

*State of Minnesota*  
*In Supreme Court*

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In Re: Source Code Evidentiary Hearings  
in Implied Consent Matters,

In Re: Source Code Evidentiary Hearings  
in Criminal Matters

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**APPELLANT'S BRIEF**

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A11-560

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**PROCEDURAL HISTORY**

**November-December, 2009:** The Minnesota Commissioner of Public Safety and several prosecution agencies filed motions with the supreme court asking for assignment of pending and future implied consent cases and criminal DWI cases involving challenges to the validity of Intoxilyzer 5000EN breath alcohol test results based on the machine's defective source code to a single judge or panel of judges

**January 11, 2010:** The supreme court issued an order assigning the Honorable Jerome B. Abrams of the First Judicial District to administer, hear and decide all pretrial matters concerning challenges to the reliability of Intoxilyzer 5000EN results based on the instrument's source code in all pending and future civil implied consent and criminal DWI cases.

**December 8-23, 2010:** The district court conducted an evidentiary hearing on drivers'/defendants' challenges to the reliability of Intoxilyzer 5000EN test results based on defects in the instrument's source code, Judge Abrams presiding.

**March 8, 2011:** Judge Abrams filed an order ruling that the results of breath alcohol testing by the Intoxilyzer 5000EN are, except in one situation, reliable and unaffected by errors in the instrument's source code and thus admissible in DWI prosecutions and implied consent proceedings.

**March 28, 2011:** Drivers/defendants filed a Petition for Discretionary Review with the court of appeals.

**April 12, 2011:** CMI of Kentucky, Inc., filed a request with the court of appeals to participate as amicus curiae.

**April 28, 2011:** The court of appeals granted the petition for discretionary review.

**May 12, 2011:** The State and the Commissioner of Public Safety filed Petitions for Accelerated Review with the supreme court.

**June 28, 2011:** The supreme court granted the respondents' petition for accelerated review.

**July 14, 2011:** The court granted CMI's request to participate as amicus curiae.

**July 29, 2011:** The court reporter delivered transcripts to appellants' counsel.

## LEGAL ISSUES<sup>1</sup>

*Issue 1:* Must the district court's order be reversed because the court failed to articulate and apply the appropriate standard to determine the admissibility of Intoxilyzer 5000EN breath alcohol test results based on errors in the instrument's source code, and because if it had applied the appropriate standard, it would have concluded the results are unreliable and therefore inadmissible?

**Ruling below:** The district court ruled that the results of breath alcohol testing conducted on the Intoxilyzer 5000EN are reliable and unaffected by problems with the instrument's source code and overruled appellants' challenges to the admissibility

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<sup>1</sup> The district court made clear it would not consider the issue appellants raised regarding varying EPROM content that may exist in the 264 Intoxilyzer 5000EN units in use in Minnesota. In its order, the court stated its decision "is limited to challenges of breath alcohol test results based upon the Source Code of the Intoxilyzer 5000EN and is not intended to impair other defenses or challenges as may be permitted." (3/8/11 Order and Memorandum at iii, para. 3; T.216-17). (App at a-3) At the conclusion of the memorandum, however, the court stated:

All issues, evidence, and arguments submitted have been considered. To the extent that anything that has been presented to this Court is not expressly ruled upon or mentioned in this decision, such positions, in whatever form, should be considered rejected.

The Court did not intend to leave any arguments for another day by omission from this Order and Memorandum.

(Id. at 116). (App at A-122) Because the district court specifically excluded the EPROM content issue from the consolidated proceeding, drivers/defendants should not be foreclosed by the court's final words from addressing those issues in their individual cases.

of test results, without articulating what, if any, standard for admissibility it applied (3/8/11 Order and Memorandum at ii-iii at para. 1).<sup>2</sup> (App. at A-2, A-3)

**Authority:** Minn. R. Evid. 702

State v. Dille, 258 N.W.2d 567 (Minn. 1977)

Kramer v. Comm’r of Pub. Safety, 706 N.W.2d 231  
(Minn. Ct. App. 2005)

**Issue 2:** Did the district court err in ruling that drivers/defendants cannot present evidence to their fact finders that Intoxilyzer 5000EN breath alcohol test results are scientifically imprecise because denying appellants the ability to challenge the state’s evidence violates due process and fair trial rights?

**Ruling below:** The district court ruled that drivers/defendants may not introduce expert testimony that the results are accurate only within a margin of imprecision (3/8/11 Order and Memorandum at ii-iii at para. 1). (App. at A-2, A-3)

**Authority:** U.S. Const. amends. V, VI and IVX

Minn. Const. art. I, §§ 6 and 7

Crane v. Kentucky, 476 U.S. 683 (1986)

State v. Richards, 495 N.W.2d 187 (Minn. 1992)

**Issue 3:** Did the district court err in ruling that evidence of an unreliable and inadmissible “deficient sample” test report is admissible if other evidence supports the deficient sample report?

**Ruling below:** The district court found that otherwise unreliable and inadmissible evidence of a deficient sample test report can be admitted if other

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<sup>2</sup> A true and correct copy of Order 20—Order and Memorandum Following Final Evidentiary Hearings is reproduced in Appellant’s Appendix at A-1.

evidence provides reasons to support the sample being deficient (3/8/11 Order and Memorandum at iii, para. 2). (App. at A-3)

**Authority:** Minn. Stat. § 169A.51, subd. 5(c)  
Minn. R. Evid. 702 and 703  
Genia v. Comm'r of Pub. Safety, 382 N.W.2d 284 (Minn. Ct. App. 1986)

## STATEMENT OF THE CASE

The Minnesota Supreme Court consolidated in over 4,000 individual cases all pretrial matters concerning challenges to the reliability of Intoxilyzer 5000EN breath alcohol concentration test results based on the instrument's source code in all pending and future civil implied consent and criminal DWI cases in which a party has challenged the reliability of the results based on defects in the source code. The supreme court assigned First Judicial District Court Judge Jerome B. Abrams to preside over and decide the consolidated pretrial matters.

After several months of discovery, an evidentiary hearing on the drivers'/defendants' (appellants in this appeal) motions to exclude Intoxilyzer 5000EN breath alcohol test results was held from December 8-23, 2010, before Judge Abrams. The court heard testimony from both parties' experts regarding the issue of defects in the Intoxilyzer 5000EN's source code and whether those defects affected the reliability of test results. On January 31, 2011, the parties submitted written closing arguments. On March 8, 2011, the court issued an order ruling that the results of breath alcohol testing by the Intoxilyzer 5000EN are, for the most part, reliable and unaffected by errors in the instrument's source code and thus admissible in implied consent proceedings and DWI prosecutions. The court also ruled that in cases in which the Intoxilyzer 5000EN running 240 software reported a deficient sample, source code errors render those results unreliable and inadmissible "unless other evidence provides reasons to support the sample being deficient."

