' motion for discretionary review of Order 20.

June 28, 2011 This Court grants accelerated review of appeal.

July 26, 2011 This Court stays cases in which a challenge to the reliability of the test result because of the source code of the Intoxilyzer 5000EN is at issue.

August 29, 2011 Appellants serve the Commissioner of Public Safety via U.S. Mail with their brief in this appeal. Attorneys on behalf of the criminal cases are personally served.

STATEMENT OF THE CASE

The issue presented for the district court's consideration was whether a defect or error in the source code rendered Intoxilyzer 5000EN test results unreliable. In a detailed Order, the district court ruled:

1. The results of breath alcohol testing conducted on the Intoxilyzer 5000EN which express a numerical value for measured breath alcohol are reliable and unaffected by actual or alleged problems with the Source Code of the instrument. To the extent challenges to test results are premised upon problems with the Source Code, such challenges are overruled, and evidence of the same should not be allowed.
2. In cases in which the Intoxilyzer 5000EN running version 75_0240 ("240 software") reported a "Deficient Sample," the Source Code of the instrument does impact the reliability, solely, of this result. Evidence in such cases of a "Deficient Sample" test report should not be allowed unless other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient.

"Order 20 - Order and Memorandum Following Final Evidentiary Hearing," by Judge Jerome B. Abrams, signed March 7, 2011, and filed in district court on March 8, 2011, at

ii-iii (“Order 20”). Appellants now bring this appeal challenging the findings of the district court.

STATEMENT OF FACTS

A hearing commenced before the Honorable Jerome B. Abrams on December 8, 2010, pursuant to this Court’s Order of January 11, 2010, regarding “the challenges to the reliability of the Intoxilyzer 5000EN based upon the source code of the instrument.” T. 38.⁴ (citing *In re Minnesota Intoxilyzer 5000EN Source Code Litigation Order*, No. A09-2109 (Minn. Jan. 11, 2010)). Judge Abrams reiterated that his “obligation is specifically to look at reliability of results arising from the source code of the instrument.” T. 451. Throughout the hearing, Judge Abrams reminded the parties that he was conducting an evidentiary hearing pursuant to Rule 104 of the Rules of Evidence. T. 872, 1451; *see also* Order 20 at 25 (A-31).⁵

At the outset of the hearing, counsel for Appellants⁶ attempted to redefine the hearing as “an evidentiary pretrial hearing to determine the foundational reliability of the Intoxilyzer 5000EN, as interpreted through analysis of the source code.” T. 16. Later in his opening statement, he put it another way: “[E]rrors or omissions in the source code

⁴ “T.” refers to the transcript of the hearing occurring between December 8, 2010, and December 23, 2010.

⁵ “A” refers to “Order 20 - Order and Memorandum Following Final Evidentiary Hearing,” by Judge Jerome B. Abrams, signed March 7, 2011, and filed in district court on March 8, 2011, reproduced in Appellant’s Appendix at A-1 through A-122.

⁶ “Appellants” refers to the criminal defendants; the implied consent petitioners; the group of defense attorneys who formed the “Coalition” to review the source code; attorney Derek Patrin, who had a separate expert review the source code; and the Public Defenders.

and bugs in the source code present serious reliability and precision problems with the machine that make the entire method unreliable for purposes of foundational reliability.”

T. 21-22. Another attorney for Appellants framed the issue as whether the Intoxilyzer “has the guarantee of trustworthiness that was really assigned to it by both the courts and the legislature.” T. 37-38.

THE WITNESSES

Timothy Black

Appellant’s first witness was Timothy E. Black (“Black”). T. 54. Black traveled to Kentucky to view the source code on August 9, 2009. T. 898. He spent six and one-half hours in Kentucky reviewing the source code, including his time reviewing his notes and “planning what else to study.” *Id.* In Kentucky, Black stated that he looked at every file, discarded files that were not relevant, and also discarded those files he did not have the resources to review. T. 87. He did not look at the printed version of the source code. T. 108-09.

After reviewing all the evidence, the district court made the following comments regarding Black’s review of the source code:

The principal shortcoming in all of Mr. Black’s criticisms of the 5000EN is the lack of documentation for the testing and experiments he conducted. Despite the occasional selective printout of tests from the instrument, he lacked a disciplined approach to the testing he conducted and to the construction of the apparatus which he used for some of his testing. Much of what he presented was anecdotal in nature, and even when he purported to record with a video camera what he was doing during his testing, the recording appeared to have many of the qualities of a home movie rather than the consequence of scientific testing. The test equipment and many of the results were understood by him to serve as foundation for his opinions.

He elected not to bring much of this foundation to court. There were many questions arising from his testimony that were unresolved by lack of documented testing, lack of foundation, and overall lack of scientific methodology.

Order 20 at 74-75 (A-80-81).

The district court further concluded about Black that “his efforts were strong on the testing aspect and weak on the collection process.” *Id.* at 76 (A-82). The court observed, “[m]oreover, by omitting the data which he felt supported his conclusions, a serious question remains about the validity of the results that he reached.” *Id.* Further, the district court found that Black “agreed in the course of his cross-examination that there is no particular place in the Source Code he can cite in which errors are present that impact the reliability of the BrAC test results.” *Id.* at 77 (A-83). Regarding Black’s testimony, the district court concluded, “Mr. Black, through his method of testing at the margins or corner cases, did not assist the Court in a significant way in its conclusions herein.” *Id.*

Dr. Karl Schubert

Appellants’ second witness was Dr. Karl Schubert (“Schubert”). Schubert worked as a contractor for Computer Forensic Services (“CFS”) and was a part of the expert team that reviewed and wrote the CFS report regarding source code. T. 232; Ex. 166. Schubert was a part of the team that conducted a “comprehensive review” of the source code, reviewing it “line-by-line,” and then “seeing that the hardware works the way it is supposed to with the software.” T. 235. At the time of the hearing, however, Schubert admitted that he was no longer speaking for CFS in his testimony, and that he received

payment for his testimony above and beyond the work he was paid to do for CFS. T. 332, 334.

Regarding Schubert's testimony, the district court concluded, "[n]or did Dr. Schubert's personal testimony overturn the CFS conclusion that the Intoxilyzer 5000EN in use in Minnesota provides valid BrAC results and functions as designed." Order 20 at 90 (A-96).

Mary McMurray

Appellants' final witness was Mary McMurray ("McMurray"). She stated her title varies day by day, but that at times it is a Forensic Scientist. T. 1201-1202. McMurray is not a Certified Intoxilyzer Operator for Minnesota, nor is she a computer programmer. T. 1395. She did not rely on the CFS report because she did not find it to be about the source code. *Id.* However, McMurray did rely on Black's report. T. 1396.

The district court found McMurray to be biased, stating:

Ms. McMurray impressed the Court with her position of distrust for the Intoxilyzer and outright antipathy towards CMI. Her bias was demonstrated, and in the Court's view, her qualifications to provide meaningful insight into the Source Code and its alleged problems were never established. In sum, early on Ms. McMurray claimed not to want a direct role in this case, due to her concerns that she may not be qualified to address the issues. Her initial observation about her role was proven correct.

Order 20 at 95 (A-101).

Dr. Steven Nuspl

The State's first witness was Dr. Steven Nuspl ("Nuspl"). Nuspl has a Ph.D in electrical engineering with minors in math and control systems. T. 1462. He has worked

extensively with both Z80⁷ and C⁸ programming languages. T. 1469. Nuspl traveled to Kentucky to review the source code. T. 1481. He produced a report in which he detailed his own independent review as well as his review of each of the other experts' reports. T. 1503-04.

