

IN THE COURT OF CRIMINAL APPEALS OF TENNESSEE
AT NASHVILLE
July 15, 2015 Session

STATE OF TENNESSEE v. JON MICHAEL JOHNSON

**Appeal from the Criminal Court for Davidson County
No. 2012-B-1415 Amanda McClendon, Judge¹**

No. M2014-01834-CCA-R3-CD – Filed October 21, 2015

Pursuant to Rule 37(b) of the Tennessee Rules of Criminal Procedure, the defendant, Jon Michael Johnson, who pleaded guilty to one count of driving under the influence (“DUI”), appeals two related certified questions of law relative to the validity of the instrument used to measure his blood alcohol level following his arrest. Because neither of the certified questions presented is dispositive of the defendant’s case, the appeal is dismissed.

Tenn. R. App. P. 3; Appeal Dismissed

JAMES CURWOOD WITT, JR., J., delivered the opinion of the court, in which NORMA MCGEE OGLE and ALAN E. GLENN, JJ., joined.

Kevin McGee (on appeal) and James Brian Lewis (on appeal and at trial), Nashville, Tennessee, for the appellant, Jon Michael Johnson.

Herbert H. Slatery III, Attorney General and Reporter; Clark B. Thornton, Assistant Attorney General; Victor S. Johnson III, District Attorney General; and Rebecca Valiquette, Assistant District Attorney General, for the appellee, State of Tennessee.

OPINION

The Davidson County grand jury charged the defendant with one count of DUI and one count of driving with a blood alcohol level of .08 percent or greater (“DUI per se”). On August 9, 2013, the defendant filed a motion to exclude the results of the breath alcohol test conducted at the time of his arrest, arguing that “[t]he Tennessee Bureau of Investigation breath test calibration system is not valid science. Therefore, it is

¹ Judge Mark Fishburn issued the ruling denying the defendant’s motion to suppress the results of the blood alcohol testing in this case, which ruling occasioned the certified questions in this case. Following Judge Fishburn’s ruling, this misdemeanor DUI case was transferred to Judge McClendon.

unreliable evidence.” The issue raised in the defendant’s motion was identical to that presented in similar motions filed by 12 other defendants. The trial court consolidated the motions for the purpose of holding a single pretrial hearing on the issue.

The trial court conducted a hearing on the consolidated motions on August 29, 2013. As an initial matter, we note that the definition of several terms is crucial to the understanding of the issue presented and the testimony presented at the hearing. Accordingly, we provide the definition of those terms as it was provided by Tennessee Bureau of Investigation (“TBI”) Special Agent and Forensic Scientist Samera Zavaro, supervisor of the “breath alcohol section” of the TBI Crime Laboratory in Nashville, at the hearing on the consolidated motions:

1. “Calibration is when you put a known standard in the instrument and tell it what that standard is, so it’s sort of like retuning the instrument.”
2. “Certification is done by running tests through the instrument and you know the value but you don’t tell the instrument the value and it has to give an answer within [the TBI] tolerance range.”
3. “An accuracy check is by and large the same as a certification test[]; a known standard is run through the instrument, and if it fails the accuracy check . . . then it will not let [the] subject test be performed.” An accuracy check is an “internal standard that runs two tests every Sunday at 11:00, if it’s on. If it’s not on Sunday at 11:00, the next time it comes on and it comes to temperature, it will run those two tests, that accuracy check.”

We also note that the breath test machine at issue in this case is the Intoximeter EC/IR II.

Also, an understanding of the case is enhanced by reviewing the ruling in *State v. Sensing*, the case at the heart of the defendant’s challenge. In *Sensing*, our supreme court, noting that “the results of [breath alcohol] testing where properly performed are generally accepted,” relaxed “the rigorous prerequisites formerly required to authenticate the reliability of the scientific equipment and procedure when they were first employed” and held that it was “no longer necessary for a certified operator of an evidentiary breath testing instrument to know the scientific technology involved in the function of the machine.” *State v. Sensing*, 843 S.W.2d 412, 416 (Tenn. 1992). In place

of the former requirements, the supreme court created a new list of prerequisites for the admission of breath alcohol test results at trial:

We hold that the testing officer must be able to testify (1) that the tests were performed in accordance with the standards and operating procedure promulgated by the forensic services division of the Tennessee Bureau of Investigation, (2) that he was properly certified in accordance with those standards, (3) that the evidentiary breath testing instrument used was certified by the forensic services division, was tested regularly for accuracy and was working properly when the breath test was performed, (4) that the motorist was observed for the requisite 20 minutes prior to the test, and during this period, he did not have foreign matter in his mouth, did not consume any alcoholic beverage, smoke, or regurgitate, (5) evidence that he followed the prescribed operational procedure, (6) identify the printout record offered in evidence as the result of the test given to the person tested.