Appellants filed a Petition for Discretionary Review with the court of appeals, which the court of appeals granted. Respondents then filed Petitions for Accelerated Review with the supreme court, and the supreme court granted that petition.

## STATEMENT OF FACTS

Minnesota uses the Intoxilyzer 5000EN, manufactured by CMI of Kentucky, Inc., to conduct breath alcohol concentration tests on individuals arrested for violating Minnesota's DWI laws. The issue at the evidentiary hearing in these consolidated cases was whether the Intoxilyzer 5000EN produces unreliable results due to flaws in the instrument's computer source code. Following is a summary of the extensive evidence presented at the eleven-day evidentiary hearing.<sup>3</sup>

Appellants presented the testimony of five expert witnesses in support of their motion to exclude breath alcohol test results based on errors and omissions in the instrument's source code that affect the reliability of the results.

The first witness, Timothy Black, a systems consultant with decades of experience with embedded computer systems, primarily designing and debugging source code, designed and conducted several experiments to test how the Intoxilyzer 5000EN's source code affected breath alcohol test results in marginal and extreme breath testing situations (T. 54-55, 104).<sup>4</sup> He examined an Intoxilyzer 5000EN machine and its computer source code (T.87, 107-08). Black focused his examination

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<sup>3</sup> The transcript of the testimony is over 1,800 pages long and the record contains hundreds of pages of exhibits and depositions. Accordingly, this statement of facts is intended only as a summary and sampling of the highlights of the experts' testimony. Appellants in their written closing argument and the district court in its order and memorandum delineate the facts in great detail. A true and correct copy of Appellants' Written Closing Argument in Support of Motion to Exclude Intoxilyzer 5000EN Results is reproduced in Appellant's Appendix at A-123. A true and correct copy of Order 20—Order and Memorandum Following Final Evidentiary Hearings is reproduced in Appellant's Appendix at A-1.

<sup>4</sup> "T." refers to the transcript of the evidentiary hearing held before Judge Abrams.

and testing on what he identified as problem areas, including: the slope detector; sample volume detection; behavior of the collection interval; and self-testing functions (T.103, 118-19). He prepared two reports on his findings, which were admitted at the evidentiary hearing as Exhibits 14 and 16 (T.121, 501).

Black's testing led him to conclude that the source code for the Intoxilyzer 5000EN was deficient in all those problem areas (T.131). For example, Black found that the self-testing functions in the source code were very limited, even though the source code is supposed to determine whether the machine is functioning properly (T.130-31, 147-48). Black testified that the source code does not detect when the peripheral electrical or heater connections are unplugged; does not measure the heater temperature; can only detect business and police band radio frequency interference and fails to detect radio frequency interference from cell phones; and does not verify whether the air purge function designed to clear the sample chamber really has cleared the chamber (T.127, 131-32, 142-43, 166-70, 168-71). In addition, although the phenomena of "power drift" could create unstable readings, the source code did not provide any method for either detecting or reporting power drift (T.177-83).

These omissions from the source code allow the Intoxilyzer 5000EN to continue working without any indication that important safeguard such as radio frequency interference detection or temperature control have failed (T.148-49). Black concluded that the omissions in the self-test functioning of the source code adversely affect the reliability of the machine's breath alcohol test results (T.205-06).

Black also testified that when the Intoxilyzer 5000EN is running the 240 version of software, the puff counter gives incorrect, usually higher, readings of the number of puffs than actually provided (T.171). He also found that the total volume of air recorded is at times inaccurate (T.171). Black further found that the slope detector in the Intoxilyzer 5000EN was “not very good” at detecting mouth alcohol and that the sample volume detection system resulted in normal results for tests that should have rendered invalid profiles (T.361, 366-69, 382-86).

Dr. Karl Schubert, an engineering consultant who specializes in embedded computer systems, contracted with Computer Forensic Services to review the source code (T.226-27, 230-32). Schubert testified that he reviewed the source code line-by-line for a comprehensive review (T.232-35). In addition, he co-authored with CFS employee Matthew Willis a report on the source code, which was admitted at the hearing as Exhibit 166 (T.236-38).

Schubert testified that his review of the source code revealed problems in “marginal” or “boundary” cases (T.239-40). For example, Schubert found that the range of acceptability set by the source code for the breath volume required for an accurate reading was too narrow (T.248-52). That is, if a test subject’s breath volume was outside the set range, the machine will report a “deficient sample” even in instances where a sample was not deficient (T.252). Although there are many reasons for a sample to be labeled as deficient, the source code lacks a means to report why the sample is deficient (T.267-68). Thus, some results are unreliable based on an error in the source code because it rejects as deficient what should be valid samples

(T.274). According to Schubert, the simple fix for this error is to increase the breath volume tolerance in the source code (T.254, 260).

Schubert also testified about the standard deviation of test results in relation to the Intoxilyzer 5000EN (T.284). Schubert testified that the source code does not comply with the requirement in the State's request for proposal and CMI's response to the RFP that systematic error could not be greater than +/-3% or +/-0.003 alcohol concentration, whichever is larger (T.293-95, 297, 298; Ex. 1 at 26; Ex. 44 at 2; Ex. 45 at 45). Schubert found, however, that the source code is deficient because it does not provide measured breath alcohol concentration results with the precision the state required and CMI guaranteed (T.298-303). Instead, he concluded the machine was accurate within a 10% margin of imprecision for a 0.08 alcohol concentration (T.298). In addition, he testified about a statistical analysis study conducted by Rod Gullberg that showed a 9-3/8% margin of imprecision for a 0.08 alcohol concentration (T.289-98; Ex. 42, Rod G. Gullberg, Breath Alcohol Measurement Variability Assessment with Different Instrumentation & Protocols, 131 Forensic Science International 30 (2003)).

Schubert thus concluded that without reporting the measurement imprecision, the Intoxilyzer 5000EN does not accurately, validly and reliably report alcohol concentrations of 0.08 or 0.20 to a reasonable degree of engineering certainty (T.329-30). Schubert believed that the results of breath alcohol tests should be reported with a margin of imprecision of 10%, which is the norm for engineering devices (T.288-89).

Appellants also presented the testimony of Karin Kierzek, a forensic scientist with the Bureau of Criminal Apprehension's breath testifying section (T.625-26). Kierzek's job duties include training police officers to use the Intoxilyzer 5000EN to administer breath alcohol concentration tests (T.629).