The district court found Nuspl to be qualified and knowledgeable. The court stated, "Dr. Nuspl's qualifications to address matters related to the source code of the Intoxilyzer 5000EN were well established." Order 20 at 108 (A-114). The district court further stated, "[f]rom his testimony it was apparent that he conducted a very thorough review of the source code." Order 20 at 109 (A-115). The district court also noted that Nuspl made "repeated material references to the actual Code when making observations about the findings of others." Order 20 at 110 (A-116).

Matthew Willis

Matthew Willis ("Willis") is the Vice President of Security Services for CFS. T. 1569. His testimony was limited by the court due to the highly unusual situation of the State calling a defense expert as a witness. T. 1567-68. Willis was Schubert's supervisor during CFS's review of the source code. T. 1570. Willis explained who wrote which sections of the CFS report, clarifying that Schubert wrote the first half of Observation 8⁹

⁷ The Z80 is one of the processors in the Intoxilyzer. T. 1474-75. It has a 16-bit address, which allocates space for 64,000 bytes of memory. T. 1478-79.

⁸ "C" is a programming language. It is defined in the district court's Definition of Terms. Order 20 at 5 (A-11).

⁹ Observation 8 in the CFS report is entitled "Precision of Measurement" and is located on pp. 53 to 57 of Exhibit 166.

regarding assembly and did not write Observation 14¹⁰. T. 1576-77. Willis did not agree with the conclusions Schubert reached during his testimony. T. 1595. Willis further testified that at most, Schubert was assigned only a “cursory” review of the source code regarding slope detection. T. 1601.

BCA Witnesses

The other witnesses were three employees of the Minnesota Bureau of Criminal Apprehension (“BCA”): Karin Kierzek (“Kierzek”), Patrick Pulju (“Pulju”) and David Edin (“Edin”). Kierzek and Edin both work at the BCA as Forensic Scientists, and Pulju’s job title is Forensic Breath Alcohol Specialist. T. 626, 843, 1758. Pulju’s job duties include maintenance, calibration and certification of the Intoxilyzer. T. 845. Recently, Pulju has been more involved with data handling. *Id.* Kierzek and Edin testify in court, train officers in the use of the Intoxilyzer, prepare simulator solution, and give presentations, among other duties. T. 630, 1758.

One of the district court’s comments regarding the BCA employees’ testimony included, “Ms. Kierzek appeared knowledgeable concerning the means by which the Intoxilyzer 5000EN conducts tests, measures slope, deals with RFI and generally the significance of the DABACABA sequence for testing.”¹¹ Order 20 at 96 (A-102).

¹⁰ Observation 14 in the CFS report is entitled “Deficient Samples & Slope Detection” and is located on pp. 66 to 68 of Exhibit. 166.

¹¹ “RFI” is defined in the district court’s Order as an “Acronym for ‘Radio Frequency Interference.’” Order 20 at 8 (A-14). “DABACABA” is an acronym that refers to the Intoxilyzer’s test sequence. A full definition can be found in the district court’s Order. Order 20 at 5 (A-11).

Another district court comment was, "Pulju appeared to be the only witness with firsthand knowledge of the specifications of components for the Intoxilyzer 5000EN which are involved in volume measurement." Order 20 at 102 (A-108).

THE ISSUES

As an initial matter, the trial court addressed the fact that the primary experts for Appellants did not support challenges to the source code. The trial court observed:

Casting a large shadow over the hearing was the report of experts Computer Forensic Services, Inc. ("CFS"), who were retained by those who had requested discovery of the Source Code in the first place. CFS opined, after conducting a thorough analysis of the Source Code, that the breath alcohol test results provided by the "Intoxilyzer 5000EN instruments in use in Minnesota provides valid BrAC measurements and functions as designed." (Ex. 166, p. 5).

Order 20 at 73 (A-79).

Even with this finding that the Intoxilyzer functions as designed and produces valid alcohol concentration measurements, Appellants' witnesses discussed numerous functions of the Intoxilyzer throughout the hearing in an attempt to show a defect or error in the source code. The issues summarized here are those raised by Appellants in the course of this appeal.

Margin Of Error/Imprecision

Observation 8 of the CFS report addresses "Precision of Measurement." Ex. 166 at 53. CFS found that the "majority of precision errors and truncations noted would have the effect of lowering the overall result of a measurement." *Id.* at 56. CFS noted that the precision errors could lower a subject's breath alcohol concentration and could also

generate a wider range of results from algorithms. *Id.* CFS concluded, “based on the numerous variances allowed in the hardware and truncations present in the source code of the Intoxilyzer 5000EN, that the Intoxilyzer 5000EN should be given an allowed variance in the precision of measurements.” *Id.* CFS recommended a formal study be conducted or that guidelines from other states be adopted. *Id.*

Schubert testified regarding the precision of measurement of the Intoxilyzer. T. 278. Schubert explained that the Intoxilyzer reports an average based on a calculation of a group of data points. T. 284. He stated that truncation occurred relative to precision. T. 285. He further testified that the truncation was not detrimental to the reading, but that it could be argued to be less precise. *Id.* Schubert’s testimony regarding truncation and precision refers to numbers far to the right of the decimal point; it is not the difference between 1.1 and 1.0 liters. T. 351. Regarding the level of uncertainty in reported test results, Schubert recommended a “ten percent” variance be displayed on Intoxilyzer test results unless a formal study of uncertainty was conducted. T. 288-89.

Nuspl also reviewed the precision of measurement. T. 1607. He was critical of the CFS report because that report listed numerous things that could impact precision, when there are actually only a few specific areas. *Id.* Nuspl also noted that the computations are completed with additional precision in 24 bits, which Nuspl explained was “in effect doing them in a lot more precise manner than necessary.” T. 1608-09. Nuspl concluded that based upon this level of precision, any deviation or error due to truncation “are really pretty insignificant for the final output of what the BrAC reading

is.” T. 1609. Nuspl concluded that in his opinion, the Intoxilyzer is more precise than CFS gave it credit for. *Id.*

Regarding truncation and rounding, Nuspl testified that there was “nothing in the source code that really would say that there’s any deviation from the way that it was designed or that the policies are implemented – specified regarding rounding.” T. 1613. Nuspl stated that the source code “is doing what it is supposed to be doing” and that what is really being discussed is a policy issue. *Id.* Nuspl explained that the typical engineering approach is to round rather than to truncate. T. 1613-14. Nuspl continued that truncation clearly favors the test subject, and that a more unbiased way would be to round. T. 1614.

On this issue, the district court ruled as follows:

Both Mr. Black and CFS commented on the use of rounding and truncation in calculations and reports of results in instrument tests. The Court is satisfied with Dr. Nuspl’s explanation in that the Intoxilyzer 5000EN does systematically perform calculations to a higher degree of precision than is actually reported. For example, the BrAC data is calculated to three decimal places but reported to two decimal places. The instructions for reporting the two decimal numbers does not get rounded up from the third decimal. In other words, a calculated test result of 0.079 gets reported as 0.07. Normally, there would be rounding up of the report to 0.08 – but the Intoxilyzer is programmed not to do this and leave the lower number as the final test value.

Order 20 at 111 (A-117).

The district court also rejected Shubert’s suggestion that a range be expressed on the face of the test result. Order 20 at 108 (A-114). The district court stated:

At bottom, Schubert felt the results should be expressed with a range of error of 10% for Intoxilyzer results; Willis disagreed. Schubert, at the

urging of petitioners' and criminal defendants' counsel, opined that in his view, the uncertainty principles of scientific measurement require a range for reporting results - largely premised on standard deviation data set forth in the Gullberg study. The Court has considered and commented, in depth, on the testimony of Dr. Schubert and rejected the suggestion that a range be expressed in the reported test results from the 5000EN.

