

SYLLABUS

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State v. Julie L. Michaels (A-69-12) (072106)

[NOTE: This is a companion case to State v. Reginald Roach, also filed today.]

Argued March 4, 2014 -- Decided August 6, 2014

LaVECCHIA, J., writing for a majority of the Court.

This appeal requires the Court to address whether defendant's confrontation rights were violated by the admission of a forensic report analyzing defendant's blood sample, where the report was admitted into evidence through the testimony of the report's author -- a laboratory supervisor and qualified expert who had reviewed and certified the test results -- without the testimony of the various individuals who had performed tasks associated with the testing procedures.

On March 3, 2008, defendant caused a collision when her vehicle crossed the center line and struck an oncoming car. The car's driver and passenger were severely injured, and the passenger later died from his injuries. Officers observing defendant at the scene of the collision and at the hospital suspected that she was under the influence of drugs or alcohol. Defendant gave permission for blood samples to be taken but would not sign the consent form. Defendant later admitted that she had used Xanax and cocaine on the night of the accident.

Defendant's blood sample was sent by the local police department to NMS Labs, a private laboratory that performs analytical testing for a number of private and public entities. Fourteen NMS analysts were involved in various aspects of handling and performing gas chromatography/mass spectrometry testing on defendant's blood sample. The testing indicated that defendant's blood sample contained cocaine, cocaine derivatives, and alprazolam, an active ingredient in Xanax.

The testing of defendant's blood sample produced approximately 950 pages of data, which was provided to Dr. Barbieri, a forensic toxicologist and pharmacologist who also held the titles of Assistant Laboratory Director and Toxicology Technical Leader at NMS Labs. Dr. Barbieri reviewed all of the data and then wrote, certified and signed a report, concluding that defendant's blood contained cocaine and alprazolam in such quantities that she would have been impaired and unfit to operate a motor vehicle at the time the sample was collected.

Defendant was indicted on multiple charges including second-degree vehicular homicide while intoxicated and third-degree assault by auto while intoxicated. At defendant's trial, Dr. Barbieri testified about the general processes used by NMS to analyze blood samples, the specific tests performed on defendant's blood, and the results of those tests. Dr. Barbieri acknowledged that there is a "human element" to the testing procedures and that he had not conducted the tests himself. However, he stated that he had reviewed the voluminous machine-generated data and was satisfied that the testing had been done properly and that his independent review permitted him to certify the results. Dr. Barbieri opined that, at the time of the collision, defendant was impaired by the quantity of alprazolam and cocaine found in her system, and that she would have been unable to drive safely.

Defendant objected to the admission of Dr. Barbieri's report as hearsay, and the trial court found the report admissible. At the close of the State's case, defendant moved to strike Dr. Barbieri's testimony, contending that the State was required to present testimony from the persons who actually conducted the blood sample testing. The trial court denied the motion, noting that as the lab supervisor, Dr. Barbieri could testify about the procedures that were employed and give an opinion, based on his expertise, as to what conclusions should be drawn from that testing.

The jury found defendant guilty on all counts. Defendant moved for a new trial, raising, among other arguments, a Sixth Amendment Confrontation Clause objection to Dr. Barbieri's testimony. The court denied the motion and sentenced defendant to an aggregate extended term of eighteen years' imprisonment with twelve years

and two months of parole ineligibility. Defendant appealed her convictions and sentence, casting her arguments regarding Dr. Barbieri's testimony as a violation of the Confrontation Clause. The Appellate Division affirmed, and this Court granted defendant's petition for certification limited to the confrontation issue. 214 N.J. 114 (2013).

HELD: Defendant's confrontation rights were not violated by the admission of Dr. Barbieri's report or his testimony regarding the blood tests and his conclusions drawn therefrom. Dr. Barbieri was knowledgeable about the testing process, independently verified the correctness of the machine-tested processes and results, and formed an independent conclusion about the results. Defendant's opportunity to cross-examine Dr. Barbieri satisfied her right to confrontation on the forensic evidence presented against her.

1. The Sixth Amendment to the United States Constitution provides in part that, "[i]n all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him." The United States Supreme Court's current line of cases on Confrontation Clause jurisprudence begins with Crawford v. Washington, 541 U.S. 36, 124 S. Ct. 1354, 158 L. Ed. 2d 177 (2004), which held that an accused's right to confront witnesses applies to all out-of-court statements that are "testimonial." Under Crawford, such statements are inadmissible unless the witness is unavailable to testify and the defendant had a prior opportunity for cross-examination. (pp. 16-20)

2. Since 2004, the United States Supreme Court has considered Crawford's application in three cases involving forensic reports—Melendez-Diaz v. Massachusetts, 557 U.S. 305, 129 S. Ct. 2527, 174 L. Ed. 2d 314 (2009); Bullcoming v. New Mexico, 564 U.S. ___, 131 S. Ct. 2705, 180 L. Ed. 2d 610 (2011); and Williams v. Illinois, 567 U.S. ___, 132 S. Ct. 2221, 183 L. Ed. 2d 89 (2011). In Melendez-Diaz, *supra*, the Supreme Court reversed a defendant's conviction where the prosecution failed to produce any analyst to support and be cross-examined regarding the statements contained in a forensic document. In a five-to-four decision, the Court held that laboratory certificates setting forth the results of analysis of drug samples were testimonial statements and therefore were inadmissible. 557 U.S. at 311, 129 S. Ct. at 2532, 174 L. Ed. 2d at 322. (pp. 21-24)

3. In Bullcoming, another five-to-four decision, the Supreme Court considered "whether the Confrontation Clause permits the prosecution to introduce a forensic laboratory report containing a testimonial certification – made for the purpose of proving a particular fact – through the in-court testimony of a scientist who did not sign the certification or perform or observe the test reported in the certification." Bullcoming, *supra*, 564 U.S. at ___, 131 S. Ct. at 2710, 180 L. Ed. 2d at 615-16. The Court held that the forensic report was inadmissible, reasoning that the testimony of a substitute analyst who did not perform or observe the tests and did not certify the results constituted "surrogate testimony" that violated the defendant's confrontation rights. *Id.* at ___, 131 S. Ct. at 2710, 180 L. Ed. 2d at 616. Justice Sotomayor wrote a separate concurring opinion that emphasized the limited nature of the Court's holding by noting, among other points, that Melendez-Diaz did not stand for the proposition that every person identified as performing some task in connection with a forensic report must be called as a witness. *Id.* at ___, 131 S. Ct. at 2722, 180 L. Ed. 2d at 628-230 (Sotomayor, J., concurring). (pp. 24-32)

4. Most recently, in Williams, a plurality of the Court found that a defendant's right of confrontation was not violated by the testimony of an individual who matched a DNA profile produced by a private laboratory to the defendant's DNA. Williams, 567 U.S. at ___, 132 S. Ct. at 2227, 183 L. Ed. 2d at 98. Notably, the plurality's analysis was criticized by a majority of the Court, including four dissenting members, *id.* at ___, 132 S. Ct. at 2265, 183 L. Ed. 2d at 139 (Kagan, J., dissenting), and Justice Thomas, who joined in the plurality's judgment, but disavowed the reasoning, *id.* at ___, 132 S. Ct. at 2255, 183 L. Ed. 2d at 129 (Thomas, J., concurring in the judgment). Because each of the Williams opinions embraces a different approach to determining whether the use of forensic evidence violates the Confrontation Clause, and because a majority of the Supreme Court expressly disagreed with the rationale of the plurality, there is no narrow rule that this Court can discern from Williams and thus Williams's force, as precedent, is at best unclear. The Court thus turns to the pre-Williams cases for more reliable guidance on confrontation rights. (pp. 32-43)

5. Applying pre-Williams jurisprudence, the Court observes that neither Melendez-Diaz nor Bullcoming requires that every analyst involved in a testing process must testify in order to admit a forensic report into evidence and satisfy confrontation rights. Nor do the cases suggest that the primary analyst involved in the original testing must testify when a different, sufficiently knowledgeable expert is available to testify. Moreover, the Court notes that it would take confrontation law to a level that is not only impractical, but, equally importantly, is inconsistent with prior law addressing the admissibility of an expert's testimony in respect of the substance of underlying information

that he or she used in forming his or her opinion. By way of background, the Court notes that, in determining when the facts underlying a forensic expert opinion may be disclosed to the jury, New Jersey's evidence case law has focused on whether the witness is knowledgeable about the particular information used in forming the opinion to which he or she is testifying and has a means to verify the underlying information even if he or she was not the primary creator of the data. Such law is consistent with the principle that a knowledgeable expert who is someone other than the primary analyst who conducted a forensic test may testify to an opinion regarding testing results, when those results have been generated by demonstrably calibrated instruments. (pp. 43-48)

6. The Court then examines defendant's argument that her confrontation rights were violated by Dr. Barbieri's testimony and the admission of his certified report. Unlike in Melendez-Diaz, where no witness was offered to testify to the statements contained in the forensic document that was admitted into evidence, here the report was admitted through the live testimony of Dr. Barbieri, the person who prepared, signed, and certified the report, and Dr. Barbieri was available for cross-examination. In addition, the forensic report that the Supreme Court rejected in Bullcoming had been admitted through the testimony of a co-analyst or "surrogate" who did not serve as supervisor or reviewer responsible for certifying the results. Here, the Court accepts that Dr. Barbieri's report was testimonial. However, Dr. Barbieri supervised the analysts who performed the tests, was qualified as an expert in the relevant subject areas, analyzed the machine-generated data, and produced and certified the testimonial report in issue. As the reviewer of the testing process and the author of the report, it was proper for Dr. Barbieri to testify to its contents and to answer questions about the testing it reported. (pp. 49-62).

7. In response to the dissenting opinion, the Court explains that Dr. Barbieri was not merely repeating the findings and conclusions of the analysts who conducted the testing. Rather, the findings and conclusions contained in the report and to which he testified were his own. A truly independent reviewer or supervisor of testing results can testify to those results and to his or her conclusions about those results, without violating a defendant's confrontation rights, if the testifying witness is knowledgeable about the testing process, has independently verified the correctness of the machine-tested process and results, and has formed an independent conclusion about the results. Testimonial facts can "belong" to more than one person if the verification and truly independent review described above are performed and set forth on the record by the testifying witness. (pp. 62-69).

The judgment of the Appellate Division is **AFFIRMED**.

JUSTICE ALBIN, DISSENTING, expresses the view that the Sixth Amendment's Confrontation Clause bars the admission of this forensic report and the testimony of the expert because the State did not produce for cross-examination the analyst(s) who actually performed the test on defendant's blood.

CHIEF JUSTICE RABNER, JUSTICES PATTERSON and FERNANDEZ-VINA, and JUDGES RODRÍGUEZ and CUFF (both temporarily assigned) join in JUSTICE LaVECCHIA's opinion. JUSTICE ALBIN filed a separate, dissenting opinion.

SUPREME COURT OF NEW JERSEY
A-69 September Term 2012
072106

STATE OF NEW JERSEY,

Plaintiff-Respondent,

v.

JULIE L. MICHAELS a/k/a LYNN
MICHAELS, JULIE LYNN, JOLINE
BROOKS, JODIE L. CALLOWAY,
JODIE CALLAWAY,

Defendant-Appellant.

Argued March 4, 2014 - Decided August 6, 2014

On certification to the Superior Court,
Appellate Division.

Gary A. Kraemer argued the cause for
appellant (Daggett, Kraemer & Gjelsvik,
attorneys; Mr. Kraemer and George T.
Daggett, on the briefs).

Frank Muroski, Deputy Attorney General,
argued the cause for respondent (John J.
Hoffman, Acting Attorney General of New
Jersey, attorney; Kenneth A. Burden and
Frank J. Ducoat, Deputies Attorney General,
of counsel; Mr. Muroski, Mr. Burden, and Mr.
Ducoat, on the briefs).

JUSTICE LAVECCHIA delivered the opinion of the Court.

Defendant Julie Michaels was charged with second-degree
vehicular homicide, third-degree assault by auto, and four other
related charges, as well as motor vehicle citations, including
driving while intoxicated, reckless driving, possession of a

controlled dangerous substance in a motor vehicle, and possession of an open container of alcohol. Laboratory results of gas chromatography/mass spectrometry tests performed on defendant's blood sample, which was drawn at a hospital the evening of her motor vehicle accident, revealed the presence of cocaine, alprazolam (an active ingredient of Xanax), and benzoethylene (a cocaine metabolite).

At trial, the State introduced testimony from Edward Barbieri, Ph.D., an assistant supervisor and toxicology technical leader from the private laboratory that had performed the testing on defendant's blood sample and issued a report certifying the test results. Dr. Barbieri was responsible for supervising the technicians and analysts who were involved in the gas chromatography/mass spectrometry testing. He also was responsible for their adherence to the laboratory's policies and protocols for the testing procedures. He had reviewed the test results and satisfied himself that the test data accurately identified and quantified the substances found in defendant's blood, and he had signed and certified the laboratory results set forth in the report. Over defendant's objection, the report was admitted into evidence without the testimony of the fourteen individuals who had performed various tasks associated with the testing procedures. A jury convicted defendant on all counts, and the Appellate Division affirmed defendant's conviction.

We granted certification in this matter to consider defendant's argument that her Sixth Amendment confrontation rights were violated because the laboratory report was admitted, although defendant had not had the opportunity to confront each laboratory employee who participated in the testing that generated the results contained in the report. We now hold that the admission of the laboratory report did not violate defendant's confrontation rights. The laboratory supervisor -- who testified and was available for cross-examination -- was knowledgeable about the testing process that he was responsible for supervising. He had reviewed the machine-generated data from the testing, had determined that the results demonstrated that defendant had certain drugs present in her system, and had certified the results in a report that he had prepared and signed.