Kierzek testified that the heating of the breath tubes is necessary to ensure scientifically reliable test results (T.657-58). She admitted that the machine's source code did not provide for internal self-testing to check whether the breath tubes were heated (T.657-58). She claimed, however, that the instruction to operators to feel the external breath tubes to see if they are "warm to the touch" was sufficient to remedy the source code's failure to check the operation of the heating elements in the external heating tube (T.808-08).

Kierzek also testified that radio frequency interference detection is a necessary function in breath alcohol testing to ensure reliable results because RFI can affect the alcohol and other results reported by the machine (T.655-56).

In addition, Kierzek agreed that the slope detection system, which ensures that deep lung air is measured, is a necessary scientific safeguard to ensure that the final test result is reliable (T.650-51, 654). But she acknowledged that a "software glitch" in the 240 version of the source code may cause an adequate sample to be rejected as deficient if a person blows harder than normal (T.691-95). Kierzek conceded that because of the source code error, a person who is blowing hard will have to blow "a great deal longer" to get the machine to accept the sample (T.743). She also conceded that the longer a person blows, the higher the test result reading will be (T.701).

Appellants also presented the testimony of another BCA employee in the breath testing section, Patrick Pulju, a forensic breath alcohol specialist, whose job it is to maintain the Intoxilyzer 5000ENs and train officers on their use (T.842-44). Pulju agreed that an error in the current 240 software running on the Intoxilyzer 5000EN caused some breath samples to be rejected as deficient even when they are not (T.859-64). Pulju testified that the current software produced different breath alcohol concentrations based on how hard a person blows, which can cause the machine to incorrectly report a deficient sample and then allow the officer administering the test to deem the subject to have refused (T.1130-31).

Appellants' final witness was Mary McMurray, a self-employed forensic scientist who consults on breath alcohol concentration test cases (T.1201-02). Before becoming an independent consultant, McMurray worked as a chemist for the Wisconsin State Patrol in the breath alcohol program, where she was responsible for checking and certifying the state's Intoxilyzer 5000s and training police officers, judges and lawyers how to operate the machine (T.1204-05).

McMurray testified that she had conducted her own testing during training seminars on the way in which radio frequency interference from cell phones affected Intoxilyzer test results (T.1304-05, 1319-21). According to McMurray's testing, RFI from cell phones frequently caused false positive breath alcohol concentration test results on subjects who were completely alcohol-free (T.1321-27). In addition, McMurray testified that the source code does not correctly calculate breath volume, which could affect the reliability of test results (T.1359-60).

Respondents presented the testimony of three witnesses. The first, Dr. Steven Nuspl an electrical engineer with his own computer systems consulting business, examined the source code (T.1461-2, 1466-67, 1479). He prepared a report on his findings, which was admitted as Exhibit 100 (T.1503). Nuspl testified that his review of the source code led him to conclude it was “unlikely” any source code errors would be found that would lead to unreliable breath alcohol concentration test results (T.1504). He admitted, however, that he did not specifically look for errors in the code; rather, he simply evaluated appellants’ experts’ findings (T.1509-10).

For example, Nuspl testified that the omissions Black found in the source code with respect to self-testing were “inconsequential” because the machine is tended by an operator, who is supposed to see if the machine is not functioning properly (T.1504-09). He also testified that omissions in the source code for detecting radio frequency interference from cell phones was not a concern “if one uses a reasonable set of guidelines – like, for example, making sure that cell phones are not in the same room or at least a certain distance away . . . .” (T.1531).

Moreover, despite the fact that the BCA scientists themselves acknowledge the source code error that renders some “deficient sample” reports inaccurate, Nuspl testified there was no source code error in that regard that would render such results inaccurate (T.1631-35, 1643, 1653). Finally, Nuspl disagreed with the CFS report’s conclusion regarding the margin of imprecision of test results, opining that the machine is “more precise” (T.1609).

The state's second witness was Matthew Willis, vice president of security services at Computer Forensic Services (T.1569). Willis testified that appellants hired CFS to review the source code, and he employed Dr. Schubert to help him with that review (T.1570). Willis testified that he disagreed with Schubert's conclusion that, due to source code errors and omissions, a 0.08 breath alcohol test result from the Intoxilyzer 5000EN was unreliable without reporting the margin of imprecision attached to that result (T.1593-95).

The state's third witness was David Edin, a forensic scientist in the BCA's breath testing section (T.1757-58). Edin's job responsibilities include teaching certification and recertification classes to Intoxilyzer 5000EN operators, instrument repair and software evaluation (T.1758). Edin testified about the issues raised in a series of emails beginning in 2006 between BCA breath testing employees and CMI, the manufacturer of the Intoxilyzer 5000EN (T.1761-79). Edin testified that the BCA was concerned that CMI had changed the sample acceptance criteria in the 240 version of the source code and, if so, whether it was possible the acceptance criteria were "denying people being able to provide tests" (T.1779).

Edin and others at the BCA conducted several tests, and decided that a sample might be erroneously labeled deficient only if a person was blowing "exorbitantly hard" (T.1780). Edin testified that the software change only affected sample acceptance, not any actual alcohol concentration measurement (T.1783-84).

Edin also testified about his understanding of the Gullberg study contained in the article admitted as Exhibit 42 (T.1798-805). According to Edin, the Gullberg

study concluded that more variables exist with biological variants rather than control variants (T.1805-06). Thus, when dealing with results generated by human subjects in the field, the range of values will be wider than in a laboratory setting (T.1805-06). Edin therefore opined that the Intoxilyzer 5000EN “is acceptable in its level of precision” (T.1813).

After considering the evidence and the parties’ arguments, the district court concluded that Intoxilyzer 5000EN breath alcohol concentration test results are “highly reliable.” 3/8/11 Order and Memorandum at 114. (App. at A-120) Although the court found “some number of errors present” in the source code, it ruled that those errors “have no significant impact” except in situations where the machine, using the 240 version software, labels a sample deficient. Id.