Id.

Deficient Samples

One of the issues that was discussed in depth during the course of the source code hearing was whether the Intoxilyzer properly concludes when a breath sample is deficient. A deficient sample occurs when the Intoxilyzer does not accept the breath sample. T. 797. The district court's Order defined it further as "[a] reported test result for a breath sample which does not meet minimum breath volume of 1.1 liters and/or level slope requirements within 4-minute time limit...."¹² Order 20 at 6 (A-12).

Kierzek explained in more detail that there are five criteria that must be met for the Intoxilyzer to accept a breath sample. T. 797. The criteria are: (1) start blowing at 0.17 liters of air per second, (2) maintain a breath of at least 0.15 liters of air per second, (3) maintain that breath for at least two seconds, (4) blow a minimum volume of air of at least 1.1 liters, and (5) attain a fairly level alcohol slope¹³ that is rising at a rate less than

¹² Deficient Sample is different from Deficient Test or Invalid Sample, which are defined in the district court's definition of terms. Order 20 at 6-7 (A-12-13). It is also different than "Deficient Sample - No Sample Given," which is when the subject never blows at all or does not blow at a rate sufficient to start the tone (0.17 liters per second). T. 800.

¹³ "Alcohol slope" is the level at which the alcohol in the breath sample is increasing. An acceptable slope is a relatively level slope, which is one that is rising at a rate no greater than seven percent. T. 1760

seven percent. T. 709, 712, 797. The slope of the alcohol concentration is not analyzed until the minimum volume of air, 1.1 liters, has been met. T. 719.

One BCA witness explained that by combining a minimum volume with an alcohol slope requirement, it “levels the playing field,” such that the test is fair to a small person or a very large person. T. 1785. If any of the acceptance criteria were changed it could affect both acceptance of the sample and accuracy of the test result. T. 1786. With the current Intoxilyzer’s acceptance criteria, it is possible to underreport a person’s alcohol concentration because the criteria allow a person to stop blowing before reaching deep lung air, which is the best part of the breath to measure alcohol concentration. *Id.*

When a test subject provides a deficient sample, he or she may be charged with a refusal at the discretion of the operator. T. 801; 1797. The Intoxilyzer does not measure intent and it is up to the operator to discern why the deficient sample occurred. T. 1797. The Certified Intoxilyzer Operator¹⁴ could give further instruction on how to provide a sample and let the subject take another breath test; the operator could offer an alternate test; or if the operator believed that no amount of instruction would produce an accepted sample, based on the subject’s conduct, the officer could charge the subject with refusal. T. 1796-97. An operator must spend time with the test subject and can usually tell whether the person was really trying to provide an adequate breath sample. T. 801.

¹⁴ Kierzek described in detail what a person goes through to become a Certified Intoxilyzer Operator. T. 801-04.

Regarding deficient samples, the CFS review of the source code concluded that “the Intoxilyzer 5000EN, when operated properly, correctly determines a ‘Deficient Sample’ and correctly determines when a measurement is inaccurate.” Ex. 166 at 68. In Nuspl’s report, he concluded that any observation or recommendation of CFS is “neither a basis for disputing Intoxilyzer 5000EN BrAC readings already taken nor a basis for preventing the use of the instrument in future BrAC readings.” Ex. 100 at 47.

Schubert believed there should be a specific message printed on tests explaining why the sample was deficient. T. 341-42. Kierzek explained that a person can usually tell the reason for the deficient sample by looking at the test result. The test prints the volume of breath, so it is clear if the 1.1 liter minimum volume has not been met. T. 721. If there is a breath volume of zero, but an alcohol concentration is printed, that indicates the tone never started, so the person did not blow 0.17 liters per second. *Id.* If the breath volume is at least 1.1 liters, then the deficient sample would be caused by the slope acceptance parameters not being met, or replicate tracking. *Id.*

There was much discussion throughout the hearing about an e-mail message from the BCA to CMI dated September 27, 2006. T. 857. The e-mail inquired about the acceptance of samples and noted that it is dependent upon the version of software in the instrument. Ex. 7 at 28. It also addressed two other issues regarding the puff counter and the volume and alcohol concentration on the display screen not being identical to the amounts that print on the test record. *Id.*

The e-mail contained a summary of testing on sample acceptance conducted by the BCA. T. 738-39. The BCA did not start the testing with the belief that there was a problem that needed to be fixed. T. 739. It was a lengthy process and most of the tests attempted produced valid results, not deficient samples. T. 1018, 1781. The BCA learned that a subject would have to provide a sample contrary to the operator's instructions for a deficient sample to occur. T. 1780. It took much testing and scrutiny to find a small deviation from what the BCA believed was normal. *Id.*

As a result of the September 2006 e-mail, CMI determined that while none of the sample acceptance criteria was changed, the math used for the enhanced interferent detection took slightly longer, which stretched the slope acceptance, and effectively increased the volume required for a sample. T. 1019.

CMI ultimately sent the BCA some test software that may have addressed this issue. T. 866, 1030-31. The BCA started to test the software, but it failed. *Id.* The BCA does not implement software that has failed testing, so this software was never implemented in Minnesota. T. 1031.

The BCA also explained that it must balance acceptance parameters versus accuracy. T. 1786. To the degree that there is inaccuracy, the Intoxilyzer underreports the alcohol concentration, which benefits the test subject. *Id.* If the BCA tightened the acceptance criteria to the point that there is no underreporting of an alcohol concentration, it could create more reports of deficient samples even when the subject is making a good faith effort to provide a sample. T. 1786-87. The BCA concluded that sample acceptance

is adequate as it is, because when a subject follows the operator's instructions, an error should not arise in ordinary testing. T. 1784-85.

Regarding deficient samples, the district court concluded:

In cases in which the Intoxilyzer 5000EN running version 75_0240 ("240 software") reported a "Deficient Sample," the Source Code of the instrument does impact the reliability, solely of that result. Evidence in such cases of a "Deficient Sample" test report should not be allowed unless other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient.

Order 20 at iii (A-3).

The district court explained its rationale as follows:

According to both Dr. Schubert and the CFS findings, when the Intoxilyzer 5000EN reports a deficient sample, it could be due to either a software fail-safe or the conduct of the test subject. The microprocessors running the Code do not have sufficient capacity for error checking and reporting with precision the reason for non-acceptance.

Order 20 at 91 (A-97). The district court further concluded:

The slope detection software, based on its Source Code, version 240, does reject under some circumstances samples which are valid. These "Deficient Samples" could have had particularized reasons for rejection identified, had CMI and the BCA elected to do so. In situations where this result has been reported due to slope acceptance criteria in the 240 version of the software, the BCA could have implemented corrective software but chose not to update the instruments.

Order 20 at 92 (A-98).

SCOPE OF REVIEW

On January 11, 2010, this Court ordered the consolidation of cases in which the common issue was the source code for the Intoxilyzer 5000EN. *In re Minnesota Intoxilyzer 5000EN Source Code Litigation Order*, No. A09-2109 (Minn. Jan. 11, 2010).

As a part of the Order, this Court assigned Judge Jerome Abrams to hear all “challenges to the reliability of Intoxilyzer 5000EN results based on the source code of the instrument....” *Id.*, at RA3. Through this Order, thousands of criminal and civil implied consent cases were consolidated to a single hearing.¹⁵

Judge Abrams conducted this hearing pursuant to Rule 104 of the Minnesota Rules of Evidence. Order 20 at 25 (A-31). Rulings on evidentiary matters rest within the sound discretion of the district court and will not be reversed on appeal, absent a clear abuse of discretion. *State v. Willis*, 559 N.W.2d 693, 698 (Minn. 1997); *In re Child of Simon*, 662 N.W.2d 155, 160 (Minn. Ct. App. 2003) (absent an erroneous interpretation of the law, whether to admit or exclude evidence is a question within the district court’s broad discretion); *Baskerville v. Baskerville*, 75 N.W.2d 762, 769 (Minn. 1956) (a district court’s decision regarding discovery will not be disturbed, absent an abuse of discretion).

