

IN THE COURT OF CRIMINAL APPEALS OF TENNESSEE  
AT NASHVILLE  
February 12, 2002 Session

**STATE OF TENNESSEE v. ROBERT S. NEAL**

**Appeal from the Criminal Court for Putnam County  
No. 99-0307 Leon Burns, Jr., Judge**

---

**No. M2001-00441-CCA-R3-CD - Filed December 19, 2002**

---

The defendant, Robert S. Neal, appeals as of right his convictions by a Putnam County jury of vehicular homicide, reckless endangerment, and child endangerment. He contends (1) that the evidence is insufficient to sustain his convictions, (2) that the trial court erroneously admitted laboratory test results regarding the presence of cocaine in his body, (3) that a Tennessee Bureau of Investigation (TBI) forensic scientist was not qualified to testify about the metabolism of cocaine, and (4) that his sentence is excessive. We merge the two child endangerment convictions pursuant to the Double Jeopardy Clause and affirm the judgments of conviction in all other respects.

**Tenn. R. App. P. 3 Appeal as of Right; Judgments of the Criminal Court Affirmed in Part,  
Modified in Part**

JOSEPH M. TIPTON, J., delivered the opinion of the court, in which JOHN EVERETT WILLIAMS and ALAN E. GLENN, JJ. joined.

Michael R. Giaimo and J. Steve Daniels (at trial), Livingston, Tennessee, for the appellant, Robert S. Neal.

Paul G. Summers, Attorney General and Reporter; Kim R. Helper, Assistant Attorney General; William Edward Gibson, District Attorney General; and Benjamin W. Fann and John A. Moore, Assistant District Attorneys General, for the appellee, State of Tennessee.

**OPINION**

This case arises from a wreck on May 15, 1999, in which the defendant's van crossed the center line of Highway 62 and struck a pickup truck, killing the victim, Jimmy Allen Morgan. The nine- and five-year-old sons of the defendant's girlfriend were riding with the defendant and sustained minor injuries. The jury convicted the defendant of vehicular homicide by intoxication, a Class B felony, for the death of the victim. It convicted him of reckless endangerment, a Class E felony, with regard to the nine-year-old boy and two counts of child endangerment, a Class A misdemeanor, for both children in the van. The trial court sentenced him as a Range I standard

offender to concurrent sentences of nine years for the vehicular homicide conviction, one year for the felony reckless endangerment conviction, and eleven months twenty-nine days for each count of child endangerment to be served in incarceration. The defendant also received \$1,000 fines for the child endangerment convictions.

Tonya Lynn Morgan, the victim's wife, testified that on May 15, 1999, the victim was twenty-nine years old and had no physical problems that would have impaired his driving. She said that the victim went to work that morning.

Janet Leigh Guillory, a nurse, testified that on May 15, 1999, she was driving east on Highway 62 behind a pickup truck. She was going around fifty-five miles per hour when suddenly the truck exploded. A van twirled around twice then came in front of her in the ditch beside the road. She almost hit the van but was able to stop. She said that the wreck occurred in the eastbound lane and that the truck never left its lane. She ran over to the van but could not open the front passenger-side door. She opened the rear door and saw an eight- or nine-year-old boy and an unconscious man. She said the boy was crying and saying "My brother." She saw another little boy lying in the floorboard. She said that she did not pay attention to whether the van's occupants were wearing seatbelts but that she believed the second boy was not wearing one because of his location in the floorboard. She ran to the pickup truck but its occupant was not moving and did not respond to her calls so she returned to the van. A couple in a blue truck arrived on the scene, and she asked the man to call an ambulance. She thought that the Emergency Medical Technicians (EMTs) arrived before the police. She agreed that it became chaotic due to the number of people at the scene.

Tommy Joe Swafford testified that between 1:00 and 1:30 p.m. on May 15, 1999, he was traveling west on Highway 62. Three or four miles past the intersection of Highway 127 and Highway 62, a bluish-gray van going fairly fast passed him on a double yellow line. He said that he was going fifty to fifty-five miles per hour and that the van was going sixty-five to seventy miles per hour. He acknowledged that when the van passed him, it did not make him swerve. He said that he noticed nothing erratic about the van's movements other than its passing him in the no-passing zone and its excessive speed. As the van passed him, he saw a little boy in the front seat. The van's window was down, the wind was catching the boy's hair, and the boy had his arms up on the door. He said that the little boy was not reaching outside the window and that the little boy did not have a significant portion of his torso outside of the window. He said that he could not tell if the van's occupants were wearing seatbelts. He saw the van pass two other vehicles ahead of him, but he could not tell if the van was in a no-passing zone at that time. He said that this part of the road was straight but contained hills and dips. He agreed that the van did not nearly hit these other vehicles or make them swerve.

Mr. Swafford testified that about ten minutes after the van passed him, he came upon the van at the scene of a collision. He ran to the van and then to a pickup truck. He said that the person in the pickup was trapped and that there was nothing he could do for him. He said that he returned to the van and tried to remove the little boy from the front seat but that the door was jammed. He opened the back door and a second little boy, who was not hurt, got out. He said that if the second

boy had been wearing a seatbelt, he had already removed it when Mr. Swafford opened the door. He said that he leaned the front seat back and pulled the first little boy over the seat and out of the van. He said that he did not remember whether the first boy was wearing a seatbelt.

Betsy Pauline Spurlock, a paramedic with Putnam County Emergency Medical Services, testified that at 2:35 p.m. on May 15, 1999, she and her partner Millard Deberry were dispatched to a wreck with injuries on Highway 62. When she arrived, she saw a truck and a van both with damage. The defendant's lower extremities were pinned under the van's pedals. Two boys, ages five and nine, were conscious and on the side of the road when she approached the van. She gave emergency treatment to the defendant, who was complaining of pain in his left leg, his upper right chest, and his right arm. She asked if he took illegal drugs or alcohol, and she said that the defendant told her that he had smoked crack cocaine about three hours before the accident. She said that the defendant denied using alcohol, that she saw no alcohol containers in the van, and that she did not smell any intoxicating substance when she spoke with the defendant. She characterized the defendant as awake, fairly alert, and in a lot of pain from a fractured femur. She said that he did not remember what had happened in the wreck and that he was irritable and cursing because they were hurting him as they tried to help him. She said that it was not unusual for people with serious injuries to be irritable. She said that his pupils were very noticeably constricted. She agreed that constricted pupils can result from numerous causes, including blunt trauma.

Trooper Michael Lee Hamilton of the Tennessee Highway Patrol testified that on May 15, 1999, he was at a convenience mart when a man drove up and told him of a serious wreck on Highway 62. While en route to the wreck, the dispatcher also advised him of it. He arrived on the scene at 2:43 p.m. and saw paramedic Betsy Spurlock and other paramedics working on the people in a van. Ms. Spurlock told him that the victim in the pickup truck was dead. He saw a partially consumed soft drink between the victim's legs. He watched Dr. Sullivan Smith draw a blood sample from the victim's heart, and he took custody of the victim's blood sample. He said that when he arrived, the children were out of the van and that the younger child was lying on the ground and his face was bloody. He said that the older child was fairly calm and no one was attending to him. He spoke briefly with the defendant, who had been driving the van, but he was not able to determine the defendant's mental condition because he did not want to interfere with the paramedics' extracting the defendant from the van. He said that he was about four feet away from the defendant but that he was not close enough to determine whether the defendant had alcohol on his breath. He acknowledged that he saw no alcohol containers in the van.

Trooper Hamilton, who had been trained in accident scene investigation, testified that he assisted Trooper Barnwell with some of the measurements at the scene. He said that the pickup truck had been coming down a hill in the eastbound lane, which is on the south side of the highway. He said that the van came to rest at the top of the hill on the same side of the highway as the truck. He saw a gouge mark in the eastbound lane two feet from the white fogline and close to the truck. Based upon his training, he said that the gouge mark showed that the collision occurred on the eastbound side of the highway next to the fogline and that the impact caused significant downward force on the truck, creating the gouge mark. The road bore skid marks in a swirling pattern from the

point of impact to the van, which came to rest in the ditch on the south side of the highway. The major point of impact on the van was just behind the front wheel and most of the damage was on the front and the driver's side. He said that the van's seatbelts had not been torn.

Trooper Blaine Edward Barnwell of the Tennessee Highway Patrol testified as a certified accident reconstructionist. He said that around 2:45 p.m. on May 15, 1999, he arrived at the scene of a wreck on Highway 62. Two vehicles, a 1994 Chevrolet pickup truck and a 1994 Mazda van, were involved in the collision. He said that the pickup had been traveling east and the van west on Highway 62. He said that from the angle of the impact, he determined that the van had crossed into the eastbound lane and struck the left front portion of the pickup. He saw no gouge or skid marks in the westbound lane. He said that the pickup truck had left the road in an attempt to avoid the van. He stated that upon impact, the left front tire of the pickup made a gouge mark in the eastbound lane and that the pickup traveled backward one and one-half feet and swivelled to the side. He said that the van created no skid marks while traveling to the point of impact and that upon impact, it careened off the pickup and traveled 121 feet and 4 inches. He said that the van's left front wheel had extreme damage.