## ARGUMENT

### I.

**The district court's order must be reversed because the court failed to articulate and apply the appropriate standard to determine the admissibility of Intoxilyzer 5000EN breath alcohol test results based on errors in the instrument's source code, and because if it had it would have concluded the results are unreliable and therefore inadmissible.**

The district court concluded that the results of breath alcohol testing conducted on the Intoxilyzer 5000EN are reliable and unaffected by problems with the instrument's source code. 3/8/11 Order and Memorandum at ii-iii, para. 1. (App. at A-2, A-3) Based on this conclusion, the court overruled appellants' challenges to the admissibility of test results. *Id.* Yet the court did not apply or even articulate any particular standard to determine whether the breath alcohol test results were unreliable and thus inadmissible based on the information learned from the experts' analysis of the Intoxilyzer 5000EN's source code. If the court had applied the proper standard for admissibility, it would have concluded that Intoxilyzer 5000EN test results are not reliable and therefore are inadmissible. Accordingly, the court's order should be reversed. In the alternative, the issue must be remanded to the district court for consideration under the correct standard.

The district court characterized the issue before it as one under Minn. R. Evid. 104(a), which provides: "Preliminary questions concerning . . . the admissibility of evidence shall be determined by the court . . . ." 3/8/11 Order and Memorandum at 25. (App. at A-31) While it is true that district courts are to determine preliminary

questions of admissibility, specific standards of admissibility apply to different types of evidence. For example, alternative perpetrator evidence is admissible if it has an inherent tendency to connect the alternative party with the commission of the crime. State v. Gutierrez, 667 N.W.2d 426, 436 (Minn. 2003); the admissibility of novel scientific evidence is determined under the Frye-Mack standard. State v. Mack, 292 N.W.2d 764, 767-68 (Minn. 1980); Minn. R. Evid. 702 provides that scientific, technical or specialized knowledge evidence is admissible if it would be helpful to the jury. State v. MacLennan, 702 N.W.2d 219, 230 (Minn. 2005). As these examples show, Minn. R. Evid. 104 gives the district court the authority to determine preliminary questions of admissibility, but it still must apply the correct individual standard to the evidentiary issue at hand in making that preliminary determination.

In this case, the question was whether Intoxilyzer 5000EN breath alcohol concentration test results are unreliable due to errors in the instrument's source code, thereby rendering the results inadmissible. Because breath alcohol test results are obtained through scientific means, the government, as the proponent of the evidence, bears the burden of proving the foundational reliability of those results. Minn. R. Evid. 702 ("The [expert] opinion must have foundational reliability."). See also Minn. R. Evid. 702, Advisory Committee Comment 2006 Amendments ("If the opinion or evidence involves a scientific test, the case law requires that the judge assure that the proponent establish that 'the test itself is reliable and that its administration in the particular instance conformed to the procedure to ensure reliability.'") (quoting Goeb

v. Tharaldson, 615 N.W.2d 800, 814 (Minn. 2000) and State v. Moore, 458 N.W.2d 90, 98 (Minn. 1990)).

The standards for determining whether the government has met its burden of proving the foundational reliability of breath alcohol test results are set forth in a series of appellate court decisions that establish a burden-shifting standard.

First, the commissioner in an implied consent case or the prosecutor in a DWI prosecution must make a prima facie case that the test is reliable and “that its administration in the particular instance conformed to the procedure necessary to ensure reliability.” State v. Dille, 258 N.W.2d 565, 567 (Minn. 1977) (citations omitted). Second, if the government makes a prima facie case of test reliability, the driver/defendant must come forward with evidence disputing the validity and trustworthiness of the breath test. Falaas v. Comm’r of Pub. Safety, 388 N.W.2d 40, 42 (Minn. Ct. App. 1986). And third, “[i]f the prima facie showing of a test’s reliability is challenged, the judge must rule upon the admissibility in light of the entire evidence,” Bond v. Comm’r of Pub. Safety, 570 N.W.2d 804, 806-07 (Minn. Ct. App. 1997) (quotation omitted), bearing in mind that the **government** retains the ultimate burden to prove foundational reliability for admissibility. Minn. R. Evid. 702.

The government meets its initial prima facie burden 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. Zern v. Comm’r of Pub. Safety, 371 N.W.2d 82, 83-84 (Minn. Ct. App. 1985) (citations omitted). “If the [diagnostic] tests give the expected results, this

would seem to be almost incontrovertible proof not only that the chemicals are proper but that the instrument is in working order.” Bielejeski v. Comm’r of Pub. Safety, 351 N.W.2d 664, 666 (Minn. Ct. App. 1984) (quotation omitted).

If the government meets the prima facie burden, then the burden of production shifts to the driver/defendant. “Once a prima facie showing of trustworthy administration has occurred, it is incumbent upon [the driver/defendant] to suggest a reason why \* \* \* the test was untrustworthy.” Tate v. Comm’r of Pub. Safety, 356 N.W.2d 766, 768 (Minn. Ct. App. 1984) (quotation omitted). “Specifically, the driver must present some evidence beyond mere speculation that questions the trustworthiness of the Intoxilyzer report.” Kramer v. Comm’r of Pub. Safety, 706 N.W.2d 231, 236 (Minn. Ct. App. 2005) (citation omitted). That is, the driver must show an alleged error *and* establish a relationship between the error and the validity of the results. Id. at 237.

“Myriad ways” exist for a driver to show a reason a breath alcohol test was untrustworthy. Id. For example, a driver may show that the instrument gave a false reading because of a low chemical level. Id. at 236 (citation omitted). A driver also may assert that some irregularity occurred during the observation period that would render a test result invalid. Id. at 237. In this case, appellants contended, and came forward with evidence to show, that errors exist in the computer source code that operates the Intoxilyzer 5000EN and that those errors affected the validity of test results.

The chief problem with the district court's order denying appellants' motion to exclude the test results is that the court did not articulate in its order the applicable standard or show that its conclusions were based on an analysis of the evidence under that standard. Generally, the district court has discretion to admit or exclude evidence and its decisions will not be reversed unless they constitute an abuse of discretion or are based on an erroneous view of the law. TMG Life Ins. Co. v. County of Goodhue, 540 N.W.2d 848, 851 (Minn. 1995) (citation omitted).

But when ruling on the admissibility of any evidence, the district court must identify and apply the standard appropriate to the particular type of evidence in question. When the court does not do so, its decision to admit or exclude evidence is not entitled to any deference at all. Cf. State v. Jones, 678 N.W.2d 1, 17 (Minn. 2004) (district court erred when it used the wrong standard to determine admissibility of alternative perpetrator evidence). Under such circumstances, a remand is appropriate for the court to apply the correct standard to its fact findings. See, e.g., State v. Pollard, 370 N.W.2d 426, 427 (Minn. Ct. App. 1985) (case remanded for further findings where record did not show which test court applied); Walser Auto Sales, Inc. v. City of Richfield, 635 N.W.2d 391, 400 (Minn. Ct. App. 2001) (case remanded for findings where court applied the wrong standard).