ARGUMENT

I. THE DISTRICT COURT CORRECTLY APPLIED THE STATUTORY PRESUMPTION OF ADMISSIBILITY OF INTOXILYZER RESULTS.

Appellants argue that the trial court erred by failing to apply the correct standard for determining whether errors in the source code render test results unreliable. They argue that the district court should have disregarded the presumptions of admissibility

¹⁵ On January 11, 2010, when this Court issued the Order consolidating cases, 787 criminal and implied consent cases were consolidated. Judge Abrams’ staff kept track of the consolidated cases until the deadline to consolidate cases ran in November 2010. At that time, there were over 4,000 cases that had been consolidated. It is now almost a year since the deadline to consolidate cases, and source code cases continue to appear before district courts throughout the State.

contained in Minn. Stat. § 634.16 (2010) and Minn. R. 7502.0420, subp. 3¹⁶, and should have placed the burden on the Commissioner and the State to prove foundational reliability of Intoxilyzer 5000EN test results. Appellants' arguments should be rejected because the trial court applied the correct legal standard, and because the challenges they brought against the source code would have failed regardless of what standard the trial court used.

In Minnesota, the Intoxilyzer 5000EN has been approved for conducting breath alcohol concentration testing. See Minn. R. 7502.0420, subp. 3 (2011). A *prima facie* case of test reliability is satisfied “by demonstrating that a certified Intoxilyzer operator administered the test, and that diagnostic checks showed that the Intoxilyzer machine was in working order and the chemicals used were in proper condition.” *Kramer v. Commissioner of Public Safety*, 706 N.W.2d 231, 236 (Minn. Ct. App. 2003). This evidence provides “almost incontrovertible proof not only that the chemicals are proper but that the instrument is in proper order.” *State, Dep't of Public Safety v. Habisch*, 313 N.W.2d 13, 16 (Minn. 1981) (quoting Watts, *Some Observations on Police-Administered Tests for Intoxication*, 45 N.C.L. Rev. 34, 87 (1966)).

In all of the cases involved in this consolidated proceeding, it is undisputed that an approved breath test instrument, the Intoxilyzer 5000EN, was used and a certified

¹⁶ On June 29, 2011, the rule approving the breath test instrument was changed. It now states, “The Intoxilyzer 5000EN, which uses infrared technology, is approved by the commissioner for use in this state for the purpose of determining the alcohol concentration of a breath sample.” Minn. R. 7502.0425, subp. 1 (2011).

Intoxilyzer operator conducted the test. As such, the State and the Commissioner established a *prima facie* case of test reliability. Therefore, the only issue before the trial court was whether a defect or error in the source code renders Intoxilyzer 5000EN test results unreliable.

The trial court properly placed the burden on Appellants in the consolidated proceeding to show why Intoxilyzer 5000EN test records are untrustworthy due to errors in the source code. See *Przymus v. Commissioner of Public Safety*, 488 N.W.2d 829, 833 (Minn. Ct. App. 1992) (citing *State v. Dille*, 258 N.W.2d 565, 568 (Minn. 1977)). It is not sufficient to merely raise possible explanations or speculation regarding any alleged defects or errors in the source code. See *Bielejeski v. Commissioner of Public Safety*, 351 N.W.2d 664, 666 (Minn. Ct. App. 1984) (trial court properly admitted test result where driver presented no evidence, but only “an invitation to speculation”); *Wells v. Commissioner of Public Safety*, 392 N.W.2d 721, 724 (Minn. Ct. App. 1986) (expert’s “possible explanations” are not facts which impugn the reliability of the test). Appellants had to present affirmative evidence proving that (1) a source code defect or error exists, and (2) the source code defect or error renders Intoxilyzer 5000EN results unreliable.

Appellants seem to concede that it was their responsibility to demonstrate errors in the source code, rendering Intoxilyzer results unreliable. Without identifying a specific standard the trial court should have applied, Appellants argue that if the trial court had applied the correct standard, it would have been compelled to conclude that Appellants met their burden of production in showing defects in the source code. Appellants also

argue that had the trial court applied the correct standard, it would have been compelled to find that the State failed to adequately discredit their evidence. Appellants' arguments simply ignore the fact that the trial court made detailed findings regarding the evidence presented and rejected nearly all of their evidence as either not credible or not sufficient to establish an error in the source code that affected test results. As a result, the evidence Appellants' submitted was inadequate under *any* standard.

The trial court correctly rejected attempts by Appellants to frame the proceeding as a *Frye-Mack* hearing, in which the prosecution has the burden of proving foundational reliability for novel scientific techniques. Order 20 at 72 (A-78). Instead, the court's Order stated:

This court reminded counsel on several occasions during these proceedings and the evidentiary hearing that this process is not a collateral attack on Minn. Stat. § 634.16 or existing law, e.g. *State v. Birk*, 687 N.W.2d 634 (Minn. App. 2004); *State v. Radar*, 597 N.W.2d 321, 323 (Minn. App. 1999). Rather, the hearing was to enable a critical analysis and review of the Source Code by those who made a *prima facie* showing of the need to do so. This Consolidated Source Code proceeding was an opportunity to litigate these challenges on a pretrial basis in all of the cases assigned to the court by Justice Magnuson.

Order 20 at 72 (A-78). While the consolidated hearing, involving both criminal and civil cases was a unique proceeding, the trial court properly used existing precedent to conduct a hearing that gave each side a fair opportunity to fully litigate all issues and present all arguments. See *CJS Waters*, Evidence § 284 (2011) (citing *Watre v. Great Northern Ry. Co.*, 149 N.W. 18, 20 (Minn. 1914) ("Evidence must afford a basis for relief over and above mere conjecture and be more than remotely relevant. No general test has been

established for determining whether it is too slight, conjectural or remote. These questions must be left largely to the judgment of the trial court.”)).

The trial court did not explicitly state that it was applying the burden-shifting standards established by this Court in *Dille* and *Habisch*, and by the Court of Appeals in many other implied consent cases that followed. The court’s analysis, however, suggests that it did. The court’s memorandum pointed out more than once that the Intoxilyzer test results are statutorily presumed reliable. Order 20 at 13, 43 (A-19, A-49). The trial court permitted all challenges the Appellants chose to present, and it comprehensively analyzed and made findings on each and every claim identified by the Appellants’ witnesses. In the end, the trial court “rule[d] upon the admissibility in light of the entire evidence.” *Bond v. Commissioner of Public Safety*, 570 N.W.2d 804, 806-07 (Minn. Ct. App. 1997).

The trial court rejected each and every claim of a source code defect or error as either not credible or inconsequential because the alleged error does not affect test results.¹⁷ Even if the burden of proof was not clearly defined, it does not matter because the court rejected the testimony offered by Appellants’ experts and credited the State’s evidence. For example, in analyzing Appellants’ radio frequency interference (“RFI”) claim, the court commented about their witness, McMurry, that “[h]er lack of documentation or even a coherent explanation of what she observed left the court with no confidence in her conclusions.” Order 20 at 94 (A-100). The court commented that Appellants’ other witness who testified about RFI, Black, offered, “uninformative testing

¹⁷ With one exception, deficient samples, which is discussed in section III, *infra*.

and unsupported anecdotal assertions.” Order 20 at 84 (A-90). By contrast, commenting on the State’s witness, Nuspl, the court stated, “[on] the subject of RFI, with demonstrated knowledge of electromagnetic theory and science, Nuspl undid much of the criticisms of Mr. Black.” Order 20 at 110 (A-116).