Trooper Barnwell testified that he could not determine the reason that the van crossed over the double yellow line into the eastbound lane. He said that in investigating accidents, he had learned of drivers crossing into oncoming traffic and striking another vehicle because the drivers were intoxicated, had spilled coffee or food, dropped a cigarette, had a flat tire, had a wheel run off the road, or fallen asleep. He stated that no lawful reason existed for the defendant to be in the eastbound lane at the time of the collision and that vehicles could not pass at that point on the road. He stated that the absence of skid marks from the van before the impact could mean that the defendant was so drunk that he could not respond, that he did not realize that he was about to hit another vehicle, or that he was asleep and did not have control over the van.

Dr. Sullivan Smith, Putnam County Medical Examiner, testified that on May 15, 1999, the Tennessee Highway Patrol requested he respond to a traffic fatality. As he arrived, emergency personnel were removing the defendant from a van onto a backboard. He knew the defendant from working with him at the hospital and spoke with the defendant. The defendant was cursing but settled down after Dr. Smith told him that the emergency personnel were trying to help him. Dr. Smith said that he was concerned that the defendant was under the influence of something based upon the way that the defendant was reacting to his environment. He said that he noticed the odor of alcohol at one point but that he did not know if it came from the defendant. He said that he did not examine the defendant in detail because he did not want to delay the defendant's trip to a trauma center. Dr. Smith testified that the victim was dead when he arrived on the scene and that the victim died from multiple injuries from the wreck.

Dr. Smith testified that cocaine has varied effects on the central nervous system including euphoria, delirium, paranoia, agitation, seizures, hallucinations, coma, rapid heart rate, high blood pressure, and sweating. He said that the amount of time that cocaine remains in the body depends upon the amount ingested and the history of the person ingesting it. He stated that one standard text

in emergency medicine stated that the effects of cocaine upon the average person begin within thirty minutes of ingestion and last for one to three hours.

Criminal Investigator Troy Human of the Tennessee Highway Patrol testified that on May 15, 1999, he was an off-duty state trooper and was traveling on Highway 62. He came upon the scene of a wreck and offered to assist. He said that a metal tube containing a small metal screen filter and residue was found on the ground about two feet from the driver's side door of the defendant's van. He said that he believed the tube was an improvised crack pipe because it was blackened. He took the tube to the TBI crime laboratory in Nashville. He said that he saw no distinguishable fingerprints on the tube to lift and use for comparison purposes. He acknowledged that he had no way of knowing to whom the tube belonged or when it was last used. He admitted that several people were assisting the defendant in the area where he found the tube.

Jonathan Dooley Jackson, a patient care technician at Erlanger Medical Center, identified his signature on the defendant's blood alcohol kit. Although he did not remember assisting with the defendant, he said that his signature on the kit meant that he either drew the defendant's blood or watched a doctor draw it. He said the kit states the requesting officer was David McVey. Trooper Charles David McVey of the Tennessee Highway Patrol testified that on May 15, 1999, he went to Erlanger Medical Center to receive a blood sample from a subject being flown there by Life Force. He received the blood sample, secured it in a box, and mailed it to the TBI crime laboratory in Chattanooga.

Edward Lewis Kuykendall, a forensic scientist for the TBI crime laboratory, testified that he analyzes blood, body fluids, or tissue for the presence of alcohol, drugs, or poisons. He explained that he tests samples using gas chromatography, which divides a mixture into its components and allows him to identify the type and quantity of each of the components. With this type of testing, he chemically extracts any drugs from a blood sample and then performs a screen to determine which classes of drugs are present. He said that the victim's blood sample was negative for all classes of drugs.

Mr. Kuykendall testified that he tested the defendant's blood sample and found cocaine and ecgonine methyl ester, a metabolite of cocaine. He testified that when the human body breaks down cocaine, one of the components is ecgonine methyl ester. He said that he did not quantify the amount of the ester, which is not an active metabolite, in the defendant's blood sample. He said that the defendant's blood sample contained less than .05 micrograms per milliliter of cocaine. He said that a microgram is one millionth of a gram. He stated that when cocaine is present at levels less than .05 micrograms per milliliter, it is the policy of his laboratory not to attempt to determine the exact amount of cocaine because of the immense amount of work involved. He explained that when he arrives at a test result, he must be able to reproduce that number every time he tests that sample. He said that once the level drops below .05 micrograms per milliliter, it becomes increasingly harder to attain reproducible numbers in the test results. He said that the difference in the effects of .01 to .04 micrograms per milliliter of cocaine on the body is negligible. He said that there was no

substantial reason to try to achieve an exact quantity below .05 micrograms per milliliter. He said that the defendant's blood sample was negative for other classes of drugs.

On cross-examination, Mr. Kuykendall testified that according to his notes, the actual quantity of cocaine in the defendant's sample was .01 micrograms per milliliter. He agreed that the potential for error was greater when dealing with numbers that small. He said that although humans metabolize cocaine in the same way, the rate at which an individual metabolizes cocaine varies based upon the amount of cocaine consumed and other factors.

Mr. Kuykendall testified that he had received training on the rates at which cocaine dissipates from the human body. He said that once consumed, cocaine begins to break down very quickly and the person quickly reaches a high or euphoria depending upon the method in which the cocaine is consumed. He stated that smoking cocaine is probably the fastest way to achieve a high. He said that for the average person taking one dose of cocaine, the amount of cocaine in the body will be reduced by half one hour after the cocaine reaches its peak effect. He said that one hour later, the cocaine will have again reduced by half and that it will continue to reduce by half each hour until it is gone. He agreed that the dissipation rate varies with the individual's metabolism of the cocaine. He acknowledged that traces of cocaine and cocaine metabolites could be found in the body, but not necessarily the blood, of the average person using cocaine for three to five days after it was consumed. He said that urine is the last location that cocaine can be detected before it dissipates from the body. He said that he had personally observed traces of cocaine in urine samples one or two days after consumption but that he had read about traces of cocaine in urine for up to five days after consumption.

Mr. Kuykendall testified that he did not consider an amount of cocaine quantified at less than .05 micrograms per milliliter to be a trace amount. He said that he characterized a trace of cocaine as an amount too small to have an effect on the person. He said that levels of cocaine from .05 to .01 micrograms per milliliter can still have an effect on the human body and could impair driving. He agreed that the effect that cocaine has on a person varies with the individual and that a level higher than .05 micrograms per milliliter might not impair driving. He said that although the defendant's blood sample was drawn on May 15, 1999, it was not tested until August 10, 1999. He said that the cocaine in the defendant's blood sample continued to break down until it was tested and that the level of cocaine would have been much higher at the time the sample was drawn. He stated that he had no doubt that the defendant's blood sample contained cocaine.

Glenn Everett, a forensic scientist for the TBI crime laboratory, testified that a pipe found at the scene of the wreck involving the defendant contained cocaine. He said that although the pipe had been used to smoke cocaine, he could not tell the last time it had been used or to whom it belonged.

Anna Davis, a health information manager at Erlanger Medical Center, testified that a laboratory report contained in the defendant's file revealed that a drug screen was conducted on the defendant at 5:40 p.m. on May 15, 1999. She stated that the report shows that the test was positive

for cocaine but negative for other drugs. She acknowledged that she could not interpret the laboratory report, tell how much cocaine was in the defendant's system at the time of the wreck, or describe the effects that cocaine would have on the defendant.

Agent Frankie Floyd of the Criminal Investigations Division of the Tennessee Department of Safety, testified that on May 19, 1999, he met with the defendant in his hospital room at Erlanger Medical Center in Chattanooga, Tennessee. He said that he identified himself to the defendant and his grandmother and told the defendant that he did not have to talk with him and that he was not under arrest. He said the defendant agreed to talk with him, saying that he had nothing to hide. He said that the defendant told him the following about the events surrounding the wreck: The defendant and his girlfriend had a drug problem, it cost them as much as \$900 per day, and it had ruined the defendant's life. The defendant said that he had not used any drugs or alcohol on the day of the wreck but that he had smoked a lot of cocaine late Tuesday night or early Wednesday morning during the week of the wreck. On Wednesday morning, the defendant was required to take a surprise drug test at work and he tested positive for cocaine. The defendant and his girlfriend had lost their house in Cookeville and were moving to Jamestown. The defendant said that before the wreck, he and his girlfriend's sons had gone to Jamestown looking for a U-Haul truck in which they could move their possessions. No U-Haul trucks were available, so they went to the defendant's grandmother's house and then to the school that the boys would attend in the fall. The defendant said that he did not remember passing anyone on the way home or anything about the wreck. The next thing the defendant remembered was the pain he felt while in an ambulance en route to the helicopter. The defendant said that he had not slept in twenty-four to thirty-six hours at the time of the wreck because he was distraught that he had lost everything. The defendant said that he believed that he had fallen asleep just before the collision. The defendant said that the pipe found near his van was his, that he had misplaced it, and that it had been knocked out of the van as a result of the wreck.