Id. at 416. The court emphasized that “[t]he breath test result merely creates a rebuttable presumption of intoxication” and that, once the State has satisfied the enumerated prerequisites, “[t]he defense is then free to rebut the State’s evidence by calling witnesses to challenge the accuracy of the particular machine, the qualifications of the operator, and the degree to which established testing procedures were followed.” *Id.*

Agent Zavaro testified that new breath test machines were initially calibrated and certified by the TBI “at a .02, a .05, a .08, a .10[,] and a .20 to show that the instrument is reading in a linear fashion.” The 90-day certification is conducted in person by a TBI agent using a blank sample followed by a single, .082 percent dry-gas standard that is purchased from Intoximeters Incorporated (“Intox”). The weekly accuracy checks also use a single .082 dry-gas standard. The machines are not tested for linearity after their initial calibration and certification. Agent Zavaro explained that the EC/IR II used “an electric chemical cell or a fuel cell” to determine the breath alcohol content and that, according to her training, because “the fuel cells are linear, . . . [the machine] only requires a one-point calibration, and it’s also common knowledge that electrode chemical cells or fuel cells have a linear response.” Agent Zavaro testified that Intox told the TBI that the EC/IR II’s fuel cell technology was linear but admitted that she did not know whether that information had been subjected to peer review, observing only that she knew that information concerning fuel cell linearity was “on Wikipedia.”

Agent Zavaro testified that the TBI did not have a written certification protocol in place at the time of any of the cases at issue, including the defendant's. She said that the agency has since drafted a written protocol that is identical to the unwritten certification protocol that agents were following previously.

Macquorn Forrester, Jr., Intox Chief Executive Officer, testified that he had assisted in the design of the breath testing machines produced by his family's company,² had written the software for the machines, and had written the training manuals. He said that he holds two patents in fuel cell technology. Mr. Forrester testified that the EC/IR II used both electrode chemical, also known as fuel cell, technology and infrared technology. The electrode chemical sensor, or fuel cell, is used to "quantitate the ethanol" while the infrared technology is used to monitor the breath sample as it is given to ensure that the concentration of alcohol increases from the beginning of the sample to the end. Use of the infrared technology in this manner eliminates high breath alcohol readings due to the presence of alcohol in the mouth. He explained fuel cell technology:

[A] fuel cell . . . is a porous, plastic disc about the size of a quarter, and on either side of that disk we have a pressed platinum black, which is a catalyst, and that disk is impregnated with an electrode light, it's an acid . . . and this whole thing is encased, and what happens is when you draw a sample across the cell, if there's alcohol in that sample, the alcohol becomes an energy source, the alcohol is oxidized on the fuel cell surface, hydro genions are created that go through [the] porous disc to the other side of the cell, negative charge on one side of the cell or a positive charge on the other side of the cell, and . . . if you link those two, you'll have electrons flow out of the cell from one side to the other, and that is current, which is what we're measuring. And what's sort of unique and neat about a fuel cell is that the amount of alcohol that you get on the cell is proportionate to the current, and that's why a fuel cell is linear, because essentially what you know is that if you put X amount of alcohol in the cell and you get Y current, if you put two X on, you get two Y current. You put [four] X on, you get four Y current. If you put zero alcohol on, you get zero current.

² Mr. Forrester emphasized that the machines were physically manufactured by a subcontractor called Alca Tech to the specifications set by Intox.

He said that a non-linear reading would indicate the creation of energy, which is “physically impossible” using fuel cell technology. Mr. Forrester testified that “a tremendous amount of testing” and “a tremendous amount of anecdotal information” confirmed that fuel cell-based instruments are linear. He said that Intox had 300,000 instruments in the field running more than 25 million tests a year and that he was “not aware of a single fuel cell that has produced a nonlinear result at any age over” the 20 years that Intox had been manufacturing fuel cell instruments. Mr. Forrester testified that it was the need for linearity that led Intox to switch from infrared technology to fuel cell technology. He said that while age might lessen the fuel cell’s ability to quantify the amount of alcohol, causing it to provide a lower than actual reading, age would not affect the machine’s linearity.