Significantly, Appellants do not identify a single source code error in which their challenge was somehow affected by an erroneous application of a legal standard by the trial court, or whose outcome was dictated by the application of the burden of proof. For the source code challenge based on RFI, for example, Appellants’ challenge fails under any standard, regardless of which side has the burden of proof, because the court credited the evidence produced by the State and rejected the evidence produced by Appellants. The same is true for all of Appellants’ other challenges, which the trial court wholly rejected, as indicated below.

Regarding Self Test Procedures, the district court wrote:

The lack of self testing, even if a valid criticism goes to an issue of instrument design. Mr. Black had numerous criticisms of the Intoxilyzer 5000EN design sprinkled throughout his testimony. He related these to Source Code by claiming that the defect was an omission in the Source Code. The Court has considered the lack of self testing and rejected same – despite the issue being outside the narrow scope of the initial charge given to this Court by Justice Magnuson.

Order 20 at 80 (A-86).

Regarding Air Volume and Pressure Measurements, the district court wrote:

If all of the criteria established by the Source Code are met in terms of minimum values of a supplied breath sample, the air volume reading being higher than the actual sample supplied does not cause the BrAC result to be unreliable – only the volume measurement number The testimony at

trial did explain that regardless of the error in the overall volume reading, the Source Code instructions directing that a test be conducted on an appropriate sample, together with all other requirements being met, will produce a reliable test so long as the minimum requirements are met.

Order 20 at 82 (A-88).

Regarding Programming Protocol, the district court wrote:

Mr. Black's cursory examination of the actual Code provides no insight into his claim of defects. Others, such as Dr. Nuspl, charitably described the Code as written for the 5000EN as highly "modular." CFS criticized the Code writing as "many shortcuts . . . to minimize the amount of memory the source code takes in the instrument" Regardless, the experts who took the time to actually look at and evaluate the Source Code found that the manner in which it was written does not present an issue concerning the validity of BrAC measurements.

Order at 85 (A-91).

Regarding Standard Deviation, the district court wrote:

Deciding whether it would be appropriate to require reporting of a standard deviation and confidence interval with every breath alcohol concentration test result goes far beyond the scope of the issue before this Court and into policy decision making.

* * *

Regardless of the reason, an inquiry into the margin of error created by the measurement process does not involve the Source Code issue before this Court and is beyond the scope of these proceedings.

Order 20 at 88-89 (A-94-95).

None of Appellants' challenges to the source code were resolved based on the application of a specific standard for determining admissibility, or the assignment of a burden of proof. Instead, the issues were resolved based upon the trial court's credibility determinations and fact-finding function. It is well established that the trial court is in best position to make credibility determinations, and these determinations will not be

disturbed absent an abuse of discretion. See *Kroning v. State Farm Auto Ins. Co.*, 567 N.W.2d 42, 45-46 (Minn. 1997) (whether to admit evidence is within the district court's discretion); *Rutten v. Rutten*, 347 N.W.2d 47, 50 (Minn. 1984) (A trial court abuses its discretion by resolving the matter in a manner that is "against the logic and the facts on the record."); *State v. Willis*, 559 N.W.2d 693 (Minn. 1997) (the Supreme Court will not reverse a district court's evidentiary ruling absent clear abuse of discretion). Similarly, a reviewing court gives great deference to the trial court's findings of fact, which will not be reversed unless they are clearly erroneous. See *Elliott v. Mitchell*, 249 N.W.2d 172, 174 (Minn. 1976) (affirmed district court findings despite admitting the evidence may support another conclusion); *Vangsness v. Vagsness*, 607 N.W.2d 468, 474 (Minn. Ct. App. 2002) (When viewing the "evidence in the light most favorable to the trial court's findings," the record requires a definite and firm conviction that a mistake was made before something will be reversed as clearly erroneous).

Appellants have not demonstrated, nor do they claim, that the trial court abused its discretion or committed clear error in its credibility determinations or findings of fact. The trial court properly placed the burden of production on the Appellants to come forward with specific challenges to the source code. It carefully analyzed all of Appellants' challenges to the source code and rejected them all based on credibility determinations and findings of fact. The trial court acted well within its discretion, and its Order should be affirmed.

II. APPELLANTS' DUE PROCESS RIGHTS ARE NOT VIOLATED BY THE DISTRICT COURT'S RULING ON ADMISSIBILITY OF EVIDENCE.

Regarding the admissibility of evidence when an Intoxilyzer test reports an alcohol concentration, the district court ordered:

The results of breath alcohol testing conducted on the Intoxilyzer 5000EN which express a numerical value for measured breath alcohol are reliable and unaffected by actual or alleged problems with the Source Code of the instrument. To the extent challenges to test results are premised upon problems with the Source Code, such challenges are overruled, and evidence of the same should not be allowed.

Order 20 at ii-iii (A-2-3).

Appellants argue that this ruling violates their procedural due process rights because they believe they should be allowed to introduce the same evidence the district court rejected in the consolidated hearing again at their individual implied consent hearing. If this Court accepts Appellants' argument, it would render the consolidated hearing meaningless. The portion of the district court Order that excludes further evidence, in cases where the Intoxilyzer test results produce a measured breath alcohol concentration in numeric format, reflects the district court's determination that there are no actual problems with the source code. Order 20 at ii-iii (A-2-3).

Further evidence of alleged source code errors would be irrelevant at future hearings. There is no due process error because the Appellants have had the opportunity to present evidence and the court has ruled upon their challenges to the source code.

There is a three-part analysis for reviewing claims of a procedural due process violation. *Fedziuk v. Commissioner of Public Safety*, 696 N.W.2d 340, 344 (Minn. 2005)

(citing *Mathews v. Eldridge*, 424 U.S. 319, 96 S. Ct. 893 (1976)). The three prongs of the test are identifying an affected private interest; the government's interest; and whether there is a risk of erroneous deprivation of the identified private interest. *Id.*

The private interest affected in an implied consent proceeding is one's driver's license. A person has a property interest in his or her driver's license. *Bell v. Burson*, 402 U.S. 535, 539, 91 S. Ct. 1586, 1589 (1971); *Heddan v. Dirkswager*, 336 N.W.2d 54, 58 (Minn. 1983). The first prong is met for implied consent hearings because there is an affected private interest.

The second prong is the government's interest in public safety. *Dirkswager*, 336 N.W.2d at 62 ("The public interest in preserving the safety of our roadways is of great importance."); *Szzech v. Commissioner of Public Safety*, 343 N.W.2d 305, 307 (Minn. Ct. App. 1984) ("The right of the public to be free from the unwarranted dangers posed by drinking drivers far outweighs any interest any individual may have in the continued unrestricted operation of motor vehicles"). Thus, the competing interests are one's property interest in his or her driver's license against the government's interest in public safety.

The third factor that must be balanced with the competing interests is whether there is a risk of erroneous deprivation of one's driver's license by the district court's exclusion of further presentation of source code evidence in cases in which an alcohol concentration has been expressed.

An Implied Consent hearing is a civil proceeding with the presumptions, evidentiary rules and burdens of proof of civil cases. *State v. Wagner*, 637 N.W.2d 330, 337 (Minn. Ct. App. 2001). The person's property interest in his or her driver's license is not as fundamental as his or her liberty interest in the criminal DWI case. *Wagner*, 637 N.W.2d at 337.

An Implied Consent hearing is a judicial review hearing to the court. Minn. Stat. § 169A.53, subd. 3(a) (2010). In an Implied Consent hearing, there are a limited number of issues that may be brought before the court. These issues are listed in the statute and include whether the testing method was valid and reliable and the results accurately evaluated. Minn. Stat. § 169A.53, subd. 3 (b)(10) (2010).