The defendant testified that he worked as an x-ray technologist for Dr. Doug Smith and that before that he worked as a mobile technologist taking offsite x-rays for Cookeville Regional Medical Center. He said that in January 1999, he was around the wrong crowd and began smoking cocaine. He said that he would use cocaine every third or fourth day and that it would cost between \$50 and \$200 per use. He stated that when he smoked cocaine, he would get an instant feeling of being without problems that would last for fifteen to twenty minutes. Then he would have a down period of fifteen minutes to an hour.

The defendant testified that he last used cocaine on May 12, 1999, before 1:00 a.m. He said that he and his girlfriend, Mary Jo Bunch, were doing cocaine but that the cocaine did not have an effect on him at that time. He said that they decided to give up cocaine together. He said that he was in terrible financial shape as a result of his drug use, that he worried about it all of the time, and that he could not sleep. He said that he went to sleep one and one-half hours after they decided to quit using cocaine and awoke on that Wednesday morning at 6:00 or 6:30 a.m. He said that he did not go to work that day. He called his grandmother, Ruth Owens, and they made the decision that he, Ms. Bunch, and Ms. Bunch's four children would move from Cookeville to get away from that

environment. He decided to move to Jamestown to be near his grandmother who had raised him. Wednesday evening, he went to Jamestown to talk with his grandmother, who agreed to help with the move. He said that he spent the night at his grandmother's house, went to bed around 10:30 p.m., and got up around 6:30 a.m. He said that he returned to Cookeville on Thursday afternoon and that Ms. Bunch had already started packing. He said that they packed on Thursday and Friday, going to bed around 11:30 p.m. or midnight and awakening between 6:30 and 7:00 a.m. He denied smoking any cocaine or having any money with which to buy cocaine on Wednesday through Saturday, the day of the collision.

The defendant testified that between 10:30 and 11:00 a.m. on Saturday, May 15, 1999, he left for Jamestown to rent a U-Haul truck. He said that Ms. Bunch's sons, Justin Vanatta and Richard Bunch, went with him. He said they arrived in Jamestown around 11:00 or 11:15 a.m. but that no U-Hauls were available. He said that they went to his grandmother's house, ate lunch, and talked about the move. He said that around 1:15 or 1:30, they went to the elementary school that the boys would attend in the fall and looked around. He said that they left for Cookeville at 2:15 p.m., that Richard was riding in the front passenger seat, and that both boys had on their seatbelts. He said that he had not smoked any cocaine that day and that he did not have any with him. He said that he stopped at a market to get a snack for the boys who waited in the car for him. He said that he turned onto Highway 62 and that the next thing he remembered was excruciating pain in his left leg. He said that he did not remember Richard leaning or waiving out the window. He said that Richard would have been able to put his arms out of the window although his seatbelt was fastened.

The defendant testified that after the wreck, Justin was shaking him and calling his name. He could move very little, was confused, and recalled hearing a multitude of voices. He said that he could reach over and touch the top of Richard's head. He said that the emergency personnel nipped his leg when they cut him out of the van. He recalled being asked if he had used any drugs and that he had responded that he had used drugs three days ago. He said that he was taken by ambulance to a helicopter. He said that he was not feeling the effects of cocaine that day but was feeling tired and worried about the move and his finances. He said he did not know if the pipe found at the scene was his but that he had lost a pipe.

On cross-examination, the defendant testified that although he went to bed on the nights before the wreck, he did not sleep well. He said that he was fired from his job at Cookeville General Hospital on the Friday before the wreck but that he already had another job lined up in Jamestown.

Mary Jo Bunch testified that she had been the defendant's girlfriend for almost three years and that the defendant had been like a father to her four children. She said that at one point, she and the defendant had a cocaine habit. She said that they had gotten in bad financial shape and felt like the cocaine was ruining their lives. She said that they had used cocaine thirty minutes to one hour before 1:00 a.m. on May 12, 1999. She said that they discussed their cocaine use at that time and decided they were "ready to straighten up." She said that the next day, the defendant's grandmother agreed to help them including providing a place for them to live if they moved to Fentress County. She said that the defendant returned from his grandmother's house on Thursday evening and that

they began packing for the move. She said they went to bed around 11:30 p.m. or midnight, awoke at 7:00 or 7:30 a.m., and packed all day Friday until 11:30 p.m. or midnight. She said that on Saturday, the defendant took her two sons with him to get a U-Haul truck. She recalled the defendant telling the boys to buckle their seatbelts like he always did. She said that except for the time the defendant was in Jamestown with his grandmother, he was with her from 1:00 a.m. on Wednesday until he left on Saturday morning and that he did not use cocaine during this time.

On cross-examination, Ms. Bunch testified that she and the defendant had used cocaine almost daily. She said that she did not carry a pipe with her nor keep one in the van. She said that she had never seen a crack pipe in the van and that she had never smoked cocaine while riding in the van but had always smoked it at home. She said that she and the defendant had talked about quitting cocaine a lot before the 12th but had continued to smoke until that day. She admitted that she did not know if the defendant had smoked cocaine after he left her on the 15th but said that she did not think he would.

Justin Vanatta testified that he was ten years old, that Mary Jo Bunch was his mother, and that he had lived with the defendant. He said that on the day of the accident, he and his brother Richard went with the defendant to Jamestown to rent a U-Haul truck. The defendant allowed him to ride in the front passenger seat on the way there and Richard to ride in the front on the way back. He said that they wore their seatbelts on the way there. No U-Hauls were available, and they went to visit the defendant's grandmother who gave them doughnuts and milk. Then they went to see the school that he would be attending. After an one and one-half hours, they fastened their seatbelts and left to go back to Cookeville. They stopped at a store and got something to eat and drink. Justin testified that on the way home, the defendant drove safely and did not speed. He said that he became sleepy and that the defendant told him to lie down. He said that he lay down in the backseat with his seatbelt still fastened. He said that he woke up just before the accident. He said that the defendant was asleep with his head against the driver's side door and was snoring. He said that the steering wheel started spinning, they began turning, and he yelled the defendant's name. He said that upon impact, his seat flipped over on top of him. He said that he hurt his shoulder and bruised his knee but needed only first aid treatment. He said that he unbuckled his seatbelt after the accident. He said that his brother must have slid underneath his seatbelt because he found his brother in the floorboard. He said that he did not remember telling a police officer at the hospital that he was not wearing a seatbelt at the time of the wreck.

Ruth Owens, the defendant's grandmother, testified that she was a registered nurse and had raised the defendant who was like a son to her. She said that before the accident the defendant asked for her help financially and emotionally. She said that she did not know the defendant had a cocaine problem until this time and that she had never noticed him acting peculiar around her. She brought him to her house on Wednesday afternoon and agreed to help him and to give him a place to live if he would move to Jamestown. She said that she took the defendant back to Cookeville the next day and spoke with him every two or three hours after that. She saw the defendant and Ms. Bunch's two sons on Saturday between 12:30 and 1:00 p.m. The defendant told her that there were no U-Haul trucks available in Jamestown, and she offered to help him rent a U-Haul in Cookeville the next day.

They had lunch and then took the boys to see the school they would attend in the fall. She said that she followed the defendant to the school and that he observed all stop signs. She said that the defendant's demeanor on that Wednesday, Thursday, and Saturday was normal. She said that she had never seen the defendant or Ms. Bunch when she thought they were using cocaine.

James Woodford, a chemist performing research on drug and alcohol testing, testified for the defense. He had reviewed the laboratory report from the TBI, which tested the defendant's blood sample for cocaine and a cocaine metabolite using gas chromatology mass spectrometry. He said that this type of test measured the presence of trace amounts of drugs and was not conducted to quantify the amount of cocaine in a person's system. He said that this type of testing is affected by the precision with which the components are measured and by temperature fluctuations. He said that the TBI laboratory report did not tell how much cocaine was in the defendant's blood. He said that the urine test also did not reveal the amount of cocaine in the defendant's blood. He said that neither of these tests revealed whether the subject was under the influence of cocaine or correlated to effect on behavior or ability.