Doctor Jimmy Valentine testified as an expert in analytical chemistry, chemistry, organic chemistry, petrology, spectrometry, thermodynamics, and infrared-based and electric-fuel-cell-based breath testing. He said that multi-point calibration was the generally accepted scientific method for analytical testing because it “shows that a given instrument is responding in a linear fashion over what we call a dynamic range. Any machine that has any type of detector that’s used for analytical testing will have a point in which it no longer responds linear.” Doctor Valentine opined that the data that he had reviewed, which was limited solely to the pleadings filed by the parties, did not show that the EC/IR II could establish linear dynamic range, explaining, “What’s being done here in the State of Tennessee . . . is that a single-point is used to call that calibration on this machine, and that simply goes against all analytical principles that you would attempt to calibrate any machine with a single point.” He emphasized that “the only scientific practice that’s accepted is multi-point calibration.” He said that it would be preferable to calibrate the machine using three points that did not include .08 and then, after calibration, test the machine using a known .08 standard purchased from the National Bureau of Standards. Doctor Valentine also questioned the use of dry-gas standards for testing, noting that it was “a fairly poor simulator of the human lung,” and suggested that the machines should be calibrated every day.

Doctor Valentine testified that in preparation for his testimony, he researched a database of peer-reviewed articles and was unable to find a single article on linearity in fuel cell technology. Doctor Valentine acknowledged that he had also never encountered a fuel cell that became non-linear over time. Additionally, he noted that no breath testing machine need be tested beyond the upper limits of human alcohol tolerance. He said that quality control testing performed by the manufacturer established that the machines were linear when they left the company.

Michael G. Link, who was declared an expert in “repair, calibration[,] and . . . follow-up testing,” testified that single-point calibration was not an accepted practice

in the scientific community or in the field of regulatory testing. He said that if the EC/IR II is not capable of multi-point calibration, it should be subjected to multi-point accuracy checks. He noted that, if he “were designing a test protocol,” he would test the machine for accuracy at the breath alcohol levels that trigger criminal violations. He stated that fuel cells contained electronics that were “very, very touchy,” and they should be tested regularly to ensure that they are not being affected by being inside the squad cars. He said that the machines should be calibrated and subjected to a multi-point accuracy check any time they are sent for repairs or subjected to a software change. Mr. Link said that he had observed non-linearity in a fuel cell instrument, but he had no familiarity with any breath testing machine.

At the conclusion of the hearing on the defendants’ motion, the trial court took the motion under advisement. In its written order denying the defendants’ motion, the trial court provided a thorough statement of facts but made no actual findings of facts. Citing *State v. Cook*, 9 S.W.3d 98, 103 (Tenn. 1999), the court observed generally that “pretrial motions to suppress evidence address themselves to the preclusion of evidence illegally seized, whereas trial objections are intended to address whether the prosecution has laid the proper foundation for the admission of the evidence,” and, citing *State v. Conway*, 77 S.W.3d 213, 219 (Tenn. Crim. App. 2001), observed specifically that the court should examine “only . . . the evidence presented at trial to determine if the foundational requirements of *State v. Sensing*, 843 S.W.2d 412 (Tenn. 1992), had been met.” Although the trial court denied the motion, the court did not rule that the State would be permitted to use the breath test results at trial. Instead, the court determined that “the breath test results in all of these cases is admissible, *assuming that the threshold requirements of Sensing are met at trial*, notwithstanding the possible merits of the defendants’ contentions.” (emphasis added). Finally, the court concluded that “the evidentiary foundation established in *Sensing* remains the standard for the admissibility of breath test results with the trier of fact assigned the responsibility to determine the weight to be given to such evidence.”

Following the trial court’s denial of the motion to suppress, the defendant moved the court to exclude the breath test results as unreliable under the rules of evidence. The defendant argued that *Sensing* did not control admissibility of the breath test results in this case because the machine at issue in *Sensing* was not the EC/IR II and because *Sensing* predated the rulings in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and *McDaniel v. CSX Transportation, Inc.*, 955 S.W.2d 257 (Tenn. 1997), which dealt with the admissibility of scientific evidence under Evidence Rule 702. The trial court denied the motion, noting that in *State v. Edison*, 9 S.W.3d 75 (Tenn. 1999), which post-dated both *Daubert* and *McDaniel*, our supreme court concluded that if the State can establish the *Sensing* prerequisites by a preponderance of the evidence, a

trial court “should admit” the results of breath alcohol testing without making any findings under Evidence Rule 702.

After the trial court denied that motion, the defendant moved the trial court to allow an interlocutory appeal pursuant to Rule 9 of the Tennessee Rules of Appellate Procedure. The trial court denied the motion. Thereafter, the defendant’s case, along with the other consolidated DUI cases, were transferred from Judge Mark Fishburn to Judge Amanda McClendon.