In this case, the court identified the issue as whether Intoxilyzer 5000EN test results are unreliable, and therefore inadmissible, because of errors in the instrument's computer source code. And the court identified its authority to make that determination under Minn. R. Evid. 104(a). But the court never identified or applied

the standard it used to guide its decision-making process, or even who had the burden of production.

The court's memorandum reviewed the evidence and testimony the parties presented at the hearing, and commented on what it found credible and what it did not. The court did not, however, make a conclusion that the government had met its burden of proving a prima facie case of reliability. Nor did the court make any conclusions about whether appellants had met their burden of producing evidence that challenged the prima facie case. Finally, the court did not in any way indicate that it had made its ultimate determination of admissibility was based on a review of the evidence as a whole, in light of the appropriate standard.

An example of the district court's failure to recognize, and therefore apply the appropriate standard is clear from page 72 of its order. (App. at A-78) There, the district court states that the issue as framed by this court in the order consolidating these cases before one judge is one of "threshold admissibility." 3/8/11 Order and Memorandum at 72. (App. at A-78) In other words, are the scientific results reliable enough to meet the minimum threshold to be admissible in evidence at all? But in the next sentence, the district court restated the issue in this way: "in other words, *whether challenges* to the reliability of Intoxilyzer 5000EN results based on the Source Code of the instrument *should be permitted.*" *Id.* (emphasis added). These are two very different questions. The first goes to the admissibility of the evidence, but the second goes to the weight a fact finder ultimately applies to that evidence. The existence of the second question presumes that the answer to the first is "yes," for the

only way the fact finder would have to consider the question of weight is if the evidence were admitted.

The fact that the district court conflated these two issues is of no small concern. If the court believed it was deciding that “challenges” to the Intoxilyzer 5000EN should not “be permitted,” it was not only presuming that a fact finder would ultimately hear the test results, but that the driver/defendant would be precluded from introducing evidence that might discredit those results. By this ruling, not only did the court fail to properly address the standard of “threshold admissibility,” but it, in effect, held that Intoxilyzer 5000EN results would be unassailable at trial. As a result of this misunderstanding and the lack of any guiding standard, the district court’s order not only “overrules” the objection to the admissibility of the results based on scientific foundation, but goes beyond the court’s mandate and holds that evidence of any problems with the source code should not be admissible to test the credibility of test results. 3/8/11 Order and Memorandum at ii-iii, para. 1. (App. at A-1, A-2) This deviation from the supreme court’s directive in its order consolidating these cases not only violates drivers’/defendants’ constitutional rights to present a defense in their individual cases (See Argument II), but clearly demonstrates that the district court failed to both understand and apply an appropriate legal standard to the evidence in this case.

If the appropriate standard had been applied, the district court would have concluded that appellants presented significant evidence that the testing method employed by, and the test results produced by, the Intoxilyzer 5000EN are

untrustworthy. If the appropriate standard had been applied, the court would have concluded that respondents' evidence did not adequately rebut this evidence. And if the appropriate standard had been applied, the court surely would have concluded that the testing method and the test results are foundationally unreliable, and therefore would have required exclusion of Intoxilyzer 5000EN results from criminal DWI trials and civil implied consent proceedings.

A thorough review of the record shows that had the district court applied the proper standard, it would have been compelled to conclude that appellants met their burden of production. Appellants presented significant expert evidence of material defects and omissions in the Intoxilyzer 5000EN's computer source code that render the results of tests performed on that machine scientifically unreliable. Appellants' source code review and analysis challenged the foundational reliability of nearly every result line of an Intoxilyzer test. Appellants also presented evidence that the machine's source code does not adequately detect and report RFI during the testing process, it rejects scientifically acceptable breath samples as deficient samples and it fails to provide the level of precision necessary to ensure reliability and accuracy of breath alcohol concentration measurement.

The court also would have been compelled to conclude that the state failed to adequately discredit appellants' evidence and therefore failed to meet its ultimate burden of proof that Intoxilyzer 5000EN breath alcohol test results are reliable. Thus, this court must reverse the district court's conclusion that such test results are

foundationally reliable and should require exclusion of Intoxilyzer 5000EN test results from civil implied consent proceedings and criminal DWI trials.

In the alternative, this court must at a minimum remand the consolidated cases to the district court for appropriate review, findings and conclusions under the appropriate legal standard.

## II.

**The district court erred in ruling that drivers/defendants cannot present evidence to their fact finders that certain Intoxilyzer 5000EN breath alcohol test results may be affected by source code error because denying drivers/defendants the ability to challenge the state's evidence violates due process and fair trial rights.**

Appellants proved conclusively that certain Intoxilyzer 5000EN breath alcohol test results may be affected by source code error. Yet, in addition to ruling that Intoxilyzer 5000EN breath alcohol test results are reliable and therefore admissible, the district court also ruled that drivers/defendants may not introduce evidence challenging the weight and credibility of particular test results. Specifically, the court held: "To the extent challenges to test results are premised upon problems with the Source Code, such challenges are overruled, and evidence of same should not be allowed." 3/8/11 Order and Memorandum at iii, para. 1. (App. at A-3) This ruling was wrong because denying drivers/defendants the ability to challenge the credibility of the state's evidence in individual cases violates their due process and fair trial rights.

A primary example of evidence of a source code error that affects breath test results relates to the machine's margin of imprecision.<sup>5</sup> In the state's Request for Proposal that resulted in its adoption of the Intoxilyzer 5000EN as the state's official breath alcohol testing device, the state specified in Paragraph 13 that the systematic error of the machine had to be within 3% or 0.003. See Ex. 1, para. 13. But appellants

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<sup>5</sup> Other courts that have addressed this issue refer to this principle as "uncertainty of measurement." See, e.g., State v. Fausto, No. CO-76949 (King County Dist. Ct., Wash. Sept. 21, 2010). A true and correct copy this unpublished opinion is reproduced in Appellant's Appendix at A-190.

introduced uncontroverted evidence that the machine does not operate within that margin of precision.