Mr. Woodford testified that he was trained regarding the metabolism of cocaine and the way it leaves the body. He said that based upon his research, if someone had smoked cocaine four to five hours before a blood sample was drawn, he would expect a result substantially greater than .05 micrograms per milliliter. He said that the effects of cocaine vary widely as does the metabolism of cocaine, which can be influenced by the subject's gender, age, race, nationality, liver and blood condition, and background. He said that trace tests can detect cocaine in the body for more than three and one-half days and sometimes for up to thirty days after use. He said that cocaine can be detected in urine for much longer than three and one-half days. He said that the test used by the TBI could detect a tiny amount of cocaine in a person's system three and one-half days after ingestion.

Mr. Woodford disputed the statement that the cocaine in the defendant's blood sample would have been much greater at the time it was drawn than at the time of testing. He said that when cocaine enters the blood, a portion of it binds with the pigmented parts of the blood while the cocaine in the clear part of the blood breaks down. He said that over several months, the cocaine linked to the pigmented part breaks off and can be detected in testing. He concluded that at some point the amount of cocaine in the blood sample was greater than at the time of testing but that he could not say when.

Millard Deberry, an emergency medical technician, testified for the state in rebuttal that on May 15, 1999, he accompanied Betsy Spurlock to the scene of a wreck on Highway 62. When he arrived, the defendant's legs were twisted and pinned under the pedals of his van. He said that he was close to the defendant as they were assisting him but did not detect the odor of an intoxicant on the defendant's breath. He said that although the defendant was irritable, he saw nothing out of the ordinary about the way in which the defendant was dealing with his pain. He said that when they were in the back of the ambulance, the defendant told them he had smoked crack cocaine. He did not recall the defendant saying when he had smoked it.

## I. SUFFICIENCY OF THE EVIDENCE

The defendant contends that the evidence is insufficient to support his convictions for vehicular homicide and child endangerment because the state failed to prove that he was intoxicated at the time of the wreck. He also argues that the evidence does not support his reckless endangerment conviction because the state failed to establish that he placed anyone in actual danger before the collision. Finally, he argues that the trial court failed to perform its duty as the thirteenth juror and, instead, deferred to the jury's findings. The state contends that the evidence is sufficient to support the defendant's convictions and that the trial court properly acted as the thirteenth juror. We agree with the state.

Our standard of review when the sufficiency of the evidence is questioned on appeal is "whether, after viewing the evidence in the light most favorable to the prosecution, any rational trier of fact could have found the essential elements of the crime beyond a reasonable doubt." Jackson v. Virginia, 443 U.S. 307, 319, 99 S. Ct. 2781, 2789 (1979). We do not reweigh the evidence but presume that the jury has resolved all conflicts in the testimony and drawn all reasonable inferences from the evidence in favor of the state. See State v. Sheffield, 676 S.W.2d 542, 547 (Tenn. 1984); State v. Cabbage, 571 S.W.2d 832, 835 (Tenn. 1978). Any questions about the credibility of the witnesses were resolved by the jury. See State v. Bland, 958 S.W.2d 651, 659 (Tenn. 1997).

Vehicular homicide by intoxication is "the reckless killing of another by the operation of an automobile . . . [a]s the proximate result of the driver's intoxication as set forth in § 55-10-401." Tenn. Code Ann. § 39-13-213(a)(2). Section 55-10-401 prohibits, in pertinent part, a person from driving on the public roads and highways while under "the influence of any intoxicant, marijuana, narcotic drug, or drug producing stimulating effects on the central nervous system." Id. § 55-10-401(a)(1); see also § 39-13-213(a)(2) (providing that intoxication for purposes of the vehicular homicide statute includes both alcohol and drug intoxication). One commits Class A misdemeanor child endangerment by violating § 55-10-401 while accompanied by a child under age thirteen. Id. § 55-10-414(1).

In the present case, the evidence reveals that the victim was killed when the defendant's van crossed the center line and struck the victim's pickup truck. The defendant's girlfriend's sons, nine-year-old Justin Vanatta and five-year-old Richard Bunch, were in the van with the defendant at the time of the collision. Viewing the evidence in the light most favorable to the state, the evidence shows that the defendant was intoxicated at the time of the collision. The defendant inexplicably crossed out of his lane of travel and into the opposing lane. Nothing in the record suggests that he was attempting to avoid something on the roadway or that his driving was affected by adverse weather conditions. The defendant admitted that he had a cocaine problem. Paramedic Betsy Spurlock testified that the defendant told her that he had smoked cocaine three hours before the wreck. Dr. Sullivan Smith testified that the effects of cocaine could last for three hours in the average person. He also said that he was concerned that the defendant was intoxicated based upon his behavior at the scene of the wreck. Samples of the defendant's blood and urine taken on the day of the collision tested positive for cocaine. Edward Lewis Kuykendall, a TBI forensic scientist,

testified that the defendant's blood sample contained .01 micrograms per milliliter of cocaine, an amount that could impair a person's driving. Finally, although Mary Jo Bunch testified that she and the defendant did not keep cocaine pipes in the van, an improvised pipe containing cocaine residue was found just outside the driver's side door of the defendant's van after the wreck. The defendant told Agent Frankie Floyd that the pipe was his. This evidence supports the jury's finding that the defendant was intoxicated at the time of the collision. The evidence is sufficient to sustain his convictions for vehicular homicide by intoxication and child endangerment.

Although the defendant does not challenge the fact that he received two child endangerment convictions arising out of the same period of driving, we believe that his convictions for two counts of child endangerment constitute plain error under the circumstances of this case. See Tenn. R. Crim. P. 52(b). In State v. Ramsey, we held that the statute defining reckless endangerment prohibits a course of conduct as opposed to an individual act or result and, therefore, that a single period of reckless driving typically constitutes a single offense even though the driver endangered more than one person. 903 S.W.2d 709, 713 (Tenn. Crim. App. 1995). Similarly, the child endangerment statute prohibits a course of conduct—that of driving while intoxicated and accompanied by a child under age thirteen. See Tenn. Code Ann. § 55-10-414; see also State v. Rhodes, 917 S.W.2d 708, 713 (Tenn. Crim. App. 1995) (holding that driving while under the influence of an intoxicant (DUI) is a continuing offense).

In Ramsey, we focused on the fact that although five people were endangered by the defendant's driving, the driving that endangered the victims was a continuous act:

The evidence indicates that the defendant's loss of control of his vehicle, combined with the speed at which he was driving, were responsible for both his swerving in front of the Triplets and hitting the Story vehicle. Due to the very short distance between the two trucks and the very short amount of time that passed between swerving into the oncoming lane of traffic in front of the Triplets and the crash with Mr. Story, the reckless conduct engaged in by the defendant was one continuous act, a single course of conduct, and therefore supports only one conviction for that act.

903 S.W.2d at 713. We note that Ramsey did not create a “blanket rule that provides that a defendant's continuous operation of a vehicle may only result in one act of reckless endangerment under the statute.” Id. (emphasis in original). Nevertheless, we believe that this case is sufficiently similar to Ramsey to warrant the same result. The defendant endangered Richard Bunch and Justin Vanatta simultaneously as they were both in the van with him. Therefore, we hold that the dual convictions violate the Double Jeopardy Clause and that the finding of guilt for the child endangerment of Justin Vanatta, count six, merges into the conviction for the child endangerment of Richard Bunch, count five. The judgment of conviction for count six is vacated.

Class E felony reckless endangerment is recklessly engaging in “conduct which places or may place another in imminent danger of death or serious bodily injury” and is committed with a deadly weapon. Tenn. Code Ann. § 39-13-103(a)-(b).

‘Reckless’ refers to a person who acts recklessly with respect to circumstances surrounding the conduct or the result of the conduct when the person is aware of but consciously disregards a substantial and unjustifiable risk that the circumstances exist or the result will occur. The risk must be of such a nature and degree that its disregard constitutes a gross deviation from the standard of care that an ordinary person would exercise under all the circumstances as viewed from the accused person’s standpoint.

Id. § 39-11-106(a)(31). A deadly weapon is anything that “in the manner of its use or intended use is capable of causing death or serious bodily injury.” Id. § 39-11-106(a)(5)(B). An automobile can be a deadly weapon. State v. Tate, 912 S.W.2d 785, 787 (Tenn. Crim. App. 1995). The defendant was indicted with two counts of felony reckless endangerment relating to Justin Vanatta and Richard Bunch. The jury convicted the defendant of both counts, which the trial court merged at the sentencing hearing. The judgment for the felony reckless endangerment of Richard Bunch states that this count was “Dismissed/Nolle Prosequi.”

