

Memorandum



To: Jennifer M. Sheetz, Attorney at Law
775 E. Blithedale Ave.
Mill Valley, CA 94941-1554

From: Brent E. Turvey, PhD - Forensic Criminologist
Forensic Solutions, LLC
234 Lakeview Drive
Sitka, Alaska 99835
Phone: (907) 738-5121

Date: January 29, 2025

Re: *California v. Joseph H. Nuccio*: Preliminary Findings

Ms. Sheetz;

The purpose of this Memorandum is to address preliminary but essential crime reconstruction, crime scene analysis, and forensic evidentiary issues present in this case. In preparing this Memorandum, this examiner relied upon reports, transcripts, and other requested materials provided by your office. This includes but was not limited to police investigation and crime scene reports; crime scene photos; the coroner and autopsy reports; autopsy photos; law enforcement evidence examination photos, to include the knife found at the scene, tire tread evidence, and vehicle examinations; trial transcripts; trial exhibits; police evidence submission and crime lab testing reports; post-conviction expert forensic analysis and reports; and related DNA reports from multiple labs.

I. Summary Background

This case involves the homicide of Jody L. Zunino. Her body, nude from the waist down, was found on 09/26/01 sometime around 0803hrs. It was reported to have been discovered by a man riding his bicycle, approximately 70ft East of the Union Pacific Railroad tracks in 1100 block of E. Jackson Road, in Stockton.

According to the Autopsy Report, Ms. Zunino had suffered multiple sharp force injuries to her neck, face, chest, upper back, and hands. Her carotid artery had been cut, resulting in exsanguination. She had also suffered multiple blunt force injuries. And she suffered a postmortem tire tread impression to the left posterior calf; postmortem drag marks to the right lateral torso; postmortem abrasion and pressure marks to her left knee. There was further evidence of active chronic intravenous drug abuse, consistent with her local history of arrests for prostitution.

The following factual and procedural background, taken from *People v. Nuccio*, No. C058865 (Cal. Ct. App. Oct. 26, 2009), is relevant to contextualizing the findings presented in this Memorandum.

This was a “cold hit” DNA case. On October 11, 2006, defendant was charged with killing Jody Lynn Zunino on September 26, 2001. She was a prostitute who had been picked up by a customer in the Wilson Way area of Stockton, and whose body was found in a nearby field. An eyewitness saw the victim on Wilson Way that night, talking to a man who looked like defendant.

Three witnesses testified the victim did not like to perform or would refuse to perform anal sex. Because her anus had a slight injury, and defendant’s semen was found inside her rectum, this tended to show defendant forced himself upon her.

The victim’s body was found nearly nude in a field, with tire tread marks nearby and across her arm and leg, and with a knife she had borrowed from a friend that night next to her. Her throat had been cut and her body bore other slashing injuries.

An eyewitness saw the victim get into a vehicle she described as a white Bronco with tinted windows, but she was not familiar with vehicles and identified photographs of defendant’s white Chevrolet Blazer, which the witness referred to at trial as a “Bronco.” She had previously told an officer that a photograph of a Bronco the officer had printed off the Internet “looked similar” to the vehicle she had seen, and the photographs in evidence of defendant’s Blazer and the Bronco from the Internet show that the vehicles are similar to each other.

The day after the murder, a peace officer saw a Ford Bronco in the Wilson Way area, and it was registered to Terry Sprinkle, a parolee. Sprinkle’s house and Bronco were searched, but nothing was found.

A criminalist testified defendant’s Blazer had tire treads consistent with the tread marks found near and on the victim’s body, but the tread was not unique, that is, she could not testify defendant’s Blazer, to the exclusion of other similar vehicles with similar tires, made the tread marks at the scene...

The jury convicted defendant of first degree murder and found the deadly weapon (knife) enhancement true.

A new trial motion based on newly discovered evidence included the declaration of the victim’s former boyfriend, who claimed they regularly had anal sex, and the declaration of a prostitute who claimed the victim admitted having anal sex. After hearing testimony from these witnesses, each of whom had abused drugs and had convictions reflecting moral turpitude, the trial court denied the motion for a new trial.

This examiner is reviewing the facts and evidence in this case as part of an overall post-conviction review related to crime scene analysis and reconstruction related issues. This includes issues related to Chain of Custody. As stated previously, this memorandum addresses some of the preliminary but essential crime reconstruction and crime scene analysis issues present in this case.

II. Chain of Custody

An issue of major importance in this case involves evidentiary *Chain of Custody* and related *Evidence Integrity*.

Evidence integrity refers to the scientific reliability and subsequent court-worthiness of any evidence that has been collected, examined, tested, and subsequently interpreted. It is demonstrated by adherence to basic protocols associated with establishing a reliable *Chain of Custody*, the protection of physical evidence while it

is in custody, and its competent testing and interpretation by qualified forensic personnel. It also refers to any failure to collect, protect, and/ or test essential items of evidence.

In a scientific examination, *Evidence Integrity* and the underlying *Chain of Custody* for any item of physical evidence may not be assumed. These must be documented and established — otherwise, reliable interpretations are not possible¹.

As defined in NIJ (1999): "**Chain of Custody**: A process used to maintain and document the chronological history of the evidence. (Documents should include name or initials of the individual collecting the evidence, each person or entity subsequently having custody of it, dates the items were collected or transferred, agency and case number, victim's or suspect's name, and a brief description of the item.)"

O'Hara (1970) specifically warns about the importance of marking and labelling evidence with respect to creating the evidentiary *Chain of Custody*. This process is essential with respect to its relationship with both reliable forensic casework and the trustworthiness of subsequent court testimony: "Evidence should be properly marked or labeled for identification as it is collected or as soon as practicable thereafter. The importance of this procedure becomes apparent when consideration is given to the fact that the investigator may be called to the witness stand many months after the commission of the offense to identify an object in evidence which he collected at the time of offense. Indeed, defense counsel may require that the complete chain of custody be established, in which case each person who handled the evidence may be called to identify the object."

As explained in the NAS report (Edwards and Gotsonis, 2009), the *Chain of Custody* is created and exists as a transparent forensic pathway along which evidence examination, testing, and interpretation are meant to occur (p.36): "Crime scene evidence moves through a chain of custody in which, depending on their physical characteristics (e.g., blood, fiber, handwriting), samples are analyzed according to any of a number of analytical protocols, and results are reported to law enforcement and court officials. When evidence is analyzed, typically forensic science "attempts to uncover the actions or happenings of an event... by way of (1) identification (categorization), (2) individualization, (3) association, and (4) reconstruction." Evidence also is analyzed for the purpose of excluding individuals or sources." Without a reliable chain of sufficient strength, competent scientific interpretations about the evidence and its role in a given crime cannot be made.

As further explained in *Chisum & Turvey* (2012): "The chain of custody (a.k.a. chain of evidence) is the record of each person, and agency, who has controlled, taken custody of, examined, tested, or had any other kind of contact with a particular item of evidence, from its discovery to the present day. It has tremendous importance with respect to providing the context for, and a record of, any scientific examinations. It

¹ See Bay (2008), Crowder & Turvey (2017), Gardenier (2011), Turvey (2013), and *Sweet v. Sisters of Providence* (1995).

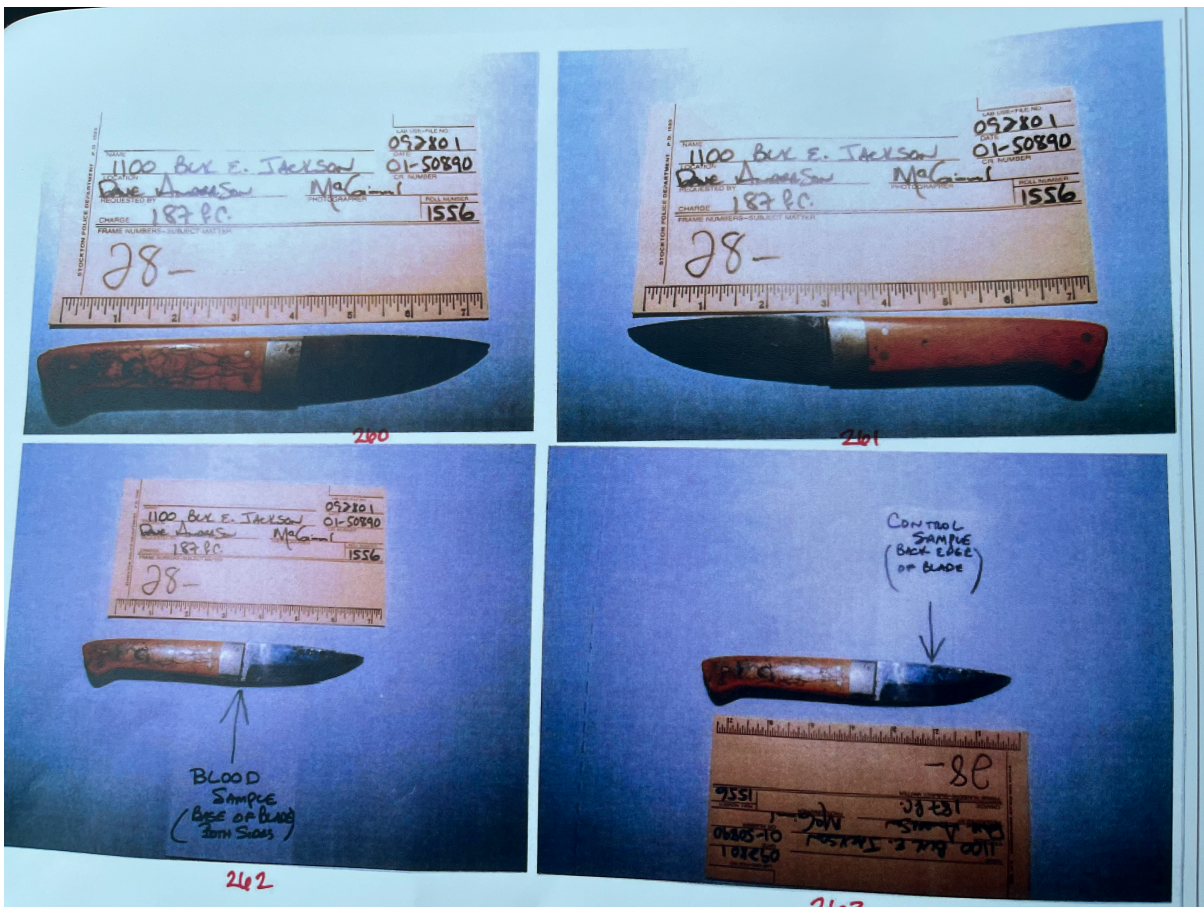
also has considerable value with respect to establishing the origins of evidence when it is presented in court.”

The historical perspective of the scientific literature, and related forensic training and practice standards, provide that establishing a reliable *Chain of Custody* is not merely a guideline that may be taken lightly or altogether ignored. It is as an essential scientific requirement for establishing the reliability and court-worthiness individual items of evidence. It is intended to provide a transparent shield against evidence that is unsourced, unreliable, and even fabricated or tampered with. Furthermore, it is a consideration that must be attended to for every item of evidence that is identified, collected, transported, stored, tested, and interpreted — by every investigative and forensic professional involved in any part of any of these processes along the way (NIJ, 1999a&b; 2011, 2013, and 2024).

III. The Knife

A knife, pictured below at the scene and during different examinations on the subsequent page, was discovered at the crime scene next to the body of Jody L. Zunino. It was subsequently reported to be the murder weapon.





The knife was taken into evidence on 9/26/01, the day that the body was found, by Field Evidence Technician (FET) Brian McGinnis of the Stockton Police Department. Multiple swabs (4) were taken from the knife within 48 hours of collection, clearly intended for DNA testing — referred to as “SWABBING FROM KNIFE ON SCENE” (A184044 Item #13). Two(2) were blood swabs, and two (2) were control swabs. FET McGinnis put the knife into evidence locker on 9/28/01, two days after collection at the scene. As of this writing, the location /storage of the blood swabs taken from the knife are unknown and undocumented until they were reportedly sent to the DOJ / BFS lab for DNA comparison testing on 10/16/01.

Det. Dave Anderson of the Stockton Police