In January 2010, this Court consolidated the issue of the "reliability of the Intoxilyzer 5000EN results based on the source code of the instrument." *In re Minnesota Intoxilyzer 5000EN Source Code Litigation Order*, No. A09-2109 (Minn. Jan. 11, 2010) at RA3. This Court directed a single district court judge to conduct an evidentiary hearing. *Id.*

The consolidated evidentiary hearing pursuant to this Court's January 2010 Order constituted the statutory judicial review hearing the driver is entitled to on the issue of whether the Intoxilyzer produces valid and reliable test results based on the source code of the instrument. As to this issue, the judicial review has occurred and no further review is necessary. There is no risk of erroneous deprivation, because Appellants were allowed to present evidence, and in fact presented a great amount of evidence, which the district

court ruled upon.¹⁸ Therefore, this third element in the balancing test is not a factor at all, because Appellants have already presented their evidence to the court. Accordingly, there is no violation of Appellants' procedural due process rights by not permitting further testimony regarding issues that have already been decided in the consolidated Implied Consent proceedings.

While the district court returned each of the consolidated matters to "their home district for further proceedings," it also noted that it retains jurisdiction for "all pending and future" cases involving source code and the district court "anticipated that in light of what has been decided herein, sufficient guidance exists for resolution of the Source Code issue in pending and future cases as well." Order 20 at 2 (A-8). In Implied Consent cases, a further hearing on this issue is not necessary.

In criminal matters, due process means that a defendant must be treated with fundamental fairness. *State v. Richards*, 495 N.W.2d 187, 191 (Minn. 1992) (citing *California v. Trombetta*, 467 U.S. 479, 485, 104 S. Ct. 2528, 2532 (1984)). Fundamental fairness is narrowly defined and includes only those instances that violate "the

¹⁸ Appellants argue as an example that they should be allowed to present evidence about the Intoxilyzer's margin of error. However, Appellants did in fact present evidence as to this issue and the district court concluded: "The Court is satisfied with Dr. Nuspl's explanation in that the Intoxilyzer 5000EN does systematically perform calculations to a higher degree of precision than is actually reported." Order 20 at 111 (A-117). Additionally, in Minnesota, breath test results do not need to be reported within a scientific margin of error. See, e.g., *Berge v. Commissioner of Public Safety*, 374 N.W.2d 730 (Minn. 1985); *Dixon v. Commissioner of Public Safety*, 372 N.W.2d 785 (Minn. Ct. App. 1985); *Hrncir v. Commissioner of Public Safety*, 370 N.W.2d 444 (Minn. Ct. App. 1985); *Schildgen v. Commissioner of Public Safety*, 363 N.W.2d 800, 801 (Minn. Ct. App. 1985).

community's sense of fair play and decency." *Dowling v. United States*, 493 U.S. 342, 352-53, 110 S. Ct. 668, 674 (1990). Appellants in the criminal cases involved here are being treated fairly. Pursuant to this Court's January 11, 2010, Order, criminal defendants that are a part of this consolidated proceeding consented to be bound by the district court's Order.¹⁹ The district court thoroughly reviewed the evidence and made a ruling on the admissibility of the evidence.

Appellants' procedural due process rights have been vindicated because they have had an opportunity to present evidence regarding the source code for the Intoxilyzer 5000EN. Appellants' argument that their procedural due process rights have been violated should be rejected and the district court's Order affirmed.

III. THE DISTRICT COURT WAS WITHIN ITS DISCRETION IN RULING THAT EVIDENCE OF A DEFICIENT SAMPLE IS ADMISSIBLE WHEN THERE IS OTHER EVIDENCE SUPPORTING THE INTOXILYZER 5000EN'S DETERMINATION THAT THE SAMPLE IS DEFICIENT.

Regarding the admissibility of a Intoxilyzer 5000EN test result, where the test result indicates a deficient sample, the district court concluded:

In cases in which the Intoxilyzer 5000EN running versions 75_0240 ("240 software") reported a "Deficient Sample," the Source Code of the Instrument does impact the reliability, solely, of this result. Evidence in such cases of a "Deficient Sample" test report should not be allowed unless other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient.

Order 20 at iii (A-3).

¹⁹ Due process, as it applies to criminal cases, is more thoroughly discussed in the Brief filed by the prosecutors on behalf of the criminal cases on September 28, 2011.

Appellants argue that the district court erred by allowing additional evidence to be provided to support the reason that a sample is deficient. Instead, Appellants argue that the trial court should have ordered that Intoxilyzer test results are inadmissible in all cases where the instrument reports a deficient sample. The district court did not abuse its discretion in its ruling that additional testimony may be presented regarding an Intoxilyzer test that indicates a deficient sample, because the Intoxilyzer's determination that a sample is deficient does not necessarily involve a source code error. Further testimony is necessary to determine why a sample was deficient.

When a breath test is offered as the evidentiary test, "the test must consist of analyses in the following sequence: one adequate breath-sample analysis, one control analysis, and a second, adequate breath-sample analysis." Minn. Stat. § 169A.51, subd. 5(a) (2010). "[A] sample is adequate if the instrument analyzes the sample and does not indicate the sample is deficient." Minn. Stat. § 169A.51, subd. 5(b) (2010).

In order for a sample to be adequate, the person must (1) start blowing at 0.17 liters per second, (2) maintain a breath of at least 0.15 liters per second, (3) maintain that breath for at least two seconds, (4) blow a minimum volume of air of at least 1.1 liters, and (5) attain a fairly level slope that is rising at a rate less than seven percent. T. 709, 712, 797. When these five criteria are met, the Intoxilyzer will determine that the sample is adequate. If any one of these criteria is not met, the Intoxilyzer will determine the sample is deficient.

Appellants argue that because of the district court's finding that certain deficient sample results are unreliable, it is impossible for the State or Commissioner to prove the Intoxilyzer was functioning properly. The district court recognized, however, that not every deficient sample is due to a source code error. Order 20 at 92 (A-98). The district court credited both CFS and Schubert's findings that "[w]hen the Intoxilyzer 5000EN reports a deficient sample, it *could be due* to either a software failsafe or the *conduct of the test subject*." Order 20 at 91 (A-97) (emphasis added).

The BCA reviewed all of the Intoxilyzer test results that were a part of the consolidated proceedings, and found there were only about 20 deficient sample cases out of more than 4,000 cases.²⁰ T. 1794-95; Order 20 at 1 (A-7). In its review of the deficient sample cases that were a part of the consolidated proceeding, the BCA found a consistent pattern that individuals did not comply with the instructions. T. 1795. Failure to comply with instructions during the breath test is not related to source code; rather, it is related to the subject's conduct, and it is that conduct, not the source code, that causes the result to be deficient. The district court found this BCA testimony to be credible, noting that less than one percent of tests would be impacted by reliability challenges to the Intoxilyzer based upon source code. Order 20 at 1 (A-7).

²⁰ There was also testimony regarding a table, which indicated that the number of deficient samples due to slope acceptance parameters in the current version of the Intoxilyzer software was 0.6 of one percent of the total number of tests. T. 1813-15; Ex. 7 at 34.

The district court stated that its decision does not dismiss cases because a result of “deficient sample” on an Intoxilyzer test result could have many causes. *Id.* The district court was very careful in pointing out that the situations in which the test result could be impacted by the source code are limited to those tests where the sample has not been accepted due to the slope acceptance parameters in the 240 software. Order 20 at 92 (A-98). There is no basis to discard every deficient sample test when the concern is limited to so very few tests.