The defendant contends that the state failed to prove that his driving up to the point at which he crossed the center line and collided with the victim placed anyone in danger of death or serious bodily injury. He argues that the testimony of Tommy Joe Swafford, the only witness to testify about his driving before the collision, did not establish that he was driving recklessly. The state contends that the evidence supports the conviction in that Mr. Swafford testified that the defendant traveled at an excessive speed, passed him in a no-passing zone, and then passed two other cars. It argues that the defendant acted recklessly in doing these things while under the influence of cocaine. It also points to Jane Guillory’s testimony that the defendant’s van almost hit her after the defendant had hit the victim. Noting the hilly condition of the road as Mr. Swafford testified, we agree with the state that the evidence that the defendant was traveling at an excessive speed and passing other vehicles while intoxicated would be reckless conduct placing Justin Vanatta in imminent danger of death or serious bodily injury. See State v. Lewis, 978 S.W.2d 558, 565 (Tenn. Crim. App. 1997) (holding that the defendant engaged in reckless conduct by approaching a blind curve at an excessive speed at night after having a couple of drinks); see, e.g., Ramsey, 903 S.W.2d at 712 (concluding that the sober defendant who was speeding despite the hilly and curvy condition of the road acted recklessly). Thus, the evidence is sufficient to support the defendant’s conviction for felony reckless endangerment.

The defendant also contends that the trial court abdicated its duty to reweigh the evidence as the thirteenth juror by deferring completely to the jury’s determinations on the credibility of the witnesses. Rule 33(f), Tenn. R. Crim. P., reinstated the thirteenth juror rule, which requires the trial judge to insure that a jury verdict is based upon satisfactory evidence, including that it be presented

through sufficiently credible witnesses. State v. Nail, 963 S.W.2d 761, 765 (Tenn. Crim. App. 1997). This assessment by the trial judge is a prerequisite to the entry of a valid judgment. Id.; see State v. Burlison, 868 S.W.2d 713, 718 (Tenn. Crim. App. 1993). Absent the proper approval of the verdict by the trial court, a new trial must be granted. Nail, 963 S.W.2d at 765; see State v. Moats, 906 S.W.2d 431, 432, 435-36 (Tenn. 1995). The trial court does not have to state explicitly its approval of the verdict as the thirteenth juror. It may simply overrule the motion for a new trial, thereby allowing the appellate court to presume its approval of the jury's verdict. Moats, 906 S.W.2d at 434. On the other hand, this court may reverse the judgment if "the record contains statements by the trial judge expressing dissatisfaction or disagreement with the weight of the evidence or the jury's verdict, or statements indicating that the trial court absolved itself of its responsibility to act as the thirteenth juror." State v. Carter, 896 S.W.2d 119, 122 (Tenn. 1995); State v. Brown, 53 S.W.3d 264, 274 (Tenn. Crim. App. 2001).

Before ruling on the evidence as the thirteenth juror at the hearing on the motion for new trial, the trial court ruled that the laboratory reports showing the presence of cocaine in the defendant's blood and urine were properly before the jury and that sufficient evidence existed with regard to the defendant's intoxication:

So I think that [the issue of the defendant's intoxication] was a matter for the jury to sort out and the evidence that was presented was competent evidence and proper evidence in this Court's opinion, and I see no reason to grant that motion for a new trial on those grounds. I think there was sufficient evidence to convict [for] the jury.

As the thirteenth juror, in weighing the evidence I believe it was a jury question, as I've said, and I would overrule the judgment of acquittal based on review as the thirteenth juror. That's different than sufficient evidence, but I think there is sufficient evidence and that the evidence presented, in this Court's opinion, a reasonable jury could find evidence of intoxication.

Although the trial court stated that the weighing of the evidence was a jury question, we believe this to be an interjected reference to its previous discussion regarding the admissibility of the laboratory reports and the sufficiency of the evidence of intoxication. In fact, the trial court's next sentence reveals that it recognized the difference between its determination as the thirteenth juror and its ruling on the sufficiency of the evidence. None of the trial court's comments reflect dissatisfaction with the jury's verdicts. We conclude that the trial court performed its duty as the thirteenth juror.

## **II. ADMISSIBILITY OF LABORATORY TESTS**

The defendant contends that the trial court erroneously admitted evidence of two laboratory tests revealing that his blood and urine contained cocaine on the day of the wreck. He argues that this evidence was irrelevant, unfairly prejudicial, failed to assist the jury substantially, and violated

his right to due process under the state and federal constitutions. The state contends that the trial court properly admitted the evidence, which was authorized by statute, relevant and probative of the defendant's being under the influence of cocaine, and scientifically accurate and acceptable. We agree with the state.

The decision to admit evidence, including scientific evidence presented by a party's expert witness, is within the sound discretion of the trial court. Coe v. State, 17 S.W.3d 193, 226-27 (Tenn. 2000); State v. Tizard, 897 S.W.2d 732, 748 (Tenn. Crim. App. 1994). This court will not reverse the trial court's decision on appeal unless the trial court has abused its discretion. Coe, 17 S.W.3d at 226-27; Tizard, 897 S.W.2d at 748.

#### A. Admissibility Pursuant to Statute

We turn first to the state's contention that the blood and urine tests conducted in the present case were authorized by statute. Tenn. Code Ann. § 55-10-407(a) provides that "[u]pon the trial of any person charged with a violation of this chapter, the results of any test made of the person so charged shall be admissible in evidence in a criminal proceeding." (Emphasis added). The state correctly points out that the defendant was charged with two counts of child endangerment, § 55-10-414, which are within the chapter referenced in § 55-10-407(a). Also, the statute proscribing vehicular homicide by intoxication requires the state to prove that the victim's death was "the proximate result of the driver's intoxication as set forth in § 55-10-401." Id. § 39-13-213(a)(2). Section 55-10-401(a)(1), which prohibits a person from driving on the public roads and highways while under "the influence of any intoxicant, marijuana, narcotic drug, or drug producing stimulating effects on the central nervous system," also falls within chapter ten of title fifty-five. Section 55-10-406, which relates to implied consent and the consequences of refusing a blood test, states that the provisions of that section do not affect the admissibility of lawfully obtained blood tests in vehicular homicide cases. Id. § 55-10-406(e). We do not take this section to render § 55-10-407(a) inapplicable to § 55-10-401 when it is charged as an element of vehicular homicide.

The code defines test, as used within § 55-10-407(a), as "any chemical test designed to determine the alcoholic or drug content of the blood" from a breath, blood, or urine specimen. Id. § 55-10-405(5). Although § 55-10-407(a) reveals the legislature's intent that any chemical test be admitted, the test must also be conducted by a qualified individual and "scientifically acceptable and accurate for the purpose that it is being employed." State v. Johnson, 717 S.W.2d 298, 303 (Tenn. Crim. App. 1986) (citing Crawley v. State, 219 Tenn. 707, 715, 413 S.W.2d 370, 373 (Tenn. 1967)). The state contends and the defendant does not contest that Mr. Kuykendall, a forensic toxicologist, was qualified to conduct the gas chromatography test on the defendant's blood sample. Indeed, the record, which reveals that Mr. Kuykendall was trained and experienced in the field of forensic toxicology, supports this conclusion. It is over the second requirement that the state and the defendant diverge. The state argues that the purpose of the test was to detect the presence of certain drugs in the defendant's blood and that it was unquestionably scientifically accurate and acceptable for that purpose. The defendant contends that the state sought to use the tests in question to prove that he was intoxicated, a purpose contradicted by both parties' expert testimony.

Section 55-10-405(5) states that the chemical test must be “designed to determine the alcoholic or drug content of the blood.” We derive what the legislature intended by “content” by looking to the common and ordinary meaning of that word. See *Ki v. State*, 78 S.W.3d 876, 879 (Tenn. 2002). “Content,” as used in this context, means both “a part, element, or complex of parts” and “the amount of specified material contained.” Merriam Webster’s Collegiate Dictionary 250 (10th ed. 1996). The state’s argued purpose fits within the first definition. The gas chromatography test revealed that cocaine and a cocaine metabolite were a part of the defendant’s blood sample. This definition also fits with this court’s statement in dictum that § 55-10-407 relates to chemical tests, “which are performed to determine the amount of alcohol or presence of drugs contained in the defendant’s blood.” State v. Gilbert, 751 S.W.2d 454, 459 (Tenn. Crim. App. 1988) (emphasis added).

Additionally, the test also revealed the amount of cocaine in the defendant’s blood sample. Mr. Kuykendall testified that the gas chromatography test revealed that the defendant’s blood contained less than .05 micrograms per milliliter of cocaine. He said that his notes reflect that the sample actually contained .01 micrograms per milliliter of cocaine but that due to the rigor involved in verifying numbers this small, it was the policy of the TBI laboratory to quantify this amount as less than .05 micrograms per milliliter. Although the defendant characterizes this as Mr. Kuykendall’s inability to arrive at an amount, we believe that he did quantify the cocaine in the defendant’s blood sample.