At the hearing, Dr. Karl Schubert testified that the Intoxilyzer 5000EN's test results are scientifically imprecise based on mathematical shortcuts and processor limitations (T.289-98). He also testified, based on his review of the source code, that the study done by Rod Gullberg properly quantified the imprecision of the machine. See Ex. 42, Rod G. Gullberg, Breath Alcohol Measurement Variability Associated with Different Instrumentation and Protocols, 131 Forensic Science International 30 (2003). Finally, he testified that if a driver was precluded from introducing evidence of the degree of imprecision to the fact finder, certain test results would not be scientifically valid or reliable (T.329-30). CFS came to a similar conclusion in its report of its source code review (Ex. 166 at 50). That is, the mathematical shortcuts in reporting BrAC test results do not accurately account for the actual lack of precision built into the design and implementation of the Intoxilyzer 5000EN's source code.<sup>6</sup>

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<sup>6</sup> Schubert's and CFS's recommendation that BrAC results be reported with a margin of imprecision are supported by the 2009 National Academy of Science Report to Congress:

As a general matter, laboratory reports generated as the result of a scientific analysis should be complete and thorough. They should contain, at a minimum, "methods and materials," "procedures," "results," "conclusions," and, as appropriate, sources and magnitudes of uncertainty in the procedures and conclusions, (e.g., levels of confidence).

2009 report to Congress of a Committee of the National Academy of Sciences, National Research Council Committee on Identifying the Needs of the Forensic

Clearly, appellants proved that errors and limitations in the Intoxilyzer 5000EN's source code renders breath alcohol test results scientifically imprecise within a certain margin. But the district court confused the question of overall foundational reliability for admissibility of test results with the question of the weight fact finders might assign to particular test results. Simply because scientific evidence is, in general, reliable enough to be admitted does not mean it cannot be challenged. That is, admissibility does not equal unassailability. See Minn. R. Evid. 104(e) ("This rule does not limit the right of a party to introduce before the jury evidence relevant to weight or credibility."). This is particularly true when the constitutional rights to a fair trial and due process, which includes the right to present a defense, are in play.

The United States and Minnesota Constitutions guarantee criminal defendants due process of law and the right to a fair trial. U.S. Const. amends. V, VI and IVX;

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Science Community, Strengthening Forensic Science in the Unites States: A Path Forward, S-15 (2009) (emphasis added).

In fact, the NAS used breath alcohol concentration testing as an example of why reporting imprecision is important:

Consider, for example, a case in which an instrument (e.g., a breathalyzer such as Intoxilyzer) is used to measure the blood-alcohol level of an individual three times, and the three measurements are 0.08 percent, 0.09 percent, and 0.10 percent. The variability in the three measurements may arise from the internal components of the instrument, the different times and ways in which the measurements were taken, or variety of other factors. These measured results need to be reported, along with a confidence interval that has a high probability of containing the true blood-alcohol level (e.g., the mean plus or minus two standard deviations).

Id. at 4-5.

Minn. Const. art. I, §§ 6 and 7. See State v. Reardon, 245 Minn. 509, 513-14, 73 N.W.2d 192, 195 (1955) (citation omitted). The right to a fair trial includes the right to present a complete defense. See Crane, 476 U.S. at 687; California v. Trombetta, 467 U.S. 479, 485 (1984); Washington v. Texas, 388 U.S. 14, 19 (1967); State v. Richards, 495 N.W.2d 187, 191 (Minn. 1992) (citation omitted).

The right to present a defense is not an unlimited right. State v. Quick, 659 N.W.2d 701, 713 (Minn. 2003). A defendant still “must comply with established rules of procedure and evidence designed to assure both fairness and reliability in the ascertainment of the guilt and of the innocence.” Richards, 495 N.W.2d at 191 (quotation omitted). Specifically, “[e]vidence that is repetitive . . ., only marginally relevant or poses an undue risk of harassment, prejudice [or] confusion of the issues may be excluded over a defendant’s insistence that the evidence is essential to present a meaningful defense.” State v. Greer, 635 N.W.2d 82, 91 (Minn. 2001) (quotation omitted). But if the evidence is relevant and admissible under the applicable rules, the right to present a defense requires its admission.<sup>7</sup>

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<sup>7</sup> Likewise, because a driver’s license is an important property interest, drivers in implied consent cases have the right to procedural due process before the state can revoke their licenses. Bell v. Burson, 402 U.S. 535, 539 (1971). “The fundamental requirement of due process is the opportunity to be heard ‘at a meaningful time and in a meaningful manner.’” Heddan v. Dirkswager, 336 N.W.2d 54, 59 (Minn. 1983) (quoting Armstrong v. Manzo, 380 U.S. 545, 552 (1965)). Procedural due process “is flexible and calls for such procedural protections as the particular situation demands.” Morrissey v. Brewer, 408 U.S. 471, 481 (1972). The opportunity to be heard is hardly meaningful if a driver cannot, with relevant and reliable evidence, challenge the weight and credibility of the evidence the state is using to deprive the driver of his or her license.

For example, even after a district court rules a defendant's confession was voluntary and therefore admissible, a defendant still may present evidence to the jury on the circumstances surrounding the making of the confession. Crane v. Kentucky, 476 U.S. at 690-91 (citation omitted). "[T]he physical and psychological environment that yielded the confession" can be relevant to determining the defendant's guilt or innocence. Id. at 689. "In other words, credibility is a different question than voluntariness." State v. Hall, 764 N.W.2d 837, 844 (Minn. 2009) (citation omitted). See also State v. Wajda, 296 Minn. 29, 31, 206 N.W.2d 1, 2 (1973) (if court admits defendant's statement, court also "must permit the jury to hear evidence on the circumstances surrounding the making of the confession . . . for a determination of weight and credibility . . .").

And with respect to scientific evidence, the due process right to present a defense requires that defendants be permitted to present their own expert testimony to challenge the weight and credibility of the state's evidence, provided the proffered evidence is relevant and not speculative. For instance, much like breath alcohol test results, DNA test results are admissible because they have foundational reliability. Minn. Stat. § 634.25 (DNA results admissible without antecedent expert testimony of reliability upon showing that testimony meets admissibility standards of rules of evidence). Cf. Minn. Stat. § 634.16 (breath alcohol test results admissible without antecedent expert testimony of reliability if test performed by trained operator). But defendants, owing to the constitutional right to present a defense, have the right to present their own scientific expert testimony challenging the reliability of particular

DNA test results, as long as the testimony is relevant and otherwise admissible. See, e.g., State v. Smith, A09-118, 2010 WL 1657048 (Minn. Ct. App. Apr. 27, 2010) (unpublished opinion).<sup>8</sup>

Under current Minnesota law, the state is not required to prove a breath alcohol concentration test result within any margin of imprecision. See, e.g., Hrncir v. Comm’r of Pub. Safety, 370 N.W.2d 444, 444 (Minn. Ct. App. 1985) (citing Schildgen v. Comm’r of Pub. Safety, 363 N.W.2d 800, 801 (Minn. Ct. App. 1985); Grund v. Comm’r of Pub. Safety, 359 N.W.2d 652, 653 (Minn. Ct. App. 1984)). The law thus limits the issue to whether a particular breath alcohol concentration test result was reported at a certain level, not whether it was within a margin of imprecision. Loxtercamp v. Comm’r of Pub. Safety, 383 N.W.2d 335, 337 (Minn. Ct. App. 1986) (citations omitted). These holdings rely on factors visibly obvious to the operator (such as air blank and simulator solution concentrations) as evidence of sufficient trustworthiness of the machine. “If the two tests give the expected results, ‘this would seem to be almost incontrovertible proof not only that the chemicals are proper but the instrument is in working order.’” Bielejeski, 351 N.W.2d at 666 (quotation omitted).