On August 21, 2014, the defendant pleaded guilty to a charge of DUI per se. Pursuant to the plea agreement between the parties, the State dismissed the alternative DUI charge and a charge of resisting arrest, and the defendant reserved the following certified questions of law that were incorporated by reference into the judgment:

(1). Whether the trial court erred in refusing to suppress the Defendant’s BAC, pursuant to the requirement mandated in State v. Sensing, 843 S.W.2d 412 (Tenn. 1992), that “the evidentiary breath testing instrument was certified by the forensic services division, was tested regularly for accuracy and was working properly when the breath test was performed.” The State contends that the standards and procedures used by the T.B.I. in this matter fully complied with the Sensing requirements. The Defense contends that the standards and procedures used by the T.B.I failed the Sensing requirements because the Defense contends that the T.B.I. failed to certify the scientific linearity of the EC-IR II, and therefore failed to properly certify the EC-IR II machine in question and failed to properly test the machine for accuracy at the time in which it was used.

(2). Whether the trial court erred in refusing to suppress the Defendant’s BAC pursuant to its gate-keeping function to preclude the admission of unreliable evidence.

The agreed order specifies that the parties and the court agreed that the questions are dispositive of the case.

As in any other appeal before this court, our first concern is whether this court is authorized to hear the case. Jurisdiction to hear a direct appeal following a guilty plea generally must be predicated upon the provisions for reserving a certified question of

law. Tennessee Rule of Criminal Procedure 37(b), which, as is applicable in this case, provides that a defendant

may appeal from any judgment of conviction . . . on a plea of guilty . . . if . . . the defendant entered into a plea agreement under Rule 11(c) but explicitly reserve[s]—with the consent of the state and of the court—the right to appeal a certified question of law that is dispositive of the case.

Tenn. R. Crim. P. 37(b)(2)(A). To perfect an appeal of a certified question under these circumstances, the following requirements must be met:

(i) the judgment of conviction or order reserving the certified question that is filed before the notice of appeal is filed contains a statement of the certified question of law that the defendant reserved for appellate review;

(ii) the question of law as stated in the judgment or order reserving the certified question identifies clearly the scope and limits of the legal issue reserved;

(iii) the judgment or order reserving the certified question reflects that the certified question was expressly reserved with the consent of the state and the trial court; and

(iv) the judgment or order reserving the certified question reflects that the defendant, the state, and the trial court are of the opinion that the certified question is dispositive of the case[.]

Tenn. R. Crim. P. 37(b)(2)(A)(i)-(iv). In light of the dispensatory nature of a certified question appeal, our supreme court firmly rejected a rule of substantial compliance, *see State v. Armstrong*, 126 S.W.3d 908, 912 (Tenn. 2003), and instead demanded strict adherence to Rule 37(b), *see State v. Pendergrass*, 937 S.W.2d 834, 836-37 (Tenn. 1996). Because a basic requirement for a certified question appeal is that the question actually be dispositive of the case, “the reviewing court must make an independent determination that the certified question is dispositive.” *State v. Dailey*, 235 S.W.3d 131, 135 (Tenn. 2007).

In this case, although the trial court denied the defendant’s motions, the court did not rule that the breath test results would be admissible at the defendant’s trial.

Instead, the court deferred any ruling on the admissibility of the evidence, concluding that, so long as the State could establish the *Sensing* prerequisites *at trial* by a preponderance of the evidence, the breath test results would be admissible. Indeed, the court noted serious misgivings about the State's ability to satisfy the *Sensing* requirements in light of the evidence offered at the hearing but nevertheless concluded that the issue was one to be addressed at trial. Because the court's ruling neither admitted nor excluded evidence, it was not a final determination of the merits of the defendant's claim, and, as such is not dispositive. The court's conclusion that *Sensing* governed the admissibility of the breath test results was not dispositive of the case based on established case law.

Similarly, the court's refusal to suppress the breath test results prior to trial in its role as evidentiary gatekeeper was not dispositive. The court reiterated that *Sensing* governs the admissibility of the breath test results and that, if the State could satisfy the *Sensing* requirements, the results would be admissible. If the State so chose, it could pursue admission of the evidence via Evidence Rules 701 and 702. That method of introduction would require the presentation of expert testimony. As this court has previously explained,

Our view is that if the [S]tate complies with the requirements of *Sensing*, it is entitled to the presumption that the test results are reliable and the results may be admitted into evidence without the benefit of an expert. If not, the [S]tate may still use traditional rules of evidence to lay the foundation for admitting the evidence but there is no presumption of reliability.

State v. Deloit, 964 S.W.2d 909, 913 (Tenn. Crim. App. 1997).

Again, the orders denying the two motions in this case do not contain any factual findings and do not constitute a ruling on the merits of the defendant's challenge to the admissibility of the breath test results. In consequence, neither of the certified questions is dispositive of the case, and the appeal must be dismissed.

JAMES CURWOOD WITT, JR., JUDGE