In any event, Tenn. Code Ann. § 55-10-405(5) establishes that the test does not have to show the effect of alcohol or drugs on the individual, i.e., whether the person is intoxicated. Whether the results of a particular test correlate with intoxication as opposed to drug or alcohol content in the blood goes to the weight of the evidence and not its admissibility. See *Johnson*, 717 S.W.2d at 304 (observing that the medical profession’s lack of unanimity about whether breath tests can measure intoxication goes to the weight of the evidence rather than its admissibility).

#### B. Relevance and Unfair Prejudice

The defendant contends that the laboratory reports address no fact of consequence to the case because they do not show how much cocaine was present in his blood and urine or how a specific amount of cocaine would have affected him in particular. In this respect, he argues that the evidence is speculative in that it invites the jury to guess how much cocaine he had in his system and how it affected his driving ability. He also argues that even if relevant, the little probative value the test results may have is substantially outweighed by the danger of unfair prejudice stemming from asking the jury to guess the amount of cocaine in his system and its effect on him. The state argues that the test results combined with Mr. Kuykendall’s testimony that an amount as small as .01 micrograms per milliliter could impair driving were probative of the defendant’s intoxication at the time of the wreck.

Relevant evidence is evidence that tends to make a material fact more or less probable. Tenn. R. Evid. 401. “Although relevant, evidence may be excluded if its probative value is substantially

outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury, or by considerations of undue delay, waste of time, or needless presentation of cumulative evidence.” Tenn. R. Evid. 403. The crimes of vehicular homicide by intoxication and child endangerment both require the state to prove that the defendant was intoxicated. Tenn. Code Ann. §§ 39-13-213(a)(2), 55-10-414(a). Intoxicating substances include illegal drugs such as cocaine. Id. §§ 39-13-213(a)(2), 55-10-401(1); see also id. §§ 39-17-408(b)(4) (categorizing cocaine and its derivatives as a Schedule II drug), 39-17-418 (possession of a controlled substance without a valid prescription is a criminal offense). The fact that the defendant had cocaine and a cocaine metabolite in his blood at the time of the collision is relevant to his intoxication.

The defendant argues that this court has deemed test results revealing trace amounts of drugs irrelevant to the conduct of the person tested. State v. West, 825 S.W.2d 695, 697 (Tenn. Crim. App. 1992); see also State v. Jim Smith, No. 03-C-01-9312-CR-00398, Knox County (Tenn. Crim. App. July 11, 1994), app. denied (Tenn. Nov. 7, 1994). In West, the defendant sought to use evidence that the deceased victim had .1 micrograms per milliliter of cocaine in his blood to support his claim that the victim was acting in a way that compelled the defendant to shoot him. This court held the test results inadmissible as merely speculative because the witness presenting the cocaine evidence could not testify which of a variety of reactions the victim would have had. West, 825 S.W.2d at 697.

In Smith, the trial court refused to let the defendant introduce evidence of a screen of the deceased victim’s urine revealing a positive result for cocaine metabolites. The doctor who performed the victim’s autopsy stated that the drug screening test was of questionable reliability because no confirmation test was performed. He said that it was the hospital’s policy to conduct a confirmation test before reporting a positive test result because of the possibility of other medications cross-reacting with the screening test and giving a false positive result. This court noted that the defendant did not ask the doctor if the test could reveal when the victim ingested cocaine or if the victim was still under the affects of cocaine at the time of his death. We concluded that the trial court did not abuse its discretion in finding the test unreliable under Rule 703, Tenn. R. Evid. Smith, slip op. at 7-8. This court also noted that when the record is devoid of evidence relating to “when the drug was ingested or when the individual may have been under the drug’s influence, a trace of cocaine may be irrelevant and thus inadmissible.” Smith, slip op. at 7.

Both of these cases are factually distinct from the present case. Here, the jury heard evidence about when the defendant last ingested cocaine. Betsy Spurlock testified that the defendant said he had last smoked cocaine three hours before the wreck. The jury also heard evidence that cocaine could affect an individual for up to three hours and that the amount of cocaine in the defendant’s blood could cause impaired driving. Although Mr. Kuykendall and Mr. Woodford testified that the precise effect cocaine had on the defendant could not be discerned from the test results because individuals respond differently to cocaine, this shortcoming does not appear to be related to this particular test or the small quantity of cocaine in the defendant’s blood.

The defendant also relies on State v. McClain, 525 So. 2d 420 (Fla. 1988), and State v. Albert L. Norton, No. 03C01-9707-CR-00270, Blount County (Tenn. Crim. App. July 20, 1999), cases in

which the court ruled that test results revealing trace amounts of drugs were inadmissible against the defendant. In McClain, the defendant was charged with vehicular manslaughter by intoxication, and his blood test revealed a blood alcohol content of .14 percent and a trace amount of cocaine. A chemist testified that the amount of cocaine was so small that the mass spectrometer could not detect it. Additionally, the chemist could not say whether the presence of a trace of cocaine in the defendant's blood could have affected the defendant's driving. The Florida Supreme Court held that although the unquantifiable amount of cocaine in the defendant's blood was relevant to the defendant's intoxication, its minimal probative value was substantially outweighed by the danger of unfair prejudice. McClain, 525 So. 2d at 421-22.

In Norton, the defendant was charged with second offense DUI. A hospital pharmacy director testified that a laboratory report revealed the presence of less than .01 micrograms per milliliter of cocaine in the defendant's blood sample. The director testified that although the cocaine would have an added effect when combined with the other drugs in the defendant's system, she could not testify to the specific effect of any of the drugs on the defendant. She testified that the effects of the drugs varied from person to person and that a person could operate a car despite having the drugs revealed by the laboratory test in the person's system. In a jury-out hearing, the pharmacy director had also testified that the defendant had 1456 nanograms per milliliter of a cocaine metabolite and that this level was sufficient to have an effect on a person. This court held that evidence of less than .01 micrograms per milliliter of cocaine was relevant and not substantially outweighed by unfair prejudice when viewed in combination with the presence of a meaningful level of a cocaine metabolite. Norton, slip op. at 13. Because the pharmacy director failed to testify before the jury about the cocaine metabolite, this court questioned whether the trial court should have admitted evidence of the presence of cocaine. Id., slip op. at 14. Holding that the defendant had waived the issue by failing to object and that any error was harmless, the court noted that "had cocaine at .1 microgram per milliliter been the only cocaine substance found, the evidence of it might well have been irrelevant under evidence Rule 401 or prohibitively prejudicial under Rule 403." Id.

In the present case, the test results are not unfairly prejudicial or confusing to the jury. Unlike in McClain, the amount of cocaine was quantified at less than .05 and specifically at .01 micrograms per milliliter, which according to Mr. Kuykendall was not a trace amount. Mr. Kuykendall testified that a level of .01 could impair a person's driving, and Dr. Smith testified that cocaine can affect an individual for up to three hours after it is consumed. This testimony allowed the jury to infer without speculation that the presence of cocaine in the defendant's blood sample supported a conclusion that he was driving while intoxicated.

Furthermore, as opposed to Norton, Mr. Kuykendall testified that cocaine was present in the defendant's blood sample in a meaningful level, i.e., in an amount that could affect a person. Although Mr. Kuykendall and Dr. Smith acknowledged that they could not know the precise effects of this amount of cocaine on the defendant, Mr. Kuykendall's testimony that .01 micrograms per milliliter of cocaine could impair driving made the evidence relevant in this case. We also note that a cocaine metabolite was present in the defendant's blood sample, albeit in an unquantified amount. As in Norton, the presence of a meaningful level of cocaine in the present defendant's sample made

the unquantified amount of metabolite relevant. Finally, Agent Floyd, the defendant, the defendant's girlfriend, and the defendant's grandmother all testified about the defendant's cocaine addiction. Trooper Human testified about the improvised cocaine pipe found at the scene. This testimony decreased the potential for unfair prejudice from the test results because the jury was already apprized of the possibility that the defendant had smoked cocaine on the day of the collision. Thus, the trial court did not abuse its discretion in concluding that the probative value of the test results were not substantially outweighed by the danger of unfair prejudice to the defendant.

### C. Scientific Reliability of the Test Results

The defendant also contends that the test results did not substantially assist the jury under Rule 702, Tenn. R. Evid. He argues that the test results are not accepted in the scientific community as reliable evidence of impairment because they do not show how much cocaine was in the defendant's system or how the cocaine would affect him individually. Although he concedes that the test administered reliably indicates the presence of cocaine, he claims that the test was not a reliable means of measuring what it intended to prove, i.e., his intoxication. The state contends the test results were given by a qualified expert and substantially assisted the jury in determining the defendant's intoxication.

"If scientific, technical, or other specialized knowledge will substantially assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise." Tenn. R. Evid. 702. The trial court must exclude expert testimony "in the form of an opinion or inference if the underlying facts or data indicate lack of trustworthiness." Tenn. R. Evid. 703. Determinations concerning the admissibility of expert testimony, including the basis of the expert opinion, are within the discretion of the trial court. State v. Ballard, 855 S.W.2d 557, 562 (Tenn. 1993); see also State v. Hall, 958 S.W.2d 679, 689 (Tenn. 1997). However, the jury determines the weight and credibility of the expert's testimony. State v. Anderson, 880 S.W.2d 720, 732 (Tenn. Crim. App. 1994).

As previously noted, the defendant does not contest and the evidence supports the conclusion that Mr. Kuykendall was qualified by education, training, and experience to testify about the results of the gas chromatography test. Instead, the defendant's challenge focuses on whether the test results substantially assisted the jury because he claims they were scientifically unreliable as proof of his intoxication. Rules 702 and 703

necessarily require a determination as to the scientific validity or reliability of the evidence. Simply put, unless the scientific evidence is valid, it will not substantially assist the trier of fact, nor will its underlying facts and data appear to be trustworthy, but there is no requirement . . . that it be generally accepted [in the scientific community].

McDaniel v. CSX Transp., Inc., 955 S.W.2d 257, 265 (Tenn. 1997). The trial court must “determine whether the reasoning or methodology underlying the scientific evidence is sufficiently valid and reliable, and whether it can properly be applied to the facts at issue.” Id. at 258. In making this assessment, the trial court is not required to choose between “legitimate but conflicting scientific views,” which is the province of the jury. Id. at 265. Instead, it must be satisfied that the expert “opinions are based on relevant scientific methods, processes, and data, and not upon an expert’s mere speculation.” Id. Our supreme court has suggested that the following factors are useful in determining the reliability of scientific evidence:

- (1) whether scientific evidence has been tested and the methodology with which it has been tested;
- (2) whether scientific evidence has been subject to peer review or publication;
- (3) whether a potential rate of error is known;
- (4) whether . . . the evidence is generally accepted in the scientific community; and
- (5) whether an expert’s research in the field had been conducted independent of litigation.

Id.

In the present case, the defendant challenged the admissibility of the laboratory test results before trial, arguing that they would not substantially assist the jury in determining that he was intoxicated and that they failed to meet the requirements of McDaniel. The trial court denied the motion to suppress the results, finding that the defendant’s arguments went to the weight of the evidence and not its admissibility.

The defendant contends that the test results failed to give a specific amount of cocaine or its metabolite that was present in his blood or urine samples. To the contrary, Mr. Kuykendall was able to quantify the amount of cocaine in the defendant’s blood sample as being less than .05 micrograms per milliliter. He explained that it was the TBI laboratory’s policy to report amounts below .05 micrograms per milliliter in this fashion rather than relating a precise number. Nevertheless, he testified that he could discern a specific number from the test and that in this case, his notes reflected that the actual amount was .01 micrograms per milliliter. The defendant is correct that the urine test did not quantify the amount of cocaine or cocaine metabolite and that Mr. Kuykendall did not quantify the amount of cocaine metabolite in the defendant’s blood sample. Although these amounts were not quantified, we note that Mr. Kuykendall did not form an opinion about the defendant’s or the average person’s intoxication based upon the urine test or the cocaine metabolite revealed in the blood test.

The state contends that the defendant's reliance on McDaniel is misplaced because the reliability of the scientific tests were not at issue. Instead, the defendant's complaint centered on whether the test results could be used to show that he was intoxicated at the time of the collision. The defendant in his reply brief concedes "the efficacy of the cocaine screen tests as to their reliability in testing for cocaine." He contends that scientific tests must not only be internally reliable but also be a reliable means of measuring what they intend to prove.

Initially, we note that this court has approved the use of a gas chromatograph to test the alcohol content of the blood. King v. State, 598 S.W.2d 834, 835-36 (Tenn. Crim. App. 1980). Furthermore, the evidence supports the trial court's ruling that the laboratory test was a reliable measure of the cocaine content in the defendant's blood. Mr. Kuykendall testified that the gas chromatograph broke the blood sample into its component parts and told him how much of a particular component existed. Based upon his training of the affects of drugs on the average person, he concluded that the amount of cocaine in the defendant's system could have impaired his driving. Although Mr. Woodford testified that the test used by the TBI was used to detect the presence of certain drugs in the blood rather than the quantity of the drugs, he also testified that he would have expected the amount of cocaine in the defendant's blood to be much higher than less than .05 micrograms per milliliter had the defendant smoked cocaine within five hours of the collision. This testimony reveals that the gas chromatography test did reveal an amount and that amount was linked to how recently the drug was consumed. This testimony does not suggest that the gas chromatography test was an unreliable method for determining the amount of cocaine in the defendant's blood sample.

We agree with the state that the test results relating to the presence of cocaine in the defendant's blood sample substantially assisted the jury. Whether the defendant was intoxicated at the time of the collision was a fact in issue in the case. The presence of .01 micrograms per milliliter of cocaine in the defendant's blood in combination with Mr. Kuykendall's testimony that this amount of cocaine could impair a person's driving substantially assisted the jury in determining whether the defendant was intoxicated. The defendant faults the results for their inability to prove that this amount of cocaine would impair him individually rather than an average person. This court has held that a jury is substantially assisted by evidence that the average person would be impaired by an amount of a drug. Norton, slip op. at 10-11; see also State v. Kenneth Lee Abbott, No. 02C01-9311-CC-00263, Carroll County, slip op. at 5 (Tenn. Crim. App. Jan. 19, 1995), app. denied (Tenn. Dec. 28, 1995) (holding that the officer's observations along with expert testimony about the presence of drugs in the defendant's system and their usual effects justified the jury's finding that the defendant was driving while intoxicated). The trial court did not abuse its discretion in admitting the test results.

#### D. Due Process

Finally, the defendant contends that even if the admission of the laboratory test results does not offend the rules of evidence, it violated his right to the due process of law under the state and federal constitutions. He argues that when the totality of the facts are considered, the introduction

of the non-specific and speculative test results was fundamentally unfair because he could not defend against the unknown. We believe an examination of the totality of the circumstances reveals that the contrary is true. First, the state's expert testified that he did quantify the amount of cocaine in the defendant's blood sample. Second, the record reveals that the defendant thoroughly cross-examined both Mr. Kuykendall and Dr. Smith about the correlation of the test results with actual impairment. Also, he presented his own expert, Mr. Woodford, who listed potential problems with the type of test used, reemphasized that cocaine affects individuals differently, and stated that the amount of cocaine indicated in the test results suggested that the defendant had not ingested the cocaine three hours before the collision. Thus, the defendant did defend against the test results. The fact that the jury accredited the state's evidence over that of the defendant does not mean that his right to due process was violated. The defendant is not entitled to relief on this issue.

### **III. EXPERT TESTIMONY**

The defendant contends that Mr. Kuykendall was not qualified to testify about the behavior of cocaine and its metabolite or their effect on the human nervous system. He argues that this testimony extended beyond the explanation of the laboratory report into principles of chemistry and pharmacology. The state contends that the defendant's cross-examination of Mr. Kuykendall about cocaine metabolites and the body's metabolism of cocaine opened the door for his testimony. It also argues that he was qualified to testify on these matters under Rule 702, Tenn. R. Evid.

Rule 702 requires that the witness be "qualified as an expert by knowledge, skill, experience, training, or education." "To give expert testimony, one must be particularly skilled, learned or experienced in a science, art, trade, business, profession or vocation, a thorough knowledge of which is not within the scope of the common knowledge and experience of the average person." Kinley v. Tennessee State Mut. Ins. Co., 620 S.W.2d 79, 81 (Tenn. 1981). The witness may gain expertise through formal education or through life experiences. Neil P. Cohen et al., Tennessee Law of Evidence § 702[4], at 7-21 (4th ed. 2000). The decision to admit expert testimony is reserved to the discretion of the trial court and will not be disturbed on appeal absent an abuse of such discretion. State v. Hall, 958 S.W.2d 679, 689 (Tenn. 1997). In fact, the defendant will only gain relief on appeal for an abuse of discretion that was prejudicial. Tizard, 897 S.W.2d at 748.

In the present case, Mr. Kuykendall testified that he had worked as a forensic toxicologist for the TBI crime laboratory for a little over twelve years. In this capacity, he analyzed blood, body fluids, or tissues for the presence of drugs, alcohol, or poisons and related his findings to the criminal issues involved in the case. He stated that he had testified over three hundred times regarding the identification of controlled substances in blood. When testifying about the results of the test he conducted on the defendant's blood sample, Mr. Kuykendall testified that the body breaks down cocaine and that metabolites result from this process. The defendant objected that Mr. Kuykendall was not qualified to testify about metabolites and how the body processes cocaine. The trial court overruled this objection. Mr. Kuykendall testified that he did not know the schedule classification of cocaine, explaining that "since this is inside the body, I'm more concerned with the metabolism, the rate that it's going to go away, how much it takes to get it, and that sort of thing."

On cross-examination, the defendant questioned Mr. Kuykendall about the fact that individuals metabolize different substances differently. Mr. Kuykendall testified that although the manner in which people metabolize cocaine is basically the same, the timing for metabolizing it would vary. On redirect examination, Mr. Kuykendall was asked about the dissipation rate of cocaine from the human body. The defendant objected that no foundation had been laid for him to testify on this subject. Although the court noted that the witness had first addressed the issue on cross-examination without objection, it observed that the witness's testimony had gone "a little bit afield" of the matters about which he was called to testify. The court directed the state to "establish some foundation for his ability to testify" about the metabolism of cocaine.

At this point, Mr. Kuykendall testified that he has a Bachelor of Science in chemistry with a biochemistry specialty from Tennessee Technical University. He said that he had been trained by the TBI in forensic toxicology and received annual training at the Federal Bureau of Investigation Academy from prominent toxicologists. He stated that he was a board certified forensic toxicologist and that in his twelve years of experience, he had performed around 30,000 analyses. He agreed that his training and experience in forensic toxicology included the dissipation rates of cocaine from the human body. He then proceeded to testify without further objection from the defense about how cocaine breaks down in the human body, the relative times at which a person ingesting cocaine in various ways begins to feel its effects, and the rate at which cocaine dissipates from the body. He testified about the dissipation rates related in the scientific literature as well as those he had personally observed, noting that cocaine

doesn't take that long to go away. It takes, typically speaking, when I have worked with police officers out in the field and we have taken subjects in who have had cocaine in them at that point in time and then we go and test them later, we see that the levels that they had were dropping relatively rapidly, and that's because it has a short half-life.

The witness stated both that he had been educated about the metabolism of cocaine in humans and that he had experience based upon his own tests in this area. Furthermore, the witness held a degree in chemistry with a concentration in biological chemistry. In light of this evidence, we cannot say that the trial court abused its discretion in allowing Mr. Kuykendall to testify about the metabolism of cocaine.

#### **IV. SENTENCING**

The defendant contends that his sentence is excessive because the trial court erroneously applied enhancement factor (10), that he showed no hesitation about committing a crime when a high risk to human life existed. See Tenn. Code Ann. § 40-35-114(10). He argues that no proof exists that he endangered the life of anyone other than the victims named in the indictments. The state asserts that the defendant drove at an excessive speed, passed cars on a double yellow line, and nearly hit another person after he struck the victim's pickup truck. It argues these actions posed a

risk to others aside from the victim and Ms. Bunch's children. It contends that the trial court properly sentenced the defendant.

For the vehicular homicide conviction, the trial court applied the following enhancement factors: (1) a previous history of criminal convictions or behavior beyond that necessary to establish his range and (10) "no hesitation about committing a crime when the risk to human life was high." Tenn. Code Ann. § 40-35-114(1),(10). It applied mitigating factor (11), the defendant "committed the offense under such unusual circumstances that it is unlikely that a sustained intent to violate the law motivated the criminal conduct." *Id.* § 40-35-113(11). The trial court imposed a nine-year sentence. The trial court applied enhancement factor (1) to the felony reckless endangerment conviction and imposed a one-year sentence. It sentenced the defendant to eleven months and twenty-nine days for each of the child endangerment convictions. It ordered all of the sentences to run concurrently and to be served in confinement, which it found necessary under § 40-35-103(1)(B), "to avoid depreciating the seriousness of the offense or . . . particularly suited to provide effective deterrence to others likely to commit similar offenses."

Appellate review of sentencing is *de novo* on the record with a presumption that the trial court's determinations are correct. Tenn. Code Ann. § 40-35-401(d). As the Sentencing Commission Comments to this section note, the burden is now on the defendant to show that the sentence is improper. This means that if the trial court followed the statutory sentencing procedure, made findings of fact that are adequately supported in the record, and gave due consideration and proper weight to the factors and principles that are relevant to sentencing under the 1989 Sentencing Act, we may not disturb the sentence even if a different result were preferred. *State v. Fletcher*, 805 S.W.2d 785, 789 (Tenn. Crim. App. 1991).

However, "the presumption of correctness which accompanies the trial court's action is conditioned upon the affirmative showing in the record that the trial court considered the sentencing principles and all relevant facts and circumstances." *State v. Ashby*, 823 S.W.2d 166, 169 (Tenn. 1991). In this respect, for the purpose of meaningful appellate review,

the trial court must place on the record its reasons for arriving at the final sentencing decision, identify the mitigating and enhancement factors found, state the specific facts supporting each enhancement factor found, and articulate how the mitigating and enhancement factors have been evaluated and balanced in determining the sentence. T.C.A. § 40-35-210(f) (1990).

*State v. Jones*, 883 S.W.2d 597, 599 (Tenn. 1994).

Also, in conducting a *de novo* review, we must consider (1) the evidence, if any, received at the trial and sentencing hearing, (2) the presentence report, (3) the principles of sentencing and arguments as to sentencing alternatives, (4) the nature and characteristics of the criminal conduct, (5) any mitigating or statutory enhancement factors, (6) any statement that the defendant made on

his own behalf, and (7) the potential for rehabilitation or treatment. Tenn. Code Ann. §§ 40-35-102, -103, -210; see Ashby, 823 S.W.2d at 168; State v. Moss, 727 S.W.2d 229, 236-37 (Tenn. 1986).

The sentence to be imposed by the trial court is presumptively the minimum in the range for a Class B and Class E felony unless there are enhancement factors present. Tenn. Code Ann. § 40-35-210(c). Procedurally, the trial court is to increase the sentence within the range based upon the existence of enhancement factors and, then, reduce the sentence as appropriate for any mitigating factors. Tenn. Code Ann. § 40-35-210(d)-(e). The weight to be afforded an existing factor is left to the trial court's discretion so long as it complies with the purposes and principles of the 1989 Sentencing Act and its findings are adequately supported by the record. Tenn. Code Ann. § 40-35-210, Sentencing Commission Cmts.; Moss, 727 S.W.2d at 237; see Ashby, 823 S.W.2d at 169. We note that the law provides no presumptive minimum for misdemeanor sentencing. See, e.g., State v. Creasy, 885 S.W.2d 829, 832 (Tenn. Crim. App. 1994). In misdemeanor sentencing, in determining the percentage, if any, of the sentence to be served in confinement, the court shall consider the purposes of the Sentencing Act, the principles of sentencing, and the enhancement and mitigating factors. See Tenn. Code Ann. § 40-35-302(d); State v. Troutman, 979 S.W.2d 271, 273-74 (Tenn. 1998). A Class A misdemeanant may be incarcerated for up to eleven months and twenty-nine days. Tenn. Code Ann. § 40-35-111(e)(1).

The defendant asserts that the application of enhancement factor (10) was crucial because increasing the sentence above the minimum eight years made him ineligible for probation. See Tenn. Code Ann. § 40-35-303(a). In this respect, the sentencing hearing consisted of numerous witnesses who testified on behalf of the defendant. The evidence indicated that the defendant showed remorse and had rehabilitation potential. The defendant also was shown to have a history of cocaine dependence and had numerous bad check charges that resulted in diversion, restitution, and some convictions.

Relative to the application of enhancement factor (10), the defendant argues that the commission of two misdemeanor offenses—speeding and passing on a double yellow line—is insufficient to support its application. He argues that this is especially true in light of Mr. Tommy Joe Swafford's testimony that he was not driving erratically at the time. This court has held that factor (10) may be applied to a vehicular homicide conviction when persons other than the victims were at risk. State v. Williamson, 919 S.W.2d 69, 83 (Tenn. Crim. App. 1995). The defendant attempts to distinguish Williamson because the defendant in that case crossed into the opposing lane twice before colliding with the victim and the offense occurred on Labor Day. In the present case, the defendant nearly hit Ms. Guillory in the opposing lane after colliding with the victim. We believe the trial court properly applied this factor. Our de novo review of the record supports the length of the defendant's sentences.

Based upon the foregoing and the record as a whole, we affirm the judgments of conviction for vehicular homicide, reckless endangerment, and one count of child endangerment. We merge the conviction for child endangerment relating to Justin Vanatta into the conviction relating to

Richard Bunch and vacate the judgment of conviction for the child endangerment count relating to Justin Vanatta.

---

JOSEPH M. TIPTON, JUDGE