This reliance does not account for the many calculations, diagnostic checks and conversions that the source code performs within the integrated system and outside the operators’ visible observations. Of course, until now, no court, nor any litigant for

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<sup>8</sup> A true and correct copy of this unpublished opinion is reproduced in Appellant’s Appendix at A-184.

that matter, has had the benefit of access to the source code to either explain or quantify the machine's lack of precision. But the evidence in this case shows conclusively that the uncertainty of measurement for Intoxilyzer 5000EN test results can be explained and quantified and thus is not an *alleged* margin for *potential* error. Not permitting evidence to challenge the precision of the result, particularly in cases where a result is at the thresholds of criminal sanctions (.04, .08 and .20) erroneously fails to acknowledge what the evidence in these consolidated cases proved to be true: The Intoxilyzer 5000EN is not capable of meeting CMI's claimed, and the state's required, +/-3% precision standard, and in fact, is not even capable of getting any closer than +/- 9-3/8% accuracy. And it erroneously allows jurors to believe that a particular test result is a certainty, when it obviously is not.

Now that the source code has been revealed and examined, it can no longer be said that specific challenges to specific Intoxilyzer 5000EN test results merely allege potential error. Rather, appellants' evidence proved identifiable actual errors that reveal an identifiable actual uncertainty of measurement. These challenges are no longer speculative; they have a solid factual basis. Accordingly, drivers/defendants must be allowed to present to their fact finders their own scientific evidence that the margin of imprecision caused by errors in the source code of the Intoxilyzer 5000EN to show that their own particular test results are credible at most only within that margin of imprecision. To deny drivers/defendants that opportunity deprives the fact finder of evidence relevant to the issue of guilt and violates the right to a fair trial and the due process right to present a defense. Therefore, this court must reverse the

district court's order that evidence of problems with the source code should not be allowed to challenge the weight and credibility of particular breath alcohol concentration test results.

### III.

**The district court erred in ruling that evidence of a “deficient sample” test result is admissible if other evidence supports the deficient sample result.**

The district court correctly found that in cases in which the Intoxilyzer 5000EN running “240 software” reported a deficient sample, an error in the machine’s source code renders such test results unreliable. 3/8/11 Order and Memorandum at iii, para. 2. (App. at A-3)<sup>9</sup> The court therefore ruled that evidence of a deficient sample in such cases is not admissible. Id. But the court also ruled that evidence of a deficient sample in such cases is admissible if “other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient.” Id. This part of the ruling is wrong and must be reversed because that evidence is irrelevant. Moreover, even if it were relevant, evidence that is inadmissible because it is without foundational reliability does not become reliable and therefore admissible simply because other evidence supports the same result.

During the course of the source code evaluation, the experts discovered that the latest version of the software running in the Intoxilyzer 5000EN was rejecting breath sample “profiles” that were acceptable on previous versions.<sup>10</sup> When the Intoxilyzer 5000EN rejects a sample profile, it labels the sample as “deficient,” regardless of the

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<sup>9</sup> Respondents did not file a cross-petition for discretionary review. Accordingly, the propriety of this conclusion and order are not at issue.

<sup>10</sup> This discovery was hardly surprising as this defect was first discovered by the BCA’s own scientists and documented in a lengthy email exchange with CMI programmers. (T.1761-79); See Ex. 7 p. 28, E-mail Exchanges between the BCA and CMI, Inc. (1998-2008).

effort of the subject to provide the sample. The machine does not, however, detect the person's intent.<sup>11</sup> It merely analyzes what it reads from the data. That is, the machine cannot report why the sample is deficient, just that it is. But a "deficient sample" result could be due either to a software failure or the subject's conduct. In either event, a "deficient sample" is considered a refusal to test under Minnesota law and carries significant ramifications.<sup>12</sup> Minn. Stat. § 169A.51, subd. 5(c). Accordingly, the district court correctly concluded that "[t]o the extent the Intoxilyzer 5000EN reports a deficient sample under some circumstances, this result is unreliable based upon the Source Code of the instrument." 3/8/11 Order and Memorandum at 92. (App. at A-98)

Based on this conclusion, the court ruled that evidence in such cases of a "deficient sample" test report is not admissible. 3/8/11 Order and Memorandum at iii, para. 2. (App. at A-3) Yet, without explanation and, frankly, inexplicably, the court also ruled that those inadmissible, unreliable deficient sample test reports would not be admitted "unless other evidence exists which provides reasons and/or observations of testing which supports the sample being deficient." *Id.* This "unless" ruling is

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<sup>11</sup> A refusal to test under the implied consent and driving while impaired laws must be a "volitional act." *State v. Ferrier*, 792 N.W.2d 98 (Minn. Ct. App. 2010).

<sup>12</sup> Test refusals are separate criminal offenses, generally punishable by more severe criminal penalties than those for impaired driving (Minn. Stat. §§169A.25 and .26); longer license revocations than those for test failures (Minn. Stat. §169A.52); and vehicle forfeiture for refusal on a second offense, rather than a third as with test failure (Minn. Stat. § 169A.63). A refusal to test is also admissible in evidence to establish a guilty state of mind in a driving while impaired trial (*South Dakota v. Neville*, 459 U.S. 553, 564 (1983); *State v. Berge*, 464 N.W.2d 595 (Minn. Ct. App. 1992), *aff'd without opinion*, 474 N.W.2d 828 (Minn. 1991); Minn. Stat. § 169A.45, subd. 3). In addition, a refusal to test renders an otherwise inadmissible preliminary test result admissible at trial (Minn. Stat. § 169A.41, subd. 2(4)).

wrong and should be reversed because unreliable evidence is not admissible under any circumstances, because it is both irrelevant and unreliable.