Minn. Stat. § 169A.51, subd. 5(c) (2010) states: “For purposes of section 169A.52 (revocation of license for test failure or refusal), when a test is administered using an infrared or other approved breath-testing instrument, failure of a person to provide two separate, adequate breath samples in the proper sequence constitutes a refusal.” The statute is very specific that a deficient sample constitutes a refusal only for purposes of license revocation, not for purposes of criminal charges.²¹

In an Implied Consent case, while an officer could rely only on an Intoxilyzer test result indicating a deficient sample as a basis for determining that the suspect refused testing, that is not what a certified Intoxilyzer operator is trained to do. David Edin, one

²¹ In criminal cases, a deficient sample test result does not automatically translate into a refusal. It requires some evidence more than just the test result. Therefore, in criminal matters, the district court’s Order requiring additional evidence is not an additional burden, as testimony regarding conduct was required prior to the source code being reviewed and analyzed.

of the BCA Forensic Scientists, explained how an operator is trained to deal with a deficient sample:

...And what they're directed to do is – they really have two choices here: They can offer the individual another opportunity to provide a breath sample. They can give them instructions on what would be required to provide an acceptable specimen. They can certainly choose to pursue a different specimen type – a blood or urine, for example – or if they feel that no amount of explanation to this individual is going to result in them providing an acceptable test based on their conduct and their behavior, they can then proceed with charging them with a refusal as being uncooperative.

T. 1796-97; Ex. 101. Edin also explained why a deficient sample does not automatically result in a refusal:

Because the refusal is the result of the operator's conclusion as to what led to the deficient sample. The instrument does not measure intent. The instrument measures only whether the criteria for an acceptable specimen were met. It is up to the operator then to discern why that occurred: Was that their conduct? And if so, he has these options.

T. 1797.

The district court correctly determined that other evidence should be presented regarding deficient samples, since none of the deficient samples that are a part of this consolidated proceeding were deficient due to slope acceptance parameters. T. 1795. If a subject's intent is to prevent a test from being valid, a court should be allowed to consider that in determining whether the person refused testing.

Further, the district court's Order is consistent with Minn. Stat. § 634.16 (2010), which allows for the results of a breath test to be admissible without expert testimony as to the trustworthiness and reliability of a measure of alcohol concentration when a fully-trained person conducts the test on an approved instrument. The Intoxilyzer 5000EN is

an approved instrument. *See* Minn. R. 7502.0425 (2011).²² The State or Commissioner can show that the instrument was functioning properly through testimony from the certified Intoxilyzer operator who conducted the test, and by submitting the actual results from the Intoxilyzer test record. For most deficient sample cases, the test record itself will show that the test is not one of the less than one percent of tests that the district court Order finds may have been affected by the source code because of the slope acceptance parameters. T. 1790-95.

Appellants further criticize the district court's ruling because they claim it allows for subjective interpretation of objective test results. Appellants are essentially asking this Court to disregard established case law regarding refusal by conduct by eliminating evidence other than the test result. *See, e.g., State, Dep't of Highways v. Lauseng*, 183 N.W.2d 926 (Minn. 1971) (failure to provide a sample); *State v. Ferrier*, 792 N.W.2d 98 (Minn. Ct. App. 2010) (unwillingness to test may be indicated nonverbally and may include frustrating the testing process); *Fischer v. Commissioner of Public Safety*, 389 N.W.2d 771 (Minn. Ct. App. 1986) (driver has duty to reasonably comply with testing process); *Sigfrinius v. Commissioner of Public Safety*, 378 N.W.2d 124 (Minn. Ct. App. 1985) (mints in mouth prior to test); *Connolly v. Commissioner of Public Safety*, 373 N.W.2d 352 (Minn. Ct. App. 1985) (blowing around rather than into the mouthpiece).

²² Minn. R. 7502.0725 became effective June 29, 2011. Prior to June 29, 2011, the Intoxilyzer 5000EN was approved pursuant to Minn. R. 7502.0420.

The Intoxilyzer determines whether a sample is adequate. See *Genia v. Commissioner of Public Safety*, 382 N.W.2d 284, 286 (Minn. Ct. App. 1986). If the sample is adequate, the Intoxilyzer analyzes the sample and determines an alcohol concentration. The Intoxilyzer does not know Minnesota law, nor does it interpret intent. If a person blows two adequate samples in sequence, then the Intoxilyzer reports a final alcohol concentration. The Intoxilyzer does not know if that alcohol concentration results in criminal charges or a driver's license revocation. The charge of driving while impaired or a driver's license revocation comes from a person reading and interpreting the Intoxilyzer test record.

The same is true when the Intoxilyzer determines that a sample is not adequate. The Intoxilyzer does not deem a deficient sample a refusal. A person must read the result and determine whether it is a refusal, based in part on whether there is evidence of an intent to frustrate the testing process. An officer makes observations as a person blows into the Intoxilyzer. For example, in *State v. Netland*, the officer observed the subject stop and start blowing multiple times "rather than providing a consistent breath necessary to yield a valid sample *** The officer's testimony indicates that the officer believed Netland attempted to manipulate the results of the first test and that, if he allowed another test, she would continue to do so." 762 N.W.2d 202, 209 (Minn. 2009).

Another example is *Connolly v. Commissioner of Public Safety*, where the Court of Appeals observed that, "Trooper Henry, a certified intoxilyzer operator, attempted to administer an intoxilyzer test to appellant. Appellant blew into the machine three or four

times, but did not provide an adequate breath sample. Appellant blew around the mouthpiece and not directly into the machine.” 373 N.W.2d at 353.

In *Netland* and *Connolly*, the certified Intoxilyzer operator’s testimony regarding how the subject blew into the Intoxilyzer supports the conclusion that the subject refused testing by failing to provide an adequate sample. The testimony in these cases is consistent with how the BCA trains certified Intoxilyzer operators, in that if the subject’s conduct prevents a sample from being accepted because the subject did not follow directions or was uncooperative, the operator, based on his or her own observations during the time of the test, may conclude the subject refused. T. 1798. Testimony from a certified Intoxilyzer operator is not a subjective interpretation of an objective test result, it is simply evidence that corroborates the objective result.

This same type of corroborating testimony as the certified Intoxilyzer operators gave in *Netland* and *Connolly* is what the district court had in mind when it ordered: “Evidence in such cases of a ‘Deficient Sample’ test report should not be allowed, unless other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient.” Order 20 at iii (A-3). The district court is not creating a new evidentiary requirement, it is merely reiterating what evidence has always been presented by the State or Commissioner when an Intoxilyzer test result indicates a deficient sample.

The district court heard and thoroughly reviewed the evidence presented to it regarding the test results indicating a deficient sample. The district court was in the best

position to determine witness credibility and to make a ruling on whether evidence would be allowed and if so, in what manner the evidence would be admitted. The district court did not err by requiring that additional evidence is necessary before a test result indicating a deficient sample may be received as evidence. The district court's Order should be affirmed.

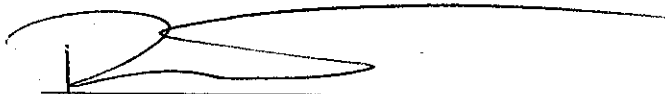
CONCLUSION

For all of the foregoing reasons, Respondent respectfully requests that the decision of the district court be affirmed in its entirety.