We recognize that the forensic report in issue is "testimonial" and that it is the type of document subject to the Confrontation Clause. See Bullcoming v. New Mexico, 564 U.S. ___, ___, 131 S. Ct. 2705, 2717, 180 L. Ed. 2d 610, 624 (2011) (determining that signed and certified laboratory report was formalized sufficiently to be characterized as testimonial); cf. State v. Sweet, 195 N.J. 357, 373-74 (2008) (noting testimonial nature of signed and certified New Jersey State Laboratory certificates prepared for use in State prosecution), cert.

denied, 557 U.S. 934, 129 S. Ct. 2858, 174 L. Ed. 2d 601 (2009). However, in this matter we join the many courts that have concluded that a defendant's confrontation rights are not violated if a forensic report is admitted at trial and only the supervisor/reviewer testifies and is available for cross-examination, when the supervisor is knowledgeable about the testing process, reviews scientific testing data produced, concludes that the data indicates the presence of drugs, and prepares, certifies, and signs a report setting forth the results of the testing. In examining the testimony and documentary evidence challenged in this matter, we do not find it to be equivalent to the "surrogate testimony" that the United States Supreme Court found problematic in Bullcoming, supra, 564 U.S. at __, 131 S. Ct. at 2715-16, 180 L. Ed. 2d at 621-22.

Finding no denial of defendant's confrontation rights in this proceeding, we affirm defendant's conviction.

I.

A.

On March 3, 2008, at approximately 10:15 p.m., defendant caused a two-car collision. Danielo Diaz, the driver of the second car, was driving northbound on Route 23 in Hardyston Township. There, Route 23 is a two-lane road with a double yellow center line and a speed limit of forty-five miles per hour. Defendant was driving southbound but swerved into the

northbound lane as she reached the crest of a hill. Diaz testified that he saw headlights approaching on his side of the road, but had no time to react before defendant's vehicle struck his vehicle head-on.

Sergeant John Broderick, the police officer responding to the scene, found defendant's car straddling the yellow line facing southbound. Diaz's car was situated perpendicular to defendant's. Diaz and his passenger, Dylan Vecchiarelli, appeared to be injured and in pain. Defendant, who was slumped in her seat, answered Broderick's questions in a slurred voice. Her eyes were partly closed. When she exited her vehicle, she did not seem to be in pain although her ankle appeared to Broderick to be broken. Defendant seemed to Broderick to be under the influence of drugs or alcohol.

Defendant was taken by ambulance to St. Clare's Hospital in Sussex County where she was met by Detective Karl Ludwig, who had been dispatched to obtain a blood sample from her. Although defendant initially informed Ludwig that she was Jodie Callaway of Moscow, Iowa, it was later determined that she was Julie Michaels of Wayne, New Jersey, and that Jodie Callaway was her sister. When asked what had happened, defendant told Ludwig that she had been on the wrong side of the road and hit a car. Ludwig noted that defendant's eyes were red and droopy, her speech was slurred, and she was lethargic. Defendant gave

permission for blood samples to be taken but would not sign the consent form. She informed Ludwig that she had not used any alcohol that night, but had taken prescription Xanax at 3:00 p.m. She also stated that her blood would test positive for cocaine because she had used it four days earlier. Defendant later altered her statement, telling Ludwig that, on the night of the accident, she had taken Xanax that belonged to her sister and had used cocaine.

Meanwhile, Diaz and Vecchiarelli were transported by helicopter from the scene of the accident to a trauma hospital. Diaz remained in the hospital for about a month for injuries that included a fractured cheekbone and nose, a broken femur with an open wound, and bruised lungs. Vecchiarelli's injuries included multiple fractures of the skull, a spinal cord fracture, a partial rupture of the thoracic aorta, lacerations of the spleen, and a broken femur. Despite weeks of intensive treatment for his serious injuries, Vecchiarelli's condition deteriorated. He died from his injuries on April 2, 2008.

Defendant's blood sample was sent by the Hardyston Police Department to NMS Labs, a private laboratory in Willow Grove, Pennsylvania, that performs analytical testing for a number of private and public entities. NMS was instructed to test the sample for the presence of alcohol and drugs, and to determine the quantities of any substances found. Tests were performed by

approximately fourteen NMS analysts.¹ Specifically, small samples, or aliquots, drawn from the original sample were screened for alcohol and a broad range of drugs. Computer analysis of the results of the screening tests indicated presumptive positives for cocaine metabolites, benzodiazepines, and marijuana products. New aliquots from the blood sample were analyzed using a combined gas chromatography/mass spectrometry machine.² That testing showed that defendant's blood sample contained cocaine, benzoethylene (a cocaine metabolite), and alprazolam (a type of benzodiazepine that is the active ingredient in Xanax). Defendant's blood tested negative for

¹ Fourteen NMS employees were involved in various aspects of handling and testing defendant's blood sample. We refer to these various analysts and technicians collectively as "analysts" throughout the opinion for simplicity and because the evidence does not detail the specific role played by each individual.

² As was explained at trial by the State's expert and author of the report on defendant's blood testing, to perform this testing, an analyst injects an aliquot of the blood to be tested into the gas chromatography/mass spectrometry machine. In the gas chromatography portion of the test, the sample is vaporized and passes through a thin 100-foot-long tube that separates the different compounds in the sample. The machine records the amount of time the compounds take to pass through the tube. When the compounds emerge from the gas chromatograph, they are ionized by the mass spectrometer, which records the molecular weights of the fractions generated. The machine produces graphs that identify and quantify the compounds in the sample by comparing the time they take to pass through the tube against the results for the calibration and control materials, and comparing the compounds' molecular weights to the molecular weights of a "library" of known compounds. The data is compared to runs performed with calibration and control materials to ensure the accurate operation of the machine.

marijuana.

The testing of defendant's blood sample produced approximately 950 pages of data, which was provided to Dr. Barbieri, a forensic toxicologist and pharmacologist who held three titles at NMS: Forensic Toxicologist, Toxicology Technical Leader, and Assistant Laboratory Director. Dr. Barbieri reviewed all the data in order to satisfy himself that (1) the testing had been done according to standard operating procedures, and (2) the results were correct. Dr. Barbieri wrote, and then certified and signed, a report stating that defendant's blood contained 270 ng/mL of alprazolam, 140 ng/mL of cocaine, and 2500 ng/mL of benzoethylene. Dr. Barbieri's report concluded that the presence of those quantities of drugs in defendant's blood would have caused her to be impaired and unfit to operate a motor vehicle at the time the blood sample was collected.

B.

In October 2008, defendant was indicted on charges of second-degree vehicular homicide while intoxicated, N.J.S.A. 39:4-50, N.J.S.A. 2C:11-5 (count one); third-degree assault by auto while intoxicated, N.J.S.A. 39:4-50, N.J.S.A. 2C:12-1(c)(2) (count two); third-degree causing death while driving unlicensed or with a suspended license, N.J.S.A. 39:3-40, N.J.S.A. 2C:40-22(a) (count three); fourth-degree causing serious bodily injury

while driving unlicensed or with a suspended license, N.J.S.A. 39:3-40, N.J.S.A. 2C:40-22(a) (count four); third-degree giving false information to a law enforcement officer, N.J.S.A. 2C:29-3(b)(4) (count five); and third-degree possession of a controlled dangerous substance, N.J.S.A. 2C:35-10(a) (count six). Defendant also previously had been issued six motor vehicle citations in connection with the collision.³

Defendant's in limine motions to dismiss the indictment were denied. The case was tried over fourteen days in February and March 2011. The State presented testimony from Diaz, two other drivers who had observed the collision and defendant's driving, several police officers including Broderick and Ludwig, the doctor who had treated Vecchiarelli prior to his death, the supervising nurse who had treated defendant upon her arrival at the hospital and who had drawn the blood sample, and Dr. Barbieri of NMS.⁴ Defendant presented two witnesses but did not testify on her own behalf.

Dr. Barbieri testified about the general processes used by

³ The citations received by defendant were driving while intoxicated, N.J.S.A. 39:4-50; driving with a revoked license, N.J.S.A. 39:3-40; reckless driving, N.J.S.A. 39:4-96; failure to keep right, N.J.S.A. 39:4-82; possession of a controlled dangerous substance in a motor vehicle, N.J.S.A. 39:4-49.1; and possession of an open container of alcohol, N.J.S.A. 39:4-51b.

⁴ Dr. Barbieri was recognized by the court, without objection, as a qualified expert in the fields of forensic toxicology and pharmacology.

NMS to analyze blood samples, the specific tests performed on defendant's blood, and the results of those tests. Dr. Barbieri acknowledged that there is a "human element" to the testing procedures and that he had not conducted the tests himself. However, he stated that he personally had reviewed the voluminous machine-generated data and was satisfied that the testing had been done properly and that his independent review permitted him to certify the results. Dr. Barbieri opined that, at the time of the collision, defendant's concentration, judgment, response time, coordination, and sense of caution would have been impaired by the quantity of alprazolam and cocaine found in her system, and that she would have been unable to drive safely.

Defendant objected to the admission of Dr. Barbieri's report as hearsay; however, the trial court determined that no applicable law compelled its exclusion. At the close of the State's case, defendant moved to strike Dr. Barbieri's testimony, contending that the State was required to present testimony from the persons who actually conducted the testing and that Dr. Barbieri did not personally perform, or assist in performing, the tests that formed the basis of his report and testimony. The trial court denied the motion to strike Dr. Barbieri's testimony, specifically noting that, "as the supervisor of the lab, certainly he's in a position to testify

about the procedures that were employed and give an opinion, based on his expertise, what conclusions should flow from that testing." The trial court also denied a motion for a judgment of acquittal on counts one and three on the ground that there was insufficient proof of Vecchiarelli's cause of death.

The jury found defendant guilty on all counts. The court denied defendant's motion for a new trial, which raised, among other arguments, a Sixth Amendment Confrontation Clause objection to the testimony by Dr. Barbieri. The court sentenced defendant to an aggregate extended term of eighteen years' imprisonment with twelve years and two months of parole ineligibility, and life-time suspension of driving privileges.

Defendant appealed on the grounds that the trial court should have excluded testimony by Dr. Barbieri and by Vecchiarelli's physician, as well as certain inculpatory statements by defendant. She also argued that her sentence was excessive. The Appellate Division affirmed the conviction and sentence in an unpublished opinion.

Addressing the argument that Dr. Barbieri's testimony violated defendant's confrontation rights, the Appellate Division reviewed recent Confrontation Clause cases from the United States Supreme Court, as well as its own published opinion in State v. Rehmann, 419 N.J. Super. 451 (App. Div. 2011). The panel held that Dr. Barbieri's testimony did not

violate defendant's confrontation rights because Dr. Barbieri, who was trained to perform the tests, made an independent assessment of data collected by the analysts he supervised, testified about the process by which samples are tested and the tests performed on defendant's blood, and explained the test results. The panel noted that no questions about testing procedures or results were asked on cross-examination that Dr. Barbieri was not able to answer fully, and concluded that defendant was not denied a meaningful opportunity for cross-examination merely because Dr. Barbieri personally had not performed the tests. In addition, the panel noted that, under N.J.R.E. 703, Dr. Barbieri, who was properly qualified as an expert, could rely on inadmissible hearsay evidence in forming his independent opinion. The panel concluded that the trial court's other rulings were correct and that defendant's sentence was not excessive.

We granted defendant's petition for certification, "limited to the issue of whether defendant's right of confrontation was violated by the admission of the expert testimony and report regarding the results of the laboratory analysis of defendant's blood samples." State v. Michaels, 214 N.J. 114, 114 (2013).

II.

A.

Defendant argues that the admission of Dr. Barbieri's

report and testimony violated the Confrontation Clause because Dr. Barbieri was not the person who performed the tests conducted on her blood sample. She asserts that the test results, data, and charts contained in the report are testimonial because the testing was done to produce evidence for trial, as shown by the fact that the report was sent to the Sussex County Prosecutor's Office and references "State v. Julie Michaels" as its subject matter. Based on the United States Supreme Court's decision in Bullcoming, defendant argues that the analysts who performed the tests should have been subject to cross-examination because there was a possibility of human error in the testing and their duties involved more than simply transcribing machine-produced data. In particular, defendant notes that, although Dr. Barbieri certified in his report that the samples and seals had maintained their integrity, only the analysts who worked with the samples could have ensured that that was the case.

Defendant emphasizes that, unlike the supervisor in Rehmann, supra, 419 N.J. Super. at 457-59, whose testimony about test results the Appellate Division held was permissible, Dr. Barbieri was not closely and directly involved with the testing on which he based his report. Defendant also asserts that the State improperly failed to notify her before trial that Dr. Barbieri was not the person who performed the tests, thus

depriving her of her right to depose the person who performed the tests used against her if that person was not going to be available to testify at trial.

In response to the State's argument that defendant waived her Confrontation Clause argument by failing to raise the issue before or during trial, defendant asserts that she preserved her confrontation claim by objecting to the testimony and report at trial as unreliable hearsay evidence. Defendant also argues that the "notice and demand" procedure of N.J.S.A. 2C:35-19 does not justify introduction of Dr. Barbieri's report because that statute only applies to State Forensic Laboratories, not to private laboratories like NMS.

B.

The State first argues that defendant waived her Confrontation Clause argument by objecting to Dr. Barbieri's report only on hearsay grounds at trial. The State asserts that the raw data provided to defendant during discovery put defendant on notice that the tests were not conducted by Dr. Barbieri himself. The State frames defendant's decision not to challenge Dr. Barbieri's testimony on Confrontation Clause grounds as a strategic decision with which she must live. The State also asserts that, under N.J.R.E. 703, Dr. Barbieri was allowed to rely on otherwise inadmissible hearsay statements, like the raw data in this case, to form the independent opinion

expressed in his report and testimony. Therefore, the underlying data was admissible to establish the basis for his opinion.

Turning to the merits of defendant's Confrontation Clause argument, the State argues that Dr. Barbieri's testimony did not violate defendant's confrontation rights because Dr. Barbieri was the one who reviewed the raw data, produced the report based on his professional evaluation of the data, and formally certified the accuracy of the results. He thus was the author of the testimonial statements against defendant, and defendant was given an opportunity to cross-examine him at trial in respect of those statements. The State also contends that denying defendant an opportunity to confront the analysts who conducted the tests did not violate her Confrontation Clause rights because the data produced by those analysts was not testimonial. The State argues that the test results were not testimonial because they were machine generated and were not formalized, sworn, or certified documents. Further, the State asserts that the results were not testimonial because the analysts performing the tests conducted them according to standard procedures and without any knowledge of the origin of the samples or the purpose for which the results were being obtained. The State points out that, although NMS conducts testing for law enforcement clients, it also conducts testing

for clients such as coroners, physicians, and drug treatment facilities operating outside of the realm of law enforcement.

Finally, the State urges this Court to adopt a "workable rule," given the nature of modern laboratory work, where a number of different individuals may be involved in the procedures necessary to produce a test result and who may recall little about any particular test. In arguing for practicality, the State argues that this Court should examine the evidence closely and avoid rigidly requiring the testimony of every laboratory analyst and assistant in any way connected with whatever testing is involved in a particular forensic laboratory report.

III.

The Sixth Amendment to the United States Constitution provides in part that, "[i]n all criminal prosecutions, the accused shall enjoy the right . . . to be confronted with the witnesses against him."⁵ The Clause is applicable to the States by virtue of the Fourteenth Amendment. See Pointer v. Texas, 380 U.S. 400, 403, 85 S. Ct. 1065, 1068, 13 L. Ed. 2d 923, 926 (1965).

This appeal requires that we address whether admission of a particular forensic report violates defendant's confrontation

⁵ The New Jersey Constitution provides for like protection to an accused. See N.J. Const. art. I, ¶ 10 (guaranteeing right of accused "to be confronted with the witnesses against him").

rights where the fourteen analysts who were involved in the testing utilized in the certified report were not individually called to testify at trial. The question is made difficult by the differing analyses used by United States Supreme Court justices in contemporary Confrontation Clause jurisprudence. We therefore begin with the Supreme Court's decisions on the subject.

A.

Prior to the current turmoil over confrontation rights, the Supreme Court had held that the Confrontation Clause allowed admission of an out-of-court statement if the statement fit "within a firmly rooted hearsay exception" or bore "particularized guarantees of trustworthiness." Ohio v. Roberts, 448 U.S. 56, 66, 100 S. Ct. 2531, 2539, 65 L. Ed. 2d 597, 608 (1980) (explaining that if statement "bears adequate indicia of reliability," Confrontation Clause does not bar admission of unavailable witness's statement against criminal defendant). That understanding was upended twenty-four years later when the Supreme Court rejected the Roberts reliability analysis and held that an accused's right to confront witnesses applies to all out-of-court statements that are "testimonial." Crawford v. Washington, 541 U.S. 36, 68, 124 S. Ct. 1354, 1374, 158 L. Ed. 2d 177, 203 (2004).

In Crawford, Justice Scalia, writing for the Court,

examined the confrontation right's English common law and statutory roots, and its development in the American colonies leading to its inclusion in the Federal Constitution, and concluded that the Confrontation Clause was directed at "the civil-law mode of criminal procedure, and particularly its use of ex parte examinations as evidence against the accused." Id. at 50, 124 S. Ct. at 1363, 158 L. Ed. 2d at 192. Based on its historical analysis, the Crawford Court concluded "that the Framers would not have allowed admission of testimonial statements of a witness who did not appear at trial unless he was unavailable to testify, and the defendant had had a prior opportunity for cross-examination." Id. at 53-54, 124 S. Ct. at 1365, 158 L. Ed. 2d at 194. In other words, "[w]here testimonial evidence is at issue . . . the Sixth Amendment demands what the common law required: unavailability and a prior opportunity for cross-examination." Id. at 68, 124 S. Ct. at 1374, 158 L. Ed. 2d at 203.

Although Crawford's analysis hinged on whether the out-of-court statement was testimonial, the Court did not define "testimonial statements." Ibid. However, the Crawford decision identified certain "formulations of [the] core class of 'testimonial' statements," such as

ex parte in-court testimony or its functional equivalent -- that is, material such as affidavits, custodial examinations,

prior testimony that the defendant was unable to cross-examine, or similar pretrial statements that declarants would reasonably expect to be used prosecutorially; extrajudicial statements . . . contained in formalized testimonial materials, such as affidavits, depositions, prior testimony, or confessions; [and] statements that were made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial.

[Id. at 51-52, 124 S. Ct. at 1364, 158 L. Ed. 2d at 193 (first alteration in original) (citations and internal quotation marks omitted).]

Importantly, whether a statement is “testimonial” was not pinned to whether the statement was taken under oath. Id. at 52, 124 S. Ct. at 1364, 158 L. Ed. 2d at 193 (noting that unsworn “[s]tatements taken by police officers in the course of interrogations are also testimonial [because those] interrogations bear a striking resemblance to examinations by justices of the peace in England”).

A three-part test -- whether the statement was testimonial, whether the witness was unavailable to testify, and whether there was a prior opportunity for cross-examination -- thus became Crawford’s new standard for assessing violations of the Confrontation Clause. Id. at 68, 124 S. Ct. at 1374, 158 L. Ed. 2d at 203. Justices Stevens, Kennedy, Souter, Thomas, Ginsburg, and Breyer joined Justice Scalia’s exposition of the new

standard, and the earlier Roberts decision was overruled.⁶ Id. at 63-69, 124 S. Ct. at 1371-74, 158 L. Ed. 2d 200-03; see also Davis v. Washington, 547 U.S. 813, 825 n.4, 126 S. Ct. 2266, 2275 n.4, 165 L. Ed. 224, 239 n.4 (2006) (“We overruled Roberts in Crawford by restoring the unavailability and cross-examination requirements.”). Applying the standard to the facts in Crawford, supra, the Court held that a tape-recorded statement made by the defendant’s wife during police interrogation was testimonial, and its admission, without providing the defendant the right to cross-examine her, violated the Confrontation Clause. 541 U.S. at 38, 69, 124 S. Ct. at 1356-57, 1374, 158 L. Ed. 2d at 184, 203.

B.

Since 2004, the Court has considered Crawford’s application in three cases involving forensic reports. Those cases are Melendez-Diaz v. Massachusetts, 557 U.S. 305, 129 S. Ct. 2527, 174 L. Ed. 2d 314 (2009); Bullcoming, supra, 564 U.S. ___, 131 S. Ct. 2705, 180 L. Ed. 2d 610; and Williams v. Illinois, 567 U.S. ___, 132 S. Ct. 2221, 183 L. Ed. 2d 89 (2011).

⁶ Chief Justice Rehnquist and Justice O’Connor concurred in the judgment but dissented from the majority’s decision to overrule Roberts. Crawford, supra, 541 U.S. at 69, 124 S. Ct. at 1374, 158 L. Ed. 2d at 203-04 (Rehnquist, C.J., dissenting). The Chief Justice claimed that the “distinction between testimonial and nontestimonial statements . . . is no better rooted in history than [the Roberts] doctrine.” Ibid.

1.

In Melendez-Diaz, supra, a cocaine distribution and trafficking case, a Massachusetts trial court admitted into evidence three "certificates of analysis" setting forth the results of forensic analysis performed by the state laboratory. 557 U.S. at 308, 129 S. Ct. at 2531, 174 L. Ed. 2d at 320. Under state law, the notarized certificates were admissible without live testimony as "prima facie evidence of the composition, quality, and the net weight of the narcotic." Id. at 309, 129 S. Ct. at 2531, 174 L. Ed. 2d at 320. Thus, the analysts were not produced as witnesses at defendant's trial; therefore, the defendant was not afforded the opportunity to cross-examine the individuals who performed the tests and certified the results. Ibid. A Massachusetts appellate court affirmed the conviction, and the Supreme Judicial Court of Massachusetts denied review. Ibid.

The United States Supreme Court reversed the conviction, in a five-to-four decision, holding that the laboratory certificates fell "within the 'core class of testimonial statements'" and therefore were inadmissible. Id. at 310, 129 S. Ct. at 2532, 174 L. Ed. 2d at 321 (quoting Crawford, supra, 541 U.S. at 51-52, 124 S. Ct. at 1364, 158 L. Ed. 2d at 193). The majority opinion, authored by Justice Scalia and joined by Justices Stevens, Souter, and Ginsburg, reaffirmed the Crawford

test for testimonial statements and employed that test. Id. at 310-11, 129 S. Ct. at 2532, 174 L. Ed. 2d at 321. The Court determined that the lab reports were “plainly affidavits” that constituted testimonial statements because they were “declaration[s] of facts written down and sworn to by the declarant before an officer authorized to administer oaths”; “solemn declaration[s] or affirmation[s] made for the purpose of establishing or proving some fact”; “made under circumstances which would lead an objective witness reasonably to believe that the statement would be available for use at a later trial”; and “functionally identical to live, in-court testimony, doing precisely what a witness does on direct examination.” Ibid. (first alteration in original) (internal quotation marks omitted). The Court determined that the analysts constituted witnesses against the defendant, and held that, absent the state’s showing that they were unavailable to testify at trial and that the defendant had prior opportunity to cross-examine them, the defendant was entitled to “be confronted with the analysts at trial.” Id. at 311, 129 S. Ct. at 2532, 174 L. Ed. 2d at 322 (internal quotation marks omitted).

Justice Thomas signed on to the majority opinion, but wrote separately to express his position that “the Confrontation Clause is implicated by extrajudicial statements only insofar as they are contained in formalized testimonial materials, such as

affidavits, depositions, prior testimony, or confessions.” Id. at 329, 129 S. Ct. at 2543, 174 L. Ed. 2d at 333 (Thomas, J., concurring) (internal quotation marks omitted). He thus continued to adhere to the narrow view of testimonial documents that he first expressed in his concurrence in White v. Illinois, 502 U.S. 346, 365, 112 S. Ct. 736, 747, 116 L. Ed. 2d 848, 865 (1992) (Thomas, J., concurring).

In a dissent by Justice Kennedy, in which Chief Justice Roberts and Justices Breyer and Alito joined, those four members declined to follow the analytic path that the majority opinion was cutting for confrontation jurisprudence as applied to forensic documents. Id. at 330, 129 S. Ct. at 2543, 174 L. Ed. 2d at 333 (Kennedy, J., dissenting). The dissent asserted that the Confrontation Clause was not implicated because laboratory analysts are not “conventional” witnesses against a defendant, positing that the majority “swe[pt] away an accepted rule governing the admission of scientific evidence.” Ibid. Justice Kennedy wrote, “The immediate systemic concern is that the Court makes no attempt to acknowledge the real differences between laboratory analysts who perform scientific tests and other, more conventional witnesses -- ‘witnesses’ being the word the Framers used in the Confrontation Clause.” Ibid. In his view, “[l]aboratory analysts who conduct routine scientific tests are not the kind of conventional witnesses to whom the Confrontation

Clause refers.” Id. at 357, 129 S. Ct. at 2558, 174 L. Ed. 2d at 350. The dissent characterized the laboratory analysts as impartial, technical witnesses, not persons adversarial to the defendant, and concluded that no confrontation violation arose from admission of the laboratory certificates. Id. at 345-46, 129 S. Ct. at 2251-52, 174 L. Ed. 2d at 342-43.

2.

In 2011, in Bullcoming, supra, another five-to-four decision, the Supreme Court considered “whether the Confrontation Clause permits the prosecution to introduce a forensic laboratory report containing a testimonial certification -- made for the purpose of proving a particular fact -- through the in-court testimony of a scientist who did not sign the certification or perform or observe the test reported in the certification.” 564 U.S. at ___, 131 S. Ct. at 2710, 180 L. Ed. 2d at 615-16. The defendant was arrested and charged with driving while intoxicated in New Mexico; after obtaining a sample of the defendant’s blood, police investigators forwarded the sample to the New Mexico Department of Health, Scientific Laboratory Division (SLD). Id. at ___, 131 S. Ct. at 2709-10, 180 L. Ed. 2d at 616. Analysts at SLD used gas chromatography machines to identify and quantify blood alcohol concentration levels. Id. at ___, 131 S. Ct. at 2711, 180 L. Ed. 2d at 617. The results of the defendant’s blood

alcohol analysis were recorded onto "a standard SLD form titled 'Report of Blood Alcohol Analysis.'" Id. at __, 131 S. Ct. at 2710, 180 L. Ed. 2d at 616. The form included a section for identification of the "participants in the testing," and a section where "the forensic analyst certified his finding." Ibid. In particular, the SLD report contained the following: information from the police officer (reason for the arrest, and date/time blood was drawn); the "'certificate of analyst,' completed and signed by Curtis Caylor, the SLD forensic analyst assigned to test [the defendant's] blood sample," which included an affirmation that the "sample was received intact" and proper procedures were followed; the blood alcohol concentration; and a certification that the forensic analyst was qualified to conduct the test. Id. at __, 131 S. Ct. at 2710-11, 180 L. Ed. 2d at 616-17. There also was a section where "the SLD examiner who reviewed Caylor's analysis certified that Caylor was qualified to conduct the BAC test, and that the 'established procedure' for handling and analyzing [the] sample 'ha[d] been followed.'" Id. at __, 131 S. Ct. at 2711, 180 L. Ed. 2d at 617 (final alteration in original).

At trial, "the State announced that it would not be calling SLD analyst Curtis Caylor as a witness." Id. at __, 131 S. Ct. at 2711, 180 L. Ed. 2d at 618. The trial court admitted the blood report as a business record, over defense counsel's

objection, during the testimony of “an SLD scientist who had neither observed nor reviewed Caylor’s analysis.” Id. at ___, 131 S. Ct. at 2712, 180 L. Ed. 2d at 618. The defendant was convicted, and the state appellate court and state supreme court each affirmed the conviction. Id. at ___, 131 S. Ct. at 2712-13, 180 L. Ed. 2d at 618-19. Specifically, the state supreme court, while acknowledging that the report was testimonial, concluded that the substitute analyst served as a surrogate witness, such that there was no violation of the defendant’s right of confrontation. Id. at ___, 131 S. Ct. at 2713, 180 L. Ed. 2d at 619.

The Supreme Court reversed and held, in an opinion by Justice Ginsberg, that “surrogate testimony of that order does not meet the constitutional requirement” of confrontation. Id. at ___, 131 S. Ct. at 2710, 180 L. Ed. 2d at 616. The Court’s holding was joined by Justices Scalia, Thomas, Sotomayor, and Kagan.

Justice Ginsburg first found that the forensic report in issue was testimonial by analogizing the report to the certifications in Melendez-Diaz and underscoring the similarities: “[l]ike the analysts in Melendez-Diaz, analyst Caylor tested the evidence and prepared a certificate concerning the result of his analysis”; and “[l]ike the Melendez-Diaz certificates, Caylor’s certificate is ‘formalized’ in a signed

document, headed a 'report.'" Id. at __, 131 S. Ct. at 2717, 180 L. Ed. 2d at 624 (citations omitted). Notwithstanding that Caylor's SLD report was not notarized, it was determined that the formalities of the report sufficed to render its contents testimonial. Ibid.

The opinion then addressed whether the surrogate witness satisfied the Confrontation Clause requirements. Id. at __, 131 S. Ct. at 2714-16, 180 L. Ed. 2d at 620-23. Justice Ginsberg noted that Caylor's representations in the SLD report (that the blood sample was intact, that proper procedures were followed, and that the analysis was valid) were proper subjects for cross-examination. Id. at __, 131 S. Ct. at 2714, 180 L. Ed. 2d at 620-21. With cross-examination concerns in mind, the Court concluded that the surrogate witness did not satisfy the defendant's confrontation rights because the surrogate's testimony "could not convey what Caylor knew or observed about the events his certification concerned, i.e., the particular test and testing process he employed." Id. at __, 131 S. Ct. at 2715, 180 L. Ed. 2d at 622 (footnote omitted). Simply put, the surrogate did not certify the report or perform or observe the tests and, therefore, cross-examination of the surrogate would not satisfy the defendant's confrontation rights.

Justice Scalia joined the majority opinion in full, including Part IV, which addressed and dismissed concerns that

were voiced by parties and the dissent about the undue testimonial burdens that would be placed on forensic analysts when the Court's holding was applied to the many situations where multiple participants are involved in forensic testing, and the retesting of laboratory samples that seemingly would be necessitated in the holding's wake. Id. at __, 131 S. Ct. at 2717-19, 180 L. Ed. 2d at 624-26.

Part IV is unusual in that only Justice Scalia joined in that part of the opinion. Neither Justice Ginsberg nor any of the other justices who joined her opinion adopted that section's dismissal of the practical concerns implicated by the holding's direction for forensic reports. In addition, Justices Thomas and Ginsberg did not join in footnote six of the opinion, which reviewed the "primary purpose" analysis used in the appeal to determine whether the SLD document involved testimonial statements. Id. at __ n.6, 131 S. Ct. at 2714 n.6, 180 L. Ed. 2d at 620 n.6.⁷

Justice Sotomayor also wrote a separate concurring opinion that emphasized the limited nature of the Court's holding. Id. at __, 131 S. Ct. at 2719, 180 L. Ed. 2d at 626 (Sotomayor, J.,

⁷ As Justice Thomas previously had emphasized in his separate opinion in Melendez-Diaz, supra, his view was that the testimonial nature of statements depended on their formality. 557 U.S. at 329, 129 S. Ct. at 2543, 174 L. Ed. 2d at 333 (Thomas, J., concurring). His rejection of the articulation of the primary purpose test in Bullcoming is consistent with that view.

concurring). Her concurrence highlighted factual circumstances that were not presented in Bullcoming:

First, this is not a case in which the State suggested an alternate purpose, much less an alternate primary purpose, for the [SLD] report. . . .

Second, this is not a case in which the person testifying is a supervisor, reviewer, or someone else with a personal, albeit limited, connection to the scientific test at issue. . . . It would be a different case if, for example, a supervisor who observed an analyst conducting a test testified about the results or a report about such results. We need not address what degree of involvement is sufficient because here [the surrogate who testified] had no involvement whatsoever in the relevant test and report.

Third, this is not a case in which an expert witness was asked for his independent opinion about underlying testimonial reports that were not themselves admitted into evidence. See Fed. Rule Evid. 703 (explaining that facts or data of a type upon which experts in the field would reasonably rely in forming an opinion need not be admissible in order for the expert's opinion based on the facts and data to be admitted). As the Court notes, ante, at ___, 180 L. Ed. 2d at 622, the State does not assert that [the surrogate] offered an independent, expert opinion about Bullcoming's blood alcohol concentration. Rather, the State explains, "[a]side from reading a report that was introduced as an exhibit, [the surrogate] offered no opinion about [Bullcoming's] blood alcohol content" . . . We would face a different question if asked to determine the constitutionality of allowing an expert witness to discuss others' testimonial statements if the testimonial statements

were not themselves admitted as evidence.

Finally, this is not a case in which the State introduced only machine-generated results, such as a printout from a gas chromatograph. . . . [W]e do not decide whether . . . a State could introduce (assuming an adequate chain of custody foundation) raw data generated by a machine in conjunction with the testimony of an expert witness.

[Id. at ____, 131 S. Ct. at 2722, 180 L. Ed. 2d at 628-30 (Sotomayor, J., concurring).]

In making those important points, Justice Sotomayor's opinion foreshadowed many of the questions that courts such as ours have had to wrestle with in the wake of the Supreme Court's contemporary Confrontation Clause cases. See, e.g., Marshall v. People, 309 P.3d 943, 947-48 (Colo. 2013) (listing cases that have addressed just "[the] question of whether supervisor testimony satisfies the Confrontation Clause when the supervisor prepares or signs the report"), cert. denied, 82 U.S.L.W. 3685 (U.S. May 27, 2014). Importantly, she returned the discussion in Bullcoming to the notable point that Melendez-Diaz, in addressing a circumstance in which there was a failure to call any witnesses at all in connection with the forensic report in issue, did not stand for the proposition that every person identified as performing some task in connection with a forensic report must be called as a witness.

[N]ot . . . every person noted on the [SLD] report must testify. As . . . explained in

Melendez-Diaz, it is not the case that anyone whose testimony may be relevant in establishing the chain of custody, authenticity of the sample, or accuracy of the testing device, must appear in person as part of the prosecution's case

[Id. at ___ n.2, 131 S. Ct. at 2721 n.2, 180 L. Ed. 2d at 627 n.2 (internal quotation marks omitted).]

Justice Sotomayor's separate opinion has helped curb the belief that Bullcoming stands for the proposition that forensic reports require, for their admission, the testimony of all analysts involved in the handling and testing of a sample used in any forensic analysis. See, e.g., Ware v. State, ___ So. 3d ___, ___ (Ala. 2014) (slip op. at 16); Jenkins v. State, 102 So. 3d 1063, 1066 (Miss. 2012), cert. denied, ___ U.S. ___, 133 S. Ct. 2856, 186 L. Ed. 2d 914 (2013); State v. Eagle, 835 N.W.2d 886, 898 (S.D. 2013).

Notably, there also was a dissent in Bullcoming, supra, authored by Justice Kennedy and joined by Chief Justice Roberts, Justice Breyer and Justice Alito, that expressed disagreement with "the new and serious misstep of extending [Melendez-Diaz's] holding to instances like this one." 564 U.S. at ___, 131 S. Ct. at 2723, 180 L. Ed. 2d at 630 (Kennedy, J., dissenting). Building on his dissent in Melendez-Diaz, Justice Kennedy focused on "[a]dditional reasons, applicable to the extension of that doctrine and to the new ruling in this case," for his

objection to the majority's confrontation theory. Ibid. He termed "requiring the State to call the technician who filled out a form and recorded the results of a test . . . a hollow formality." Id. at __, 131 S. Ct. at 2724, 180 L. Ed. 2d at 632. He pointed to the varying principles that "have weaved in and out of the Crawford jurisprudence," and expressed serious reservations about the rationale employed by the majority: "That the Court in the wake of Crawford has had such trouble fashioning a clear vision of that case's meaning is unsettling" Id. at __, 131 S. Ct. at 2725-26, 180 L. Ed. 2d at 632-33. The dissent concluded with a strong call to reexamine the Court's Confrontation Clause jurisprudence:

Seven years after its initiation, it bears remembering that the Crawford approach was not preordained. This Court's missteps have produced an interpretation of the word "witness" at odds with its meaning elsewhere in the Constitution . . . and at odds with the sound administration of justice. It is time to return to solid ground.

[Id. at __, 131 S. Ct. at 2728, 180 L. Ed. 2d at 636 (citation omitted).]

3.

Most recently, the Supreme Court issued Williams, supra, a case involving a DNA profile produced by a private laboratory, Cellmark. The profile was discussed in testimony by a police analyst who matched it to the defendant's DNA. 567 U.S. at __, 132 S. Ct. at 2227, 183 L. Ed. 2d at 98. The analyst used

information from a DNA profile created from crime scene samples by another analyst in rendering her opinion that that profile matched the DNA profile that she herself had created from the defendant's buccal swab. Id. at __, 132 S. Ct. at 2240, 2243-44, 183 L. Ed. 2d at 112, 115-16. A plurality opinion by Justice Alito, joined by Chief Justice Roberts and Justices Kennedy and Breyer, set forth several rationales for concluding that the defendant's right of confrontation was not violated by the testimony. We refer to this as the plurality opinion, although the analysis is criticized by a majority of the Court, see id. at __, 132 S. Ct. at 2265, 183 L. Ed. 2d at 139 (Kagan, J., dissenting), including Justice Thomas, who joined in the judgment but disavowed the reasoning, id. at __, 132 S. Ct. at 2255, 183 L. Ed. 2d at 129 (Thomas, J., concurring).

Two key analyses are set forth in Justice Alito's opinion. Justice Alito first reasoned that "[o]ut-of-court statements that are related by the expert solely for the purpose of explaining the assumptions on which [her] opinion rests are not offered for their truth and thus fall outside the scope of the Confrontation Clause." Id. at __, 132 S. Ct. at 2228, 183 L. Ed. 2d at 99 (plurality opinion). In opining that the Cellmark DNA profile was never admitted for its truth, Justice Alito reasoned,

[t]his conclusion is entirely consistent

with Bullcoming and Melendez-Diaz. In those cases, the forensic reports were introduced into evidence, and there is no question that this was done for the purpose of proving the truth of what they asserted: in Bullcoming that the defendant's blood alcohol level exceeded the legal limit and in Melendez-Diaz that the substance in question contained cocaine. Nothing comparable happened here. In this case, the Cellmark report was not introduced into evidence. An expert witness referred to the report not to prove the truth of the matter asserted in the report, i.e., that the report contained an accurate profile of the perpetrator's DNA, but only to establish that the report contained a DNA profile that matched the DNA profile deduced from [Williams's] blood.

[Id. at ___, 132 S. Ct. at 2240, 183 L. Ed. 2d at 112.]

Alternatively, Justice Alito's opinion states that "even if the report produced by Cellmark had been admitted into evidence, there would have been no Confrontation Clause violation" because the report was not produced for the primary purpose of accusing a targeted individual. Id. at ___, 132 S. Ct. at 2228, 183 L. Ed. 2d at 99. "The report was sought not for the purpose of obtaining evidence to be used against [Williams], who was not even under suspicion at the time, but for the purpose of finding a rapist who was on the loose." Ibid. This alternative analysis -- promoting a targeted-accusation test -- provoked criticism from other Court members, who asserted that the opinion threw into disorder the Court's previously settled test for assessing whether evidence is testimonial for confrontation

purposes. Id. at __, 132 S. Ct. at 2274, 183 L. Ed. 2d at 149 (Kagan, J., dissenting). However, before turning to the dissent's disagreement with Justice Alito's plurality opinion, it is noteworthy that even within the plurality there were concurring opinions.

Justice Breyer, who also joined Justice Alito's opinion, issued a concurring opinion in which he largely agreed with the plurality, but expressed his view that "neither the plurality nor the dissent answers adequately: How does the Confrontation Clause apply to the panoply of crime laboratory reports and underlying technical statements written by (or otherwise made by) laboratory technicians?" Id. at __, 132 S. Ct. at 2245, 183 L. Ed. 2d at 117 (Breyer, J., concurring). Addressing the dissent specifically, Justice Breyer critically noted that its reasoning would "require[e] the prosecution to call all of the laboratory experts" who worked on a matter. Id. at __, 132 S. Ct. at 2246, 183 L. Ed. 2d at 118. Ultimately, Justice Breyer stated, "I adhere to the dissenting view set forth in Melendez-Diaz and Bullcoming, under which the Cellmark report would not be considered 'testimonial' and barred by the Confrontation Clause." Id. at __, 132 S. Ct. at 2248, 183 L. Ed. 2d at 121.

Justice Thomas concurred only in the judgment of the Alito plurality opinion. Id. at __, 132 S. Ct. at 2255, 183 L. Ed. 2d at 129 (Thomas, J., concurring in the judgment). In his view,

"the disclosure of Cellmark's out-of-court statements through the expert testimony of [the analyst who performed the DNA match] did not violate the Confrontation Clause." Ibid. However, he "share[d] the dissent's view of the plurality's flawed analysis," and only reached his conclusion "because Cellmark's statements lacked the requisite 'formality and solemnity' to be considered 'testimonial' for purposes of the Confrontation Clause." Ibid. (quoting Michigan v. Bryant, 562 U.S. __, __, 131 S. Ct. 1143, 1168, 179 L. Ed. 2d 93, 120 (2011) (Thomas, J., concurring in judgment)).

Justice Kagan authored a dissent, which was joined by Justices Scalia, Ginsburg, and Sotomayor. Id. at __, 132 S. Ct. at 2264, 183 L. Ed. 2d at 138 (Kagan, J., dissenting). In a single paragraph, Justice Kagan captured the splintered viewpoints existing among the Court's members:

The Court today disagrees [that Williams's confrontation rights were violated], though it cannot settle on a reason why. Justice Alito, joined by three other Justices, advances two theories -- that the expert's summary of the Cellmark report was not offered for its truth, and that the report is not the kind of statement triggering the Confrontation Clause's protection. . . . [I]n all except its disposition, his opinion is a dissent: Five Justices specifically reject every aspect of its reasoning and every paragraph of its explication. Justice Thomas, for his part, contends that the Cellmark report is nontestimonial on a different rationale. But no other Justice joins his opinion or subscribes to the test

he offers.

[Id. at ___, 132 S. Ct. at 2265, 183 L. Ed. 2d at 139 (citations omitted).]

On the merits of the case, Justice Kagan found that “the [Cellmark] report is, in every conceivable respect, a statement meant to serve as evidence in a potential criminal trial,” putting the report squarely within the realm of testimonial statements. Id. at ___, 132 S. Ct. at 2275, 183 L. Ed. 2d at 151. In concluding, Justice Kagan expressed her frustration with the results flowing from the Court’s divergent opinions:

The five Justices who control the outcome of today’s case agree on very little. Among them, though, they can boast of two accomplishments. First, they have approved the introduction of testimony at Williams’s trial that the Confrontation Clause, rightly understood, clearly prohibits. Second, they have left significant confusion in their wake. What comes out of four Justices’ desire to limit Melendez-Diaz and Bullcoming in whatever way possible, combined with one Justice’s one-justice view of those holdings, is -- to be frank -- who knows what. Those decisions apparently no longer mean all that they say. Yet no one can tell in what way or to what extent they are altered because no proposed limitation commands the support of a majority.

[Id. at ___, 132 S. Ct. at 2277, 183 L. Ed. 2d at 152.]

IV.

A.

Normally we would turn to the Supreme Court’s most recent

decision in an area of law to guide us in our interpretation and application of the Court's case law. However, like a number of state high courts and federal courts of appeal, we find that the fractured holdings of Williams provide little guidance in understanding when testimony by a laboratory supervisor or co-analyst about a forensic report violates the Confrontation Clause. See Jenkins v. United States, 75 A.3d 174, 184 (D.C. 2013) (noting that Williams "has not provided any clarity" to Confrontation Clause jurisprudence); State v. Ortiz-Zape, 743 S.E.2d 156, 161 (N.C. 2013) (noting "lack of definitive guidance" provided by Williams), cert. denied, 82 U.S.L.W. 3685 (U.S. May 27, 2014).

A case may be "of questionable precedential value" where "a majority of the Court expressly disagree[s] with the rationale of the plurality." Seminole Tribe of Fla. v. Florida, 517 U.S. 44, 66, 116 S. Ct. 1114, 1128, 134 L. Ed. 2d 252, 273 (1996). The general rule for interpreting opinions where no single rationale is espoused by a majority of the Court is that "the holding of the Court may be viewed as that position taken by those Members who concurred in the judgments on the narrowest grounds." Marks v. United States, 430 U.S. 188, 193, 97 S. Ct. 990, 993, 51 L. Ed. 2d 260, 266 (1977) (internal quotation marks omitted).

However, as recognized by the Court of Appeals for the

District of Columbia in attempting to interpret Williams, the Marks approach “works only when the narrowest opinion actually does represent ‘a common denominator.’ If one opinion ‘does not fit entirely within a broader circle drawn by the others,’ the Marks approach . . . would ‘turn a single opinion’ to which ‘eight of nine justices do not subscribe’ into law.” Young v. United States, 63 A.3d 1033, 1043 (D.C. 2013) (quoting King v. Palmer, 950 F.2d 771, 781-82 (D.C. Cir. 1991), cert. denied, 503 U.S. 918, 112 S. Ct. 1290, 117 L. Ed. 2d 514 (1992)). Rather, as the Court of Appeals for the Third Circuit has noted, in cases where the rationales given in the multiple opinions are not subsets of each other, “no particular standard constitutes the law of the land, because no single approach can be said to have the support of a majority of the Court.” Rappa v. New Castle Cnty., 18 F.3d 1043, 1058 (3d Cir. 1994); see also State v. Deadwiller, 834 N.W.2d 362, 373 (Wis. 2013) (“If no theoretical overlap exists between the rationales employed by the plurality and the concurrence, ‘the only binding aspect of the fragmented decision . . . is its specific result.’” (alteration in original) (quoting Berwind Corp. v. Comm’r of Soc. Sec., 307 F.3d 222, 234 (3d Cir. 2002), cert. denied, 538 U.S. 1012, 123 S. Ct. 1927, 155 L. Ed. 848 (2003)) (internal quotation marks omitted)).

We find that Williams is such a case for the following

reasons.

Justice Alito, in his four-justice plurality opinion, found no Confrontation Clause violation because (1) the expert witness's reference to the laboratory report in question was not an assertion that the information in the report was true, Williams, supra, 567 U.S. at __, 132 S. Ct. at 2240, 183 L. Ed. 2d at 111-12; and (2) the report was not testimonial because it was not produced for the primary purpose of accusing a specific, known defendant, id. at __, 132 S. Ct. at 2243-44, 183 L. Ed. 2d at 115-16. Justice Thomas, writing only for himself, concurred in the result because he also concluded that the report was not testimonial. Id. at __, 132 S. Ct. at 2255, 183 L. Ed. 2d at 129 (Thomas, J., concurring in the judgment). However, he applied an entirely different test, focusing on the formality and solemnity of the statement rather than whether its primary purpose was accusatory. Id. at __, 132 S. Ct. at 2259-60, 183 L. Ed. 2d at 133-34. He also disagreed that the report had not been introduced for its truth. Id. at __, 132 S. Ct. at 2257, 183 L. Ed. 2d at 130. Justice Kagan, in a four-justice dissent, disagreed with both the rationales articulated by the plurality and with the rationale articulated by Justice Thomas. Id. at __, 132 S. Ct. at 2265, 183 L. Ed. 2d at 139 (Kagan, J., dissenting). Rather, the dissent found that the report was testimonial because it was intended to serve as evidence in a

criminal trial and that the manner of its introduction failed to satisfy the defendant's confrontation rights. Id. at ___, 132 S. Ct. at 2267-68, 183 L. Ed. 2d at 142.

In short, each of those three opinions in Williams embraces a different approach to determining whether the use of forensic evidence violates the Confrontation Clause, and there is no narrow rule that would have the support of a majority of the Supreme Court that we can discern from the opinions in Williams. Further, Williams advances a wholly new approach to when a forensic document will be deemed testimonial, and that approach diverges from the primary purpose test that had been applied previously.

We find Williams's force, as precedent, at best unclear. Without more definitive evidence that the Court is adopting an approach other than the primary purpose test for use in determining when a forensic document is testimonial, we are reluctant to conclude that the primary purpose test has been abandoned.

Moreover, since the Supreme Court's Crawford decision and its subsequent cases applying the "primary purpose" test to various hearsay statements made to police,⁸ our Court has

⁸ See Davis, supra, 547 U.S. 813, 126 S. Ct. 2266, 165 L. Ed. 2d 224 (addressing consolidated cases Davis v. Washington, where Court found admissible victim's 911 call in assault case, and Hammon v. Indiana, where Court held inadmissible affidavit from

followed the "primary purpose" test to distinguish between non-testimonial and testimonial statements when determining whether a violation of the Confrontation Clause has occurred. See State ex rel. J.A., 195 N.J. 324, 348-51 (2008) (finding that, because non-appearing eyewitness's statement to police about robbery and robbers' flight was testimonial, statement's admission violated defendant's confrontation rights); State v. Buda, 195 N.J. 278, 304-08 (2008) (holding battered child's statement to mother and separate statement during hospital admission to child services worker were not testimonial and therefore admission of statements did not violate defendant's confrontation rights).⁹

domestic violence victim interviewed by police at crime scene); see also Bryant, supra, 562 U.S. at ___, 131 S. Ct. at 1150, 179 L. Ed. 2d at 101-02 (holding admissible statement by victim to police about shooter's identity because primary purpose was to respond to ongoing emergency).

⁹ The primary purpose test also has been used to discern whether statements in forensic reports were testimonial. In Sweet, supra, 195 N.J. at 373-74, we distinguished foundational documents from signed and certified State Laboratory certificates on the basis that the former were not "testimonial." Sweet involved Breathalyzer foundational documents, specifically ampoule testing certificates and breath testing instrument inspection certificates. Id. at 370-71. We noted that those foundational records constituted hearsay but were admissible as business records under N.J.R.E. 803(c)(3), and not "testimonial" so as to raise confrontation concerns. Id. at 372-74. A similar observation was made in State v. Chun when considering Alcotest blood alcohol test results. 194 N.J. 54, 142, cert. denied, 555 U.S. 825, 129 S. Ct. 158, 172 L. Ed. 2d 41 (2008). We noted that the foundational documents showing that the device was in good working condition constituted admissible hearsay as business records, without risking violation of a defendant's confrontation rights. Ibid.

Accordingly, we adhere to that approach.

Furthermore, the divergent analytic approaches taken in Williams with respect to the testimonial nature of the Cellmark report also undermine the decision's value in assessing, in any given circumstance involving forensic evidence, whether a defendant's confrontation rights were violated. Accordingly, we turn for more reliable guidance in that respect to pre-Williams Confrontation Clause law.

B.

In Melendez-Diaz, supra, no witness was offered to support and be cross-examined in respect of the statements contained in the forensic document that was admitted into evidence without live testimony. 557 U.S. at 308-09, 129 S. Ct. at 2531, 174 L. Ed. 2d at 320. In Bullcoming, supra, a forensic report was admitted into evidence through the testimony of a co-worker who did not observe the work of the analyst who performed the testing, serve as the analyst's supervisor, or certify the results obtained by the analyst whose work was contained in the report as a second independent reviewer. 564 U.S. at ___, 131 S. Ct. at 2709-10, 180 L. Ed. 2d at 616. The holdings in those two cases can be understood based on the peculiar and stark facts in each. That said, it is far from clear that either case compels a broad new obligation requiring testimony by multiple analysts involved in every kind of forensic testing that produces a

report used in a criminal case against a defendant.

First, neither Bullcoming's holding nor Melendez-Diaz's requires that every analyst involved in a testing process must testify in order to admit a forensic report into evidence and satisfy confrontation rights. That conclusion was underscored in Justice Sotomayor's observations on Melendez-Diaz in Bullcoming, supra. See 564 U.S. at ___ n.2, 131 S. Ct. at 2721 n.2, 180 L. Ed. 2d at 627 n.2 (Sotomayor, J., concurring). Justice Kagan's dissent in Williams, supra, makes the same point. See 567 U.S. at ___ n.4, 132 S. Ct. at 2273 n.4, 183 L. Ed. 2d at 148 n.4 (Kagan, J., dissenting). The fact that no member of the Court except Justice Scalia joined Section IV of Bullcoming further suggests that all of the other justices harbor some level of disquiet over the necessity and practicality of rigidly interpreting the Confrontation Clause to compel the testimony of all persons who handled or were involved in the forensic testing of a sample.

Second, neither Melendez-Diaz nor Bullcoming lead to the conclusion that in every case, no matter the type of testing involved or the type of review conducted by the person who does testify, the primary analyst involved in the original testing must testify to avoid a Confrontation Clause violation. In Melendez-Diaz, no analyst testified. In Bullcoming, the surrogate analyst who testified was found to lack sufficient

direct knowledge about the blood alcohol testing and the conclusions in the blood alcohol report that the surrogate neither certified nor separately reviewed. We do not find that either Melendez-Diaz or Bullcoming stands for the proposition that in all cases the primary analyst who performed the test must testify when a different, sufficiently knowledgeable expert is called to testify at trial. That would take the holdings of those decisions to a new level, which we decline to do when the Supreme Court has not done so.

Moreover, it would take confrontation law to a level that is not only impractical, but, equally importantly, is inconsistent with our prior law addressing the admissibility of an expert's testimony in respect of the substance of underlying information that he or she used in forming his or her opinion.

Even prior to the Supreme Court's reexamination of the Confrontation Clause in Crawford and our subsequent articulation of the primary purpose test in J.A. and Buda, we had grappled with the admissibility of medical reports and other forensic evidence under our evidence rules. As noted by the State in this case, N.J.R.E. 703 allows a testifying expert to rely on inadmissible facts or data as long as those facts or data are "of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject." N.J.R.E. 705 further provides that, although an expert "may

testify in terms of opinion or inference and give reasons therefor without prior disclosure of the underlying facts or data, . . . [t]he expert may in any event be required to disclose the underlying facts or data on cross-examination.” While not a substitute for a confrontation analysis as to when the proponent of the underlying information must be produced for cross-examination, it provides necessary background to our analysis of the forensic evidence in issue.

Among the documents that may properly be relied on by an expert witness under Rule 703 are nontestimonial foundational documents. We have previously held that documents demonstrating that a machine is in good working condition and is calibrated correctly are within this class of nontestimonial foundational documents because they do not report past facts and are not generated in order to establish a fact that is an element of a criminal offense. See Sweet, supra, 195 N.J. at 372-74 (noting admissibility of ampoule testing certificates and breath testing instrument inspection certificates because nontestimonial); State v. Chun, 194 N.J. 54, 142-44 (commenting similarly for Alcotest blood alcohol test results in respect of foundational documents that show device is in good working condition), cert. denied, 555 U.S. 825, 129 S. Ct. 158, 172 L. Ed. 2d 41 (2008). A number of other courts similarly have found that the introduction at trial of calibration records does not violate

the Confrontation Clause. See, e.g., People v. Pealer, 985 N.E.2d 903, 907-08 (N.Y.), cert. denied, ___ U.S. ___, 134 S. Ct. 105, 187 L. Ed. 2d 77 (2013); Commonwealth v. Dyarman, 73 A.3d 565, 574 (Pa. 2013), cert. denied, ___ U.S. ___, 134 S. Ct. 948, 187 L. Ed. 2d 785 (2014); Jones v. State, 982 N.E.2d 417, 428 (Ind. Ct. App.), transfer denied, 987 N.E.2d 70 (Ind. 2013).

Although a hearsay analysis is not a replacement for a confrontation analysis, we note further that in the application of N.J.R.E. 808's business records hearsay exception to scientific reports and records containing embedded information we eschew admission of subjective, complex hearsay statements. The admissibility of such reports depends on factors including "the relative degrees of objectivity and subjectivity involved in the procedure; the regularity with which these analyses are done; [and] the routine quality of each analysis." State v. Matulewicz, 101 N.J. 27, 30 (1985) (addressing laboratory report prepared by State Police chemist). Recent cases in this context continue to connect the degree of complexity of the analysis with the importance of allowing the other party to cross-examine the expert who conducted that analysis. See Agha v. Feiner, 198 N.J. 50, 65-67 (2009) (differentiating between "straightforward observations" contained in expert reports that may be admitted for their truth without an opportunity for cross-examination of the declarant, and statements of "diagnosis" "critical to the

primary issue in the case" which may not be); Chun, supra, 194 N.J. at 142 (finding routine Breathalyzer calibration test reports admissible as business records); Brun v. Cardoso, 390 N.J. Super. 409, 422 (App. Div. 2006) (rejecting medical document as business record based on complexity of MRI reading and diagnosis).

In determining when the facts underlying a forensic expert opinion may be disclosed to the jury, our evidence case law has focused on whether the witness is knowledgeable about the particular information used in forming the opinion to which he or she is testifying and has a means to verify the underlying information even if he or she was not the primary creator of the data. Our evidence law is thus consistent with the principle that a knowledgeable expert who is someone other than the primary analyst who conducted a forensic gas chromatography/mass spectrometry test may testify to an opinion regarding testing results, when those results have been generated by demonstrably calibrated instruments. Accord Ortiz-Zape, supra, 743 S.E.2d at 161-62 (holding that expert's use of machine-generated raw data, consistent with North Carolina's Evidence Rule 703, does not violate Confrontation Clause when defendant has opportunity to cross-examine expert who rendered opinion based on that data).

With that backdrop, we examine the testimony of Dr. Barbieri that was challenged in this matter.

V.

A.

In this appeal, defendant argues that her confrontation rights were violated by Dr. Barbieri's testimony and the admission of his certified report. She focuses on Dr. Barbieri's testimony and opinion that, based on the nature and quantity of drugs found in defendant's blood sample from testing procedures carried out by analysts in the laboratory he supervised, defendant was drug impaired at the time of her motor vehicle accident. The evolution of defendant's argument deserves brief mention.

At trial, defendant objected to the admission of Dr. Barbieri's three-page report on the basis that it was inadmissible hearsay because Dr. Barbieri testified to someone else's findings rather than his own. The State emphasized that Dr. Barbieri testified that he personally reviewed the data generated from the gas chromatography/mass spectrometry tests and that he was the one who drafted and signed the report setting forth the results and his opinion. There was no quoting of another person's findings in Dr. Barbieri's report; it only referenced machine-generated data identifying and quantifying the drugs found in defendant's blood sample.

The trial court rejected defendant's hearsay argument as a basis to exclude the report, and rightly so. Dr. Barbieri

examined and used the raw data generated by the gas chromatography/mass spectrometry machines in preparing his report and the conclusions that he reached. This case is unlike Agha, supra, 198 N.J. at 67, where an expert testified based on a hospital report containing another doctor's subjective statements and conclusions. Under those circumstances, we held that the statements contained in the report were hearsay and could not be admitted for their truth through the expert's testimony. Ibid.

Later, at the close of the State's case, defendant filed a motion to strike Dr. Barbieri's testimony, arguing that the State was required to produce the person who actually performed the testing about which Dr. Barbieri testified. Defendant did not expressly claim a violation of her rights under the Confrontation Clause. The trial court denied the motion, explaining that "[a]s the supervisor of the lab, certainly [Dr. Barbieri is] in a position to testify about the procedures that were employed and give an opinion, based upon his expertise, [on] what conclusions should flow from that testing." The court indicated that the weight to be given to the testimony would be up to the jury, but it declined "to exclude [Dr. Barbieri's] testimony because he did not personally perform the tests."

In a post-trial motion and when the case was appealed to the Appellate Division, defendant cast her argument about Dr.

Barbieri's testimony as a violation of the Confrontation Clause. The Appellate Division addressed that Confrontation Clause argument, and we do as well. However, the State makes a strong argument that defendant waived her Confrontation Clause argument, or that the issue should be assessed as a matter of plain error in light of the way it has been raised. Had a confrontation argument been raised before the State concluded its case, inquiry could have been made as to which analyst or analysts defendant wanted produced. Even at this stage in the proceedings, we are uncertain whether defendant argues that the State must call all fourteen analysts who played some role, no matter how inconsequential, in the procedures and protocols at the lab, or one analyst, or some number in between. Defendant has never been put to the task of making a confrontation demand.¹⁰ As such we must consider defendant's confrontation argument taken to the extreme: that all fourteen analysts must be produced in order for the State to introduce Dr. Barbieri's testimony and report.

¹⁰ Defendant's argument that, until the trial, she did not know that Dr. Barbieri did not personally perform the tests rings hollow. First, she should have known from the documents turned over in discovery. The hundreds of pages of discovery that constituted the lab documents do not contain Dr. Barbieri's name on the pages reporting machine readings. Second, even after discovering this fact during cross-examination of Dr. Barbieri, defendant still never made any demand for production of any or all analysts.

With that perspective, we turn to Dr. Barbieri's testimony, which was offered without any notice that, for confrontation purposes, he needed to justify in detail the independence of his review of the testing that was done or the exact manner in which he reached the conclusions in his report.

B.

Dr. Barbieri's testimony explained that the analysts and technicians employed by NMS perform differing roles in the handling and testing of blood samples. Indeed, much of modern forensic testing involves multiple analysts, as was the case in the present matter. He described the process in detail, including how a specimen is inspected and marked when received, how a work order is assigned and follows the work through every step in the process, and how chain of custody is maintained and recorded. His description of the testing process, he said, applied generally and in defendant's case.

The samples are labeled.

The testing is ordered by a forensic processor.

Aliquots are drawn.

An aliquot is a small sample of the original sample for moving back into the laboratory proper for the various types of testing.

The original sample never leaves the forensic processing area.

After the aliquots are drawn, that original sample is stored in a secured refrigerator. Labeled as to location and things like that. So the aliquot goes back to the lab.

All of this is done, and [a] forensic folder is produced, which is labeled and that carries through with all the testing; and some of the original data actually goes into that folder.

When all the testing is done, the toxicologist is notified. Toxicologists pick up the folder [and] review all the data. Either the raw data that's in the file, or on the computer. Generate a report. And that report is sent to the client. With all the information that we have received. And positive and negative findings as well.

Dr. Barbieri testified that 957 pages of raw data, including chain of custody and machine-generated documents, were produced from the work that NMS performed on defendant's blood sample. That raw data was shared with defendant in discovery and included, in relevant part, the machine-generated data from the gas chromatography/mass spectrometry machines on the calibration material, the quality control material, and the aliquots of defendant's blood sample. Dr. Barbieri explained how gas chromatography/mass spectrometry, which he was trained to perform and was knowledgeable about, was used to confirm the presence of drugs in defendant's blood:

[I]t's a procedure that's been around since, 1950's. So it's a well established procedure.

There's two parts to the instrumentation. The Gas Chromatogram, and then the Mass Spectrometer.

The GC part of it is basically a large tube. It's about 100-foot very fine tube in an oven. And, there's a gas that flows through: Helium inert gas. And the sample is injected into one end of the column into the injectory port. And this oven heats. It heats it up to over 250 degrees centigrade. It's very hot. And everything volatilizes into a vapor phase. And as the gas flows through this column[, t]he column separates different compounds. And when it comes out at the detector, the time from the time it's injected, to the time it comes out, is called the "retention time." The time it's retained in the column.

Every compound, based upon the way the analysis is set up, will have a definitive retention time. So we measure the retention times as a marker for specific compounds.

As we do this, we also include in the batch, calibration material, which would be pure compounds of different concentrations. And also quality control material. Which is really blood samples that contain either negative, no compound, or presence of some compounds.

So we're monitoring the system as it [] goes through. And we compare the responses of [the] unknown blood sample, the retention time, and the pe[a]k height that we get from the detector against the calibration materials, quality controls. So we can get a quantitation of the compound; so we identify, we quantify.

At the other end after it comes out, is Mass Spectrometer. This is the really important part of the instrument. Because when the pe[a]ks come out through the GC

part, those new Mass Spectrometer, it's like a ray gun, basically, it's shooting bullets at the compound as it's passing through. It fractionates them. Breaks them apart. And it breaks the molecules apart into pieces of its original molecular weight.

Whether we do it in Willow Grove, we do it here, or we do it in [] Alaska . . . the fractionation of that compound is the same.

You have a book. You look up Cocaine. You get the same pieces of that molecule.

So we basically have a fingerprint of every molecule that's moving through that. And it's quantified in the system. So we have a fingerprint for cocaine. We have a fingerprint for Cocaine metabolites.

And so the Mass Spectrometer breaks it up, gives us a fingerprint, and gives us, here is the different masses, and compares it against a library. And it says; this is a 98 percent hit, basically. And so, again, positive identification and qualification.

And that's how we ran the confirmations on each of these type of compounds.

Dr. Barbieri then identified the drugs that were found in defendant's blood sample and the quantities detected. He explained that documents are produced by the instruments when the testing is performed and that the testing results are printed directly from the machines. Those documents are compiled for a reviewer who, in this case, was Dr. Barbieri. Dr. Barbieri testified that he had available all 957 documents generated during the testing process involved in defendant's case when he performed his review and analysis of the data. He

reviewed the raw data before preparing his signed and certified report as the forensic toxicologist on defendant's testing. Although in his testimony Dr. Barbieri discussed the nature and quantities of drugs he found to be present in defendant's blood, the machine-generated documents were not admitted into evidence.

The State also entered Dr. Barbieri's certified report into evidence through his live testimony. It is undisputed that Dr. Barbieri did not actually conduct the initial or confirmatory screening via gas chromatography/mass spectrometry performed on defendant's blood. We also have no evidence in this record that Dr. Barbieri directly observed the individual analysts, who were under his supervision, as each performed the tasks involved in the testing process.

VI.

We note at the outset the factual differences between this case and Melendez-Diaz and Bullcoming.

First, unlike in Melendez-Diaz, where no witness was offered to testify to the statements contained in the state lab's forensic document that was admitted into evidence, here we are not asked to consider a self-admitting report.

Indeed, to the extent that, once before, we were presented with an argument that laboratory certificates issued by the New Jersey State Laboratory could be regarded under N.J.S.A. 2C:35-19 as self-admitting documents that obviated any

confrontation right concerns, we rejected the notion. See State v. Simbara, 175 N.J. 37, 49 (2002). Instead, we interpreted N.J.S.A. 2C:35-19 as creating a notice-and-demand procedure for the assertion -- or waiver -- of a defendant's right to confront the certificate's preparer. Id. at 48-49.

The NMS report at issue here is outside the purview of N.J.S.A. 2C:35-19 because the report was the product of a private laboratory. More importantly, the report was admitted through the live testimony of Dr. Barbieri, the person who prepared, signed, and certified the report, and Dr. Barbieri was available for cross-examination on his report. That renders the circumstances of the NMS report's admission materially different from those of the report admitted at trial in Melendez-Diaz.

Second, the forensic report and testimony admitted in this case differs in several respects from what happened in Bullcoming. In Bullcoming, supra, the SLD forensic report was admitted through the testimony of a co-analyst who did not observe the work of the SLD analyst who performed the testing and who did not serve as a supervisor or reviewer responsible for certifying the blood alcohol results obtained by the analyst whose work was referenced in the report. 564 U.S. at ___, 131 S. Ct. at 2711-12, 180 L. Ed. 2d at 618. If all we had was a co-analyst reciting the findings contained in a report that he had not participated in preparing or evaluated independently, we

would be faced with a scenario indistinguishable from Bullcoming. But that is not the case here.

In the present matter, Dr. Barbieri supervised the technicians and analysts who handled defendant's blood sample and performed the tests on small amounts of that sample using the laboratory's gas chromatography/mass spectrometry machines. But we do not have testimony from someone simply bearing the title of supervisor. Here we are presented with testimony by a supervisor who was qualified as an expert in the relevant subjects, and who analyzed the machine-generated data and produced the certified report in issue.

Dr. Barbieri reviewed the procedures followed in the testing and personally reviewed the machine-generated documents, including the readings from calibration material and quality control material, when reviewing the readings taken on the aliquots of defendant's blood.¹¹ He signed the report and certified its accuracy. The supervisory role that Dr. Barbieri played in the testing process also required him to be responsible for the testing procedures utilized by the NMS lab generally and in this case, to be knowledgeable about the testing, and to be able to evaluate the results generated by the

¹¹ Dr. Barbieri also reviewed the chain of custody records as part of his review and certified that the analysis was performed under chain of custody. All of the necessary documents were turned over in discovery and are not at issue in this appeal.

tests run by persons under his supervision and responsibility. He testified that he had to satisfy himself that the lab's procedures and protocols were followed during the testing before issuing his report.

Dr. Barbieri's participation in preparing the report and developing the substantive conclusions contained therein was real and direct. He evaluated the results of the testing, found them to be reliable, and produced the report detailing those results. Moreover, he signed and certified that report. As the reviewer of the testing process and the author of the report, it was proper for him to testify to its contents and to answer questions about the testing it reported. The fact that Dr. Barbieri was testifying in respect of his own report distinguishes him from the co-analyst in Bullcoming, who merely presented a blood alcohol report prepared by another SLD co-employee.

With regard to Dr. Barbieri's in-court testimony, we note that he explained how he independently reviewed the machine-generated data and came to his conclusion about the findings and opinion stated in the report that he authored, signed, and certified. Dr. Barbieri testified that he reviewed the compiled calibration and quality control documents and machine-generated test results on defendant's blood sample and concluded that they demonstrated that

[a]ll the tests were done appropriately, according to our standard operating procedures, including our quality controls, calibration, blanks, and all the testing was done. And I believe the results produced were accurate and true representations of what was there in the blood of Julie Michaels.

We conclude that there is no confrontation violation caused by Dr. Barbieri's use of nontestimonial calibration and quality control data in preparing his report, or by his discussion of that data in his testimony. Cf. Sweet, supra, 195 N.J. at 370-71; Chun, supra, 194 N.J. at 142-44. Other courts similarly have determined that the introduction at trial of calibration records does not violate the Confrontation Clause. See, e.g., Pealer, supra, 985 N.E.2d at 907-08; Dyarman, supra, 73 A.3d at 574; Jones, supra, 982 N.E.2d at 428.

To the extent that the machine-generated results of the tests conducted on defendant's blood are of a more directly accusatory nature, we address that data separately. As noted, the machine-generated documents identifying the drugs found in defendant's blood, and quantifying each drug, were not introduced into evidence, but their content was used by Dr. Barbieri in preparing his report that stated the drugs found to be present in defendant's blood and the quantities detected.

Certainly, Dr. Barbieri's report is testimonial, both in his conclusion and in his use of test results indicating that

defendant had specific amounts of certain drugs in the blood sample taken shortly after her motor vehicle accident. One can hardly dispute that those conclusions are testimonial in nature, and Bullcoming, supra, supports such a determination. See 564 U.S. at ___, 131 S. Ct. at 2717, 180 L. Ed. 2d at 623-24. Dr. Barbieri's report bears all the indicia of a direct accusation against defendant. As the author of that report, he is bearing witness against the accused, namely defendant, when the report is prepared for the State at its request. Because defendant had the opportunity to confront and cross-examine Dr. Barbieri in court about the results of the testing that he reviewed and certified, defendant was not denied her right to confrontation.

Reviewed in toto, the machine-generated data provided the basis for Dr. Barbieri to review the test results independently and certify that the results were accurate and not flawed in some way. Clearly, defendant could not cross-examine the machines themselves. See Jenkins v. State, supra, 102 So. 3d at 1069 (approving supervisor's expert testimony after review of gas chromatography results obtained by nontestifying analyst); see also United States v. Moon, 512 F.3d 359, 362 (7th Cir.) ("[H]ow could one cross-examine a gas chromatograph?"), cert. denied, 555 U.S. 812, 129 S. Ct. 40, 172 L. Ed. 2d 19 (2008). And we have rejected the argument that defendant's confrontation rights could only be satisfied by testimony from all analysts

involved in the testing. Defendant's opportunity to cross-examine Dr. Barbieri about the testing and its results provided meaningful confrontation. His testimony is in no way equivalent to the surrogate testimony provided by the co-analyst from the SLD lab in Bullcoming.

To be complete, we highlight our point of difference with the dissent. Contrary to the dissent's characterization of this record, Dr. Barbieri was not repeating the findings and conclusions of the analysts who manned the gas chromatography/mass spectrometry devices. Rather, the findings and conclusions contained in the report and to which he testified were his own. It was his job to review and certify the results of the tests performed on defendant's blood sample.

Dr. Barbieri testified that he relied on raw data produced by the machine tests regarding the levels of alprazolam, cocaine, and cocaine metabolites in defendant's system, and drew his own conclusions from that data. He reviewed the calibration and quality control tests to ensure that the machine was producing accurate results in order to be satisfied that the machines were generating true readings when defendant's blood sample was tested. He explained the confirmatory test that is performed by the gas chromatography and mass spectrometry machine and how its results are issued by the machine itself and are not capable of being misreported or altered by a human

being. Dr. Barbieri's explanation could have been more fulsome. See e.g., Ortiz-Zape, supra, 743 S.E.2d at 158-59 (setting forth detailed testimony of co-analyst on workings of gas chromatography/mass spectrometry machine, whose results witness independently reviewed and testified to without violating defendant's confrontation rights). However, as he explained, the machine process is highly standardized. In the instant case, the State's presentation of this supervisor/reviewer's signed and certified report, based on his independent review of machine-generated data, through his live testimony, did not violate defendant's confrontation rights.

Our difference with the dissent thus comes down to this: we believe that a truly independent reviewer or supervisor of testing results can testify to those results and to his or her conclusions about those results, without violating a defendant's confrontation rights, if the testifying witness is knowledgeable about the testing process, has independently verified the correctness of the machine-tested processes and results, and has formed an independent conclusion about the results. The dissent claims that such testimony thwarts a defendant's confrontation rights. In the dissent's view, only testimony by the original analyst who worked on a test procedure, of any kind, can satisfy a defendant's confrontation rights. The majority's view, and holding, recognizes that testimonial facts can "belong" to more

than one person if the verification and truly independent review described above are performed and set forth on the record by the testifying witness.

In our judgment, Dr. Barbieri satisfied that standard and was not parroting the testimonial hearsay of another analyst. Rather, he testified to the findings and conclusions that he reached based on test processes that he independently reviewed and verified. Permitting such testimony does not value expediency over constitutional rights, as the dissent claims. Instead, this approach recognizes the reality that more than one expert can responsibly verify a process, find a fact to be reliable, and draw a conclusion. Respectfully, we do not accept the dissent's inflexible approach to scientific testing that involves machine-generated data.

In concluding, as we do on this record, that defendant's confrontation rights were not violated, we note that several other jurisdictions similarly have found that a supervisor or reviewing analyst who reviews and certifies the work of an analyst or analysts may testify in respect of forensic evidence without running afoul of a defendant's confrontation rights.

Specifically, a number of states have held that there is no Confrontation Clause violation where a supervisor, who has conducted his or her own independent review of the data generated by other analysts, testifies to the conclusions he or

she has drawn from that independent analysis. See, e.g., Marshall v. People, supra, 309 P.3d at 947-48 (finding no confrontation violation where testifying expert was lab supervisor who reviewed urinalysis test results and prepared, signed, and certified report); Jenkins v. State, supra, 102 So. 3d at 1069 (finding no confrontation violation where testifying expert was lab supervisor who reviewed and co-signed report identifying tested substance as cocaine and was knowledgeable about testing procedures); Commonwealth v. Yohe, 79 A.3d 520, 540-41 (Pa. 2013) (finding confrontation rights satisfied by ability to cross-examine supervisor who analyzed raw data from blood alcohol tests, drew conclusions about intoxication, and prepared and signed report), cert. denied, 82 U.S.L.W. 3685 (U.S. May 27, 2014); see also Ortiz-Zape, supra, 743 S.E.2d at 164-65 (finding no confrontation violation where testifying expert was technical reviewer who testified to independent conclusions based on review of cocaine substance analysis report as well as all raw data and calibration and maintenance documentation from testing).

We recognize that the holdings of various courts around the country have not been uniform in analyzing Confrontation Clause questions like the one presented here. Some courts, following Justice Thomas, have adopted an approach that focuses on the formality and solemnity of the report at issue. See, e.g.,

People v. Lopez, 286 P.3d 469, 581-84 (Cal. 2012) (finding no confrontation violation where analyst testified based on colleague's blood alcohol report and testing because report was unsigned and consisted entirely of chain of custody log and machine-generated test data), cert. denied, __ U.S. __, 133 S. Ct. 1501, 185 L. Ed. 2d 556 (2013); Derr v. State, 73 A.3d 254, 272-73 (Md. 2013) (finding serological and DNA testing reports introduced through lab supervisor's testimony insufficiently formal to be testimonial because unsigned and no statements attesting to accuracy), cert. denied, 82 U.S.L.W. 3707 (U.S. June 9, 2014).

Another subset of courts, citing the confusion generated by the fractured Williams opinions, have not attempted to formulate a general approach for determining when the introduction of forensic evidence by someone other than the analyst who performed the tests will violate the Confrontation Clause. See, e.g., State v. Bolden, 108 So. 3d 1159, 1161 (La. 2012); Deadweller, supra, 834 N.W.2d at 373. Rather, these courts have resolved the cases before them by drawing analogies to the specific facts of Williams and holding that, because the facts are similar, the same result should pertain. Bolden, supra, 108 So. 3d at 1162; Deadweller, supra, 834 N.W.2d at 373-75.

We further acknowledge that a few state high courts have found that a defendant's confrontation rights are violated when

the analyst who physically performed the tests at issue does not testify, even when the testifying expert is a supervisor who reviewed the data generated by the analyst and prepared the report based on that data. See Martin v. State, 60 A.3d 1100, 1108-09 (Del. 2013) (finding Confrontation Clause violation where lab manager who reviewed data and wrote report testified about results of blood alcohol tests because manager did not perform or observe tests and underlying test documents were testimonial and admitted for truth under Bullcoming); Jenkins v. United States, supra, 75 A.3d at 189-92 (finding violation where testifying expert was lab supervisor who prepared report stating DNA profile match but did not perform underlying tests; test documents were testimonial because prepared for and used in criminal prosecution). That approach has the advantage of avoiding the possibility that the United States Supreme Court may one day agree on the most exacting interpretation of confrontation rights vis-à-vis multiple actors involved in handling and testing evidence subject to all forms of forensic testing. However, as noted earlier, that outcome is uncertain. And taking the most rigid approach to confrontation rights in the context of forensic reports carries practical drawbacks that range from moderate to severe. It leaves no meaningful solution where the analyst or analysts no longer work at the lab, are unavailable, or are deceased. There is a real likelihood that

such dilemmas may arise in cold cases. Further, it cannot be assumed that retesting a sample is invariably a possibility. Moreover, demanding the in-court testimony of every analyst is unnecessary for providing the defendant with meaningful cross-examination on every testing process utilized in forensic examinations.

We believe that the Supreme Court's decisions and various opinions in Melendez-Diaz and Bullcoming have left the states room to apply the confrontation principles expressed in those cases in meaningful ways, depending on the nature of the testing that is involved and the independence of the analysis and review of the person who testifies on the basis of verifiable test results.

Here we are satisfied that the machine-calibrated, quality-controlled gas chromatography/mass spectrometry tests performed on defendant's blood sample provided a sound basis for Dr. Barbieri, as an expert in the fields of forensic toxicology and pharmacology and a person knowledgeable about the testing process employed, to opine on the drugs found in defendant's blood and their likely impact on her at the time the blood was drawn. When a confrontation challenge is raised, the record must show in detail the basis upon which the testifying witness soundly has reached his or her conclusion. Here, defendant's opportunity to cross-examine Dr. Barbieri satisfied defendant's

right to confrontation on the forensic evidence presented against her.

VII.

The judgment of the Appellate Division is affirmed.

CHIEF JUSTICE RABNER, JUSTICES PATTERSON and FERNANDEZ-VINA, and JUDGES RODRÍGUEZ and CUFF (both temporarily assigned) join in JUSTICE LAVECCHIA's opinion. JUSTICE ALBIN filed a separate, dissenting opinion.

STATE OF NEW JERSEY,

Plaintiff-Respondent,

v.

JULIE L. MICHAELS, a/k/a LYNN
MICHAELS, JULIE LYNN, JOLINE
BROOKS, JODIE L. CALLOWAY,
JODIE CALLAWAY,

Defendant-Appellant.

JUSTICE ALBIN, dissenting.

In criminal cases, the State routinely retains scientists and analysts to perform tests on a suspect's blood to detect the presence of drugs or alcohol. Today, the majority pronounces that the accused has no constitutional right to confront the scientist or analyst who actually performs the test. The majority upholds a criminal conviction based on the expert testimony of a laboratory "supervisor," who did not perform, participate in, or observe the analysis of defendant's blood test. Indeed, this "supervisor" was used as a conduit to pass through to the jury the testimonial statements of the real test analysts who were never subject to cross-examination.

The Sixth Amendment's Confrontation Clause generally bars the admission of an absent witness's out-of-court testimonial

hearsay as a substitute for live in-court testimony when the accused has not had the opportunity to cross-examine the absent witness. Crawford v. Washington, 541 U.S. 36, 50-62, 124 S. Ct. 1354, 1363-71, 158 L. Ed. 2d 177, 192-99 (2004). The majority's opinion cannot be squared with that principle. More ominously, the opinion is in direct conflict with Bullcoming v. New Mexico, 564 U.S. ___, ___, 131 S. Ct. 2705, 2713, 180 L. Ed. 2d 610, 619 (2011), a case in which the United States Supreme Court held that the State violated the Sixth Amendment's Confrontation Clause by calling a non-testing analyst as a substitute witness for the analyst who performed a blood analysis. However confused the United States Supreme Court's Confrontation Clause jurisprudence may be in the wake of Williams v. Illinois, 567 U.S. ___, 132 S. Ct. 2221, 183 L. Ed. 2d 89 (2012) -- with its plurality, concurring, and dissenting opinions -- it is doubtful that any member of the Williams Court would adopt the approach the majority is taking here.

The purpose of the Confrontation Clause is not to foster expedient trial procedures, but to ensure that testimonial evidence is tested in the crucible of cross-examination -- however time consuming or difficult that process may be. See Crawford, supra, 541 U.S. at 61, 124 S. Ct. at 1370, 158 L. Ed. 2d at 199. Thus, chemical analysts who provide out-of-court "testimony" through laboratory reports must be made available

for cross-examination. Bullcoming, supra, 564 U.S. at ____, 131 S. Ct. at 2716, 180 L. Ed. 2d at 622.

Curtailling confrontation rights is not the answer to the uncertainty in federal jurisprudence. Although the majority upholds the conviction in this case, it is chancing the reversal of countless future convictions by rendering an opinion that may fall below the minimum guarantees of the Sixth Amendment. The majority may be charting a course that will collide with the next United States Supreme Court case construing the Confrontation Clause. Law enforcement, if properly directed, can successfully prosecute cases while conforming to the dictates of the Confrontation Clause. It has done so in the past.

Whatever perceived benefits are achieved by the majority opinion, they come at a high price -- the abandonment of basic principles that underlie our Confrontation Clause jurisprudence. I therefore respectfully dissent.

I.

A.

The majority opinion cannot be reconciled with the United States Supreme Court's recent Confrontation Clause jurisprudence. One overarching principle remains clear from that jurisprudence: the admission of testimonial statements

from witnesses absent from trial violates the Sixth Amendment's Confrontation Clause unless the witnesses are "unavailable," and "the defendant has had a prior opportunity to cross-examine" them. Crawford, supra, 541 U.S. at 59, 124 S. Ct. at 1369, 158 L. Ed. 2d at 197. A statement is "testimonial" if the primary purpose of making the statement is to establish a fact as evidence in a later criminal prosecution. Bullcoming, supra, 564 U.S. at ___ n.6, 131 S. Ct. at 2714 n.6, 180 L. Ed. 2d at 620 n.6 (quoting Davis v. Washington, 547 U.S. 813, 822, 126 S. Ct. 2266, 2273, 165 L. Ed. 2d 224, 237 (2006)).

Applying that test in Melendez-Diaz v. Massachusetts, 557 U.S. 305, 310-11, 129 S. Ct. 2527, 2532, 174 L. Ed. 2d 314, 321 (2009), the Court held that a laboratory report identifying a substance as cocaine was testimonial evidence and therefore its admission at trial, without the testimony of the analyst who prepared it, violated the Sixth Amendment's Confrontation Clause. The report in Melendez-Diaz was created for the specific purpose of serving "as evidence in a criminal proceeding." Bullcoming, supra, 564 U.S. at ___, 131 S. Ct. at 2709, 180 L. Ed. 2d at 615.

Bullcoming presented a variation of the theme in Melendez-Diaz. In Bullcoming, the Court held that the in-court testimony of a scientist who did not conduct or participate in any laboratory tests relevant to the case, but who read into

evidence the actual analyst's test results contained in a certified report, violated the Confrontation Clause. Id. at ____, 131 S. Ct. at 2713, 180 L. Ed. 2d at 619. The facts in Bullcoming are remarkably similar to the facts in the present case.

In Bullcoming, the defendant was arrested for driving while intoxicated (DWI). Id. at ____, 131 S. Ct. at 2710, 180 L. Ed. 2d at 616. A blood sample was taken from him at a hospital and submitted for testing at a state laboratory. Ibid. A forensic analyst operated a gas chromatograph machine to test Bullcoming's blood sample and determined his blood alcohol content (BAC). Id. at ____, 131 S. Ct. at 2711, 180 L. Ed. 2d at 617. The Supreme Court made the following observations about the operation of the gas chromatograph machine: "[T]he analyst must be aware of, and adhere to, good analytical practices and understand what is being done and why." Id. at ____ n.1, 131 S. Ct. at 2711 n.1, 180 L. Ed. 2d at 617 n.1 (quoting David T. Stafford, Chromatography, in Principles of Forensic Toxicology 92, 114 (B. Levine ed., 2d ed. 2006)). Although the gas chromatograph machine produces a printed graph, securing "an accurate BAC measurement . . . is not so simple or certain." Ibid. Indeed, the "risk of human error [is not] so remote as to be negligible." Ibid.

The forensic analyst determined that Bullcoming's BAC was 0.21, a level sufficient to support a conviction for aggravated DWI. Id. at ____, 131 S. Ct. at 2711, 180 L. Ed. 2d at 617-18. The analyst was not called as a witness at Bullcoming's trial. Id. at ____, 131 S. Ct. at 2711-12, 180 L. Ed. 2d at 618. Instead, the State called Gerasimos Razatos, a scientist also qualified as an expert in the gas chromatograph machine but who did not participate in testing Bullcoming's blood. Id. at ____, 131 S. Ct. at 2712, 180 L. Ed. 2d at 618. Razatos gave "live, in-court testimony" about laboratory procedures, the machine's operation, and the results of the BAC test. Id. at ____, 131 S. Ct. at 2713, 180 L. Ed. 2d at 619. In addition, the analyst's report was admitted as a business record. Id. at ____, 131 S. Ct. at 2712, 180 L. Ed. 2d at 618.

The United States Supreme Court held that Razatos's surrogate testimony violated the Confrontation Clause because Bullcoming did not have the opportunity to cross-examine the forensic analyst who tested his blood. Id. at ____, 131 S. Ct. at 2713, 180 L. Ed. 2d at 619. According to the Court, the surrogate expert's testimony "could not convey what [the forensic analyst] knew or observed about the events his [laboratory report] concerned, i.e., the particular test and testing process he employed. Nor could such surrogate testimony expose any lapses or lies on the certifying analyst's part."

Id. at ____, 131 S. Ct. at 2715, 180 L. Ed. 2d at 622. Indeed, at trial, Razatos admitted that “‘you don’t know unless you actually observe the analysis that someone else conducts, whether they followed th[e] protocol in every instance.’” Id. at ____ n.8, 131 S. Ct. at 2715 n.8, 180 L. Ed. 2d at 622 n.8 (alteration in original). Razatos, moreover, was unable to testify why the forensic analyst was on unpaid leave. Id. at ____, 131 S. Ct. at 2715, 180 L. Ed. 2d at 622. Thus, the defense could not ask “questions designed to reveal whether incompetence, evasiveness, or dishonesty accounted for [the forensic analyst’s] removal from his work station.” Ibid.

The Supreme Court reached conclusions relevant to the facts before us. First, “the comparative reliability of an analyst’s testimonial report drawn from machine-produced data does not overcome the Sixth Amendment bar.” Id. at ____, 131 S. Ct. at 2715, 180 L. Ed. 2d at 621. Second, the analysts who write reports that the prosecution introduces must be made available for confrontation even if they possess “‘the scientific acumen of Mme. Curie and the veracity of Mother Teresa.’” Ibid. (quoting Melendez-Diaz, supra, 557 U.S. at 319 n.6, 129 S. Ct. at 2537 n.6, 174 L. Ed. 2d at 327 n.6).

In her concurring opinion, Justice Sotomayor noted that Bullcoming would have been “a different case if, for example, a supervisor who observed an analyst conducting a test testified

about the results or a report about such results.” Id. at ____, 131 S. Ct. at 2722, 180 L. Ed. 2d at 629. Razatos did not observe the testing of the forensic analyst. Ibid.

B.

The facts before us are remarkably similar to those in Bullcoming, and yet the majority reaches a diametrically different result.

Here, defendant Julie Michaels was charged with vehicular homicide, assault by auto, and related offenses stemming from a head-on car collision. The State claimed that defendant was under the influence of drugs at the time of the accident. At the direction of a police officer, a sample of defendant’s blood was taken at the hospital where she was treated. The Sussex County Prosecutor’s Office forwarded the blood sample to NMS Labs in furtherance of its criminal investigation. NMS Labs submitted back a report entitled “STATE V. JULIE MICHAELS” authored by forensic toxicologist Edward J. Barbieri, Ph.D.

The report revealed that defendant had concentrations of cocaine and Xanax in her blood. According to Dr. Barbieri, defendant’s “alertness, judgment, perception, coordination, response time and sense of care and caution were impaired rendering this individual unfit to operate a motor vehicle safely.” The report failed to reveal that Dr. Barbieri did not conduct, participate in, or observe any of the blood tests that

detected the drugs in defendant's system. Dr. Barbieri's report, which was admitted into evidence, does not name the analysts who conducted the test, although the discovery, which is referenced by the majority and is not part of the record, suggests that only two analysts were involved in the actual testing. Other laboratory employees referred to by the majority appear to be merely in the chain of custody.

Like in Bullcoming, the analysts here used a gas chromatograph machine to test defendant's blood sample. Like Razatos in Bullcoming, Dr. Barbieri conceded that "there's always a human element" involved when a gas chromatograph machine is operated. Like Razatos in Bullcoming, Dr. Barbieri averred to the procedures that NMS technicians follow when testing samples. Like Razatos in Bullcoming, Dr. Barbieri took the test results of the analysts and merely parroted them before the jury. Like Razatos in Bullcoming, Dr. Barbieri could not testify about what the forensic analysts "knew or observed" when they performed the "particular test and testing process," nor was he in a position to "expose any lapses" on the part of the analysts. See id. at ____, 131 S. Ct. at 2715, 180 L. Ed. 2d at 622. Moreover, Dr. Barbieri does not fit within the example given by Justice Sotomayor in her concurrence of a supervisor who observed the testing performed by an analyst.

In sum, Dr. Barbieri, in his surrogate testimony, passed through the testimonial statements of the analysts who actually performed the tests on defendant's blood, denying defendant her right of confrontation. This is exactly what Bullcoming says the Sixth Amendment prohibits. There are no meaningful differences between the case before us and Bullcoming, except the outcomes.

II.

The majority contends that, even though Dr. Barbieri conducted none of the blood tests involved in this case, his testimony is constitutionally admissible expert testimony under N.J.R.E. 703. The majority concedes that the analysts' "facts" -- the tests they performed on defendant's blood sample and the results they recorded -- are testimonial statements. That Dr. Barbieri relied on facts or data from the analysts in forming his own opinion does not diminish the impermissible use of the analysts' testimonial statements, which were presented to the jury. Those absent analysts' tests, moreover, were offered for their truth -- offered to prove that the substances in defendant's blood were cocaine and Xanax. Those tests were not foundational, not calibrations of a machine, but were the very tests that went to the heart of whether defendant was guilty of the crimes charged. The majority allows the absent analysts'

testimonial statements to be passed through Dr. Barbieri to the jury without cross-examination of the analysts.

The position taken by the majority has not only been rejected in Bullcoming but also does not find support in either the plurality opinion or dissenting opinion in Williams v. Illinois. In Williams, supra, the Court divided over the question of whether a DNA profile, prepared by a specialist who did not testify, was offered for the truth of its contents. 567 U.S. at ___, ___, 132 S. Ct. at 2228, 2236, 183 L. Ed. 2d at 99, 108 (plurality opinion). Here, the majority asserts that it is not relying on Williams. The majority, moreover, does not contest that the analysts' tests results were offered for their truth or that the results were testimonial in nature. No justice in Williams suggested that passing testimonial statements offered for their truth through a surrogate witness would be acceptable under the Confrontation Clause.

It may be true that Dr. Barbieri gave an independent opinion. But that opinion was formed by the testimonial statements of the analysts who performed the tests. The State cannot deprive the accused of the right to confront the analysts by the use of a surrogate witness. The core purpose of the Confrontation Clause is undermined when the accused cannot confront those whose statements bear testimony against her.

The majority opinion will have far-reaching effects for future cases involving laboratory tests that are critical to criminal prosecutions. From this point forward, a laboratory -- regardless of how many scientists are employed there -- can designate one forensic expert to testify at all trials, relying on the tests of fellow scientists in which he has had no involvement. The incentive will be to select as the expert witness the best pitch person, the one who appears to have walked out of Central Casting. This approach will destroy the ability of the accused to have any meaningful opportunity to cross-examine the persons who are actually bearing testimony against her -- the actual chemists or analysts conducting the tests.

III.

The majority acknowledges that courts throughout the country are reading Williams and reaching divergent results. We know that Williams is not the last word. If the United States Supreme Court does not follow the path taken by the majority today, and if prosecutors take the approach that providing fewer confrontation opportunities is the better strategy, then countless convictions may be jeopardized.

Prudence would dictate that when federal jurisprudence is in a state of flux, a conservative approach is best. See State

v. O'Neill, 193 N.J. 148, 175 (2007) (affording protections to accused under state law when "[t]he shifting sands of federal jurisprudence provide no certainty concerning the standard that might apply to the next set of slightly different facts").

Cautious prosecutors can still place on the stand the chemist or analyst who actually conducted the test and will not have to worry about a United States Supreme Court decision upending a conviction.

IV.

In the wake of the majority's opinion, defendants will no longer have the opportunity to cross-examine the analysts who actually perform scientific tests -- no longer have the opportunity to expose errors, lapses, and shortcomings in the testing process. This is a backward step that, I believe, violates the Sixth Amendment.

For the reasons expressed, I respectfully dissent.