The court's ruling that evidence of a deficient sample test result could be admitted if other evidence provides "reasons and/or observations of testing which supports the sample being deficient" is wrong in the first instance because that "other evidence" of a sample being deficient itself is irrelevant. A person's behavior before commencing an Intoxilyzer test can constitute refusal to take a test. Sigfrinius v. Comm'r of Pub. Safety, 378 N.W.2d 124, 126-27 (Minn. Ct. App. 1985). Thus, reasons or observations that provide evidence of a test refusal are admissible as long as those reasons or observations occurred *before* a breath alcohol test began.

But with respect to the issue of test refusal, once a person actually takes an Intoxilyzer test, Minn. Stat. § 169A.51, subd. 5(c) provides: "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." This statute "makes it clear that the Intoxilyzer, not the police officer, is to determine the adequacy of a breath sample." Genia v. Comm'r of Pub. Safety, 382 N.W.2d 284, 286 (Minn. Ct. App. 1986) (interpreting an earlier, identical version of Minn. Stat. § 169A.51, subd. 5(c)). Under this statute, "with a record of the proper functioning of the Intoxilyzer,<sup>13</sup> the Commissioner can readily meet the burden of proving a refusal." Id. at 286-87.

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<sup>13</sup> The district court's conclusion that defects in the Intoxilyzer 5000EN's source code render "deficient sample" results unreliable make the required "proper functioning"

On the other hand, there is no authority that once a breath test has begun, “a refusal can be based on an officer’s conclusion that a driver is not making a good-faith effort to provide an adequate sample.” Id. at 286. This makes sense given that the purpose of a scientific test is to obtain objective results without subjective interpretation. The district court’s ruling, however, frustrates the purpose of scientific testing. Accordingly, if a deficient sample result is not admissible to prove a test refusal because the result is not scientifically reliable, any “reasons or observations” to support the deficient sample result are simply not relevant because, under the statute, only the test result itself is relevant. And if the reasons or observations are not admissible, then the test result also certainly is not.

Moreover, even if a deficient sample test result was relevant, relevance alone does not guarantee the admissibility of evidence. Jacobson v. \$55,900 in U.S. Currency, 728 N.W.2d 510, 528 (Minn. 2007) (citing Minn. R. Evid. 403, which excludes relevant evidence under certain circumstances). More particularly, when expert evidence is offered, the admissibility of the testimony is governed by Minn. R. Evid. 702 and 703. Id. Therefore, breath testing results are admissible only if they assist the finder of fact **and** if there is a reasonable basis for the results. Id. (citing Minn. R. Evid. 702 and 703). In other words, the party seeking to introduce the evidence must establish an adequate foundation. Id. (citation omitted). And although admission of evidence generally is within the trial court’s discretion, admission of

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threshold unachievable. This further supports the district court’s decision to exclude these test results, and make its decision to allow them in any situation even more inexplicable.

expert testimony lacking in foundation always is an abuse of discretion. Sanchez v. Waldrup, 271 Minn. 419, 430, 136 N.W.2d 61, 68 (1965).

Once scientific evidence has been found to lack sufficient foundational reliability to allow its admission, it does not later become reliable and therefore admissible because it is consistent with other, admissible, evidence offered to prove the same issue. The evidence, because it is unreliable, remains forever inadmissible. See, e.g., Dille, 258 N.W.2d at 567 (“Without foundation guaranteeing the tests reliability, the test result is not probative as a measurement and hence is irrelevant.”). For example, polygraph test results are not admissible because they lack foundational reliability. State v. Kolander, 236 Minn 209, 221-22, 52 N.W.2d 458, 465 (1952). Accordingly, polygraph test results, references to the administration of a polygraph test or even evidence that a polygraph test was refused, are inadmissible to corroborate other evidence relating to a particular issue. State v. Fenney, 448 N.W.2d 54, 62 (Minn. 1989) (error to allow reference to administration of polygraph test to bolster police officer’s testimony regarding defendant’s demeanor on being charged with murder).

The same principles apply to the admissibility of evidence other than scientific or expert evidence. For instance, a confession obtained in violation of a defendant’s right to counsel may be admitted for impeachment purposes, but only if the confession was voluntary. Harris v. New York, 401 U.S. 222, 224-26 (1971). That is, as long as the trustworthiness of the confession meets the legal standard for reliability, it may be used to impeach. Id. But if a defendant’s confession was involuntary, and

hence unreliable, it is not admissible at all, for any purpose. Mincey v. Arizona, 437 U.S. 385, 402 (1978). This is the rule “even though there is ample evidence aside from the confession to support the conviction.” Id. at 398 (quotation and other citations omitted).

Admitting scientific testimony that is not foundationally reliable to support other evidence is unfair because the importance normally accorded scientific testimony can mislead a fact finder into believing or disbelieving other witnesses. Sanchez, 271 Minn. at 430, 136 N.W.2d at 68. The lack of foundation, together with the scientific nature of the testimony, can distort rather than assist, the fact finder’s determination.

The district court’s “unless” ruling in this case would allow the state to use unreliable evidence of a deficient sample test result to distort a fact finder’s determination of whether a driver actually refused to test. It defies both law and logic to allow unreliable “scientific” evidence of a “deficient sample” to support any other evidence the government might have that a subject, by willful conduct, refused to submit to breath alcohol testing. Accordingly, that part of the district court’s order that allows evidence of a deficient sample test report to be admitted to support other evidence of a deficient sample must be reversed.

## CONCLUSION

Because respondents did not bear their burden to prove that errors in the Intoxilyzer 5000EN's computer source code did not render breath alcohol concentration test results unreliable, this court must reverse the district court's finding that Intoxilyzer 5000EN breath alcohol concentration test results are reliable and admissible. In the alternative, because the district court did not articulate or apply the correct standard for admissibility of such evidence, this court must at a minimum reverse the district court's order and remand with instructions that the district court apply the correct standard.

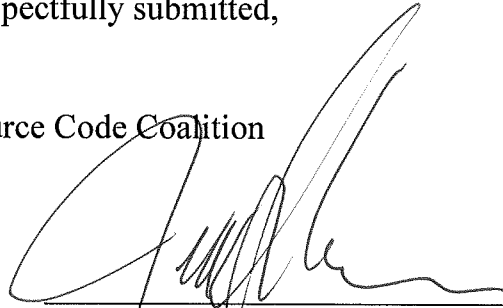
Additionally, this court should reverse the district court's order that evidence of errors in the computer source code that affect the results of breath alcohol concentration test results is never admissible as this ruling violates due process and the right to a fair trial. Finally, this court should reverse the district court's order that unreliable evidence of a deficient sample in certain cases may become admissible if other evidence supports the sample being deficient because unreliable evidence is never admissible.

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Respectfully submitted,

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