Dated: 10-3-11

Respectfully submitted,

OFFICE OF THE ATTORNEY GENERAL
State of Minnesota



DAVID S. VOIGT
Deputy Attorney General
Atty. Reg. No. 0251860

KRISTI NIELSEN
Assistant Attorney General
Atty. Reg. No. 0329770

445 Minnesota Street, Suite 1800
St. Paul, Minnesota 55101-2134
(651) 757-1350

ATTORNEYS FOR RESPONDENT
COMMISSIONER OF PUBLIC SAFETY

RESPONDENT'S APPENDIX

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TO RESPONDENT'S APPENDIX**

In re Minnesota Intoxilyzer 5000EN Source Code Litigation Order,
No. A09-2109 (Minn. Jan. 11, 2010) RA1

AG: #2876777-v1

STATE OF MINNESOTA

IN SUPREME COURT

A09-2109

OFFICE OF
APPELLATE COURTS

JAN 11 2010

FILED

In re Minnesota Intoxilyzer 5000EN
Source Code Litigation.

ORDER

The Commissioner of Public Safety has filed a motion pursuant to Minn. R. Gen. Prac. 113.03 for assignment, to a single judge or a panel of judges, of all pending and future implied consent cases in which the petitioner challenges the validity of Intoxilyzer 5000EN results based on allegedly defective source code for the Intoxilyzer 5000EN. At the time the Commissioner's motion was filed there were approximately 717 implied consent cases involving Intoxilyzer 5000EN source code challenges pending in the ten judicial districts.

The Commissioner asserts that all of these cases involve a similar question of fact: that is, whether the Intoxilyzer 5000EN source code contains a material defect that affects the reliability of the instrument's results. The Commissioner further contends that assignment of a single judge or panel of judges to administer and hear pretrial proceedings in these cases relating to the source code challenges will eliminate the risk of inconsistent rulings, provide a more efficient process and forum for adjudication of the source code challenges, and thereby preserve the resources of both the parties and the judiciary. Opposing counsel in all implied consent cases with source code challenges pending when the motion was filed were served with the motion. None has filed a response in opposition.

One attorney for numerous implied consent petitioners has filed a response agreeing with the Commissioner's motion and requesting that the cases in which he is counsel for the petitioner that were initiated after the Commissioner's motion be included in any assignment order.

In addition, the Cities of Apple Valley, Bloomington, Brooklyn Center, Corcoran, Golden Valley, Greenfield, Hassan, Hanover, Hopkins, Independence, Maple Grove, Maple Plain, Minneapolis, Minnetonka, Plymouth, Robbinsdale, and Rogers, and the Minnetonka Conservation District (the "Cities") have moved for assignment, to a single judge or panel of judges, of criminal Driving While Impaired (DWI) cases pending in their jurisdictions that involve Intoxilyzer 5000EN source code challenges, together with the implied consent cases. The Cities assert that the criminal DWI cases raise the same common factual issue concerning the source code as the implied consent cases and present the same logistical issues that favor statewide administration and decision of the source code challenges in those cases. Counsel for defendants in the pending criminal cases that are specifically identified in the Cities' motions have been served with those motions. None of those served attorneys has responded or opposed the motion. However, the Chief Public Defender for the Seventh Judicial District has filed a letter, on behalf of the State Public Defender, the Chief Public Defenders of all the judicial districts, and the Acting Chief Appellate Public Defender, opposing assignment to a single judge of criminal cases involving Intoxilyzer 5000EN source code challenges in which the defendant is represented by a public defender.

The interests of the parties and the judiciary will be furthered by assignment of civil Intoxilyzer 5000EN source code challenge cases to a single judge for administration and

resolution of those challenges. Such assignment will eliminate duplicative litigation in different districts, prevent inconsistent rulings, conserve the resources of the parties, their counsel, and the judiciary, and facilitate resolution of the cases. Although some of the same benefits might accrue from assignment of criminal cases involving Intoxilyzer 5000EN source code challenges to a single judge, the opposed request to include criminal cases in a statewide assignment raises legal issues not appropriate for resolution in this procedural context—a motion directed to the chief justice. Accordingly, the relief afforded in this order for criminal cases must be more limited than for civil implied consent cases.

Based upon all the files, records, and proceedings herein,

IT IS HEREBY ORDERED THAT:

1. Pursuant to Minn. R. Gen. Prac. 113.03 and Minn. Stat. §§ 2.724 and 480.16 (2008), the Honorable Jerome B. Abrams of the First Judicial District, having consented, is assigned to administer, hear, and decide all pretrial matters concerning challenges to the reliability of Intoxilyzer 5000EN results based on the source code of the instrument, including scheduling, discovery, and an evidentiary hearing, if necessary, in all pending and future civil implied consent cases in which a party challenges the reliability of Intoxilyzer 5000EN results based on the source code of the instrument, with the exception of cases in which a timely and valid notice to remove Judge Abrams was filed before the filing of this order.

2. Pursuant to Minn. R. Gen. Prac. 113.03 and Minn. Stat. §§ 2.724 and 480.16 (2008), the Honorable Karen J. Asphaug of the First Judicial District, having consented, is assigned to administer, hear, and decide all pretrial matters concerning challenges to the

reliability of Intoxilyzer 5000EN results based on the source code of the instrument, including scheduling, discovery, and an evidentiary hearing, if necessary, in all pending and future civil implied consent cases in which a party challenges the reliability of Intoxilyzer 5000EN results based on the source code of the instrument and in which a timely and valid notice to remove Judge Abrams was filed before the filing of this order.

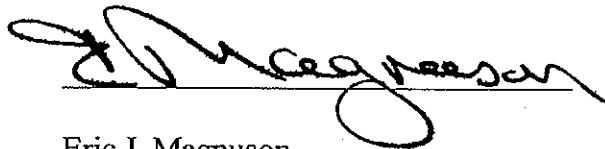
3. Pursuant to Minn. Stat. §§ 2.724 and 480.16 (2008), the Honorable Jerome B. Abrams of the First Judicial District, having consented, is assigned to administer, hear, and decide such pretrial matters as he deems appropriate concerning challenges to the reliability of Intoxilyzer 5000EN results based on the source code of the instrument in all pending and future criminal DWI cases in which (a) a party challenges the reliability of Intoxilyzer 5000EN results based on the source code of the instrument and (b) both the prosecuting authority and the defendant provide written notice to Judge Abrams of their consent to this assignment.

4. Because only the public defenders have objected to statewide assignment of criminal DWI cases that involve an Intoxilyzer 5000EN source code challenge, the motions of the Cities to include criminal cases pending in their jurisdictions in a statewide assignment is granted as to all cases specifically identified in the Cities' motions (listed in Appendix A to this order) in which the defendant is not represented by a public defender, and those defendants are deemed to have consented to the assignment made in paragraph 3 of this order. Because the time to respond to the motion of the City of Minneapolis had not expired by the filing date of this order, that motion is not governed by this paragraph, and the cases identified in that motion are governed by paragraph 3, *supra*.

5. The chief judges of the judicial districts are encouraged to work with prosecution and defense counsel to explore and implement, consistent with the rights of criminal defendants, means of achieving logistical benefits of coordinated administration of pretrial matters involving Intoxilyzer 5000EN source code challenges in criminal DWI cases where consent to participation in the statewide effort is not available.

6. The Clerk of Appellate Courts shall mail a copy of this order to Judges Abrams and Asphaug, the chief judges and district administrators of each judicial district, the court administrator for each district court, and all counsel listed as served with the motions filed here. The Commissioner of Public Safety shall provide Judges Abrams and Asphaug with an updated list of pending implied consent cases in which an Intoxilyzer 5000EN source code challenge has been asserted. To the extent practicable, district court administrators shall provide a copy of this order to the parties or their counsel in pending and future criminal DWI cases in which an Intoxilyzer 5000EN source code challenge is asserted.

Dated: January 11, 2010

A handwritten signature in black ink, appearing to read "Eric J. Magnuson", written over a horizontal line.

Eric J. Magnuson
Chief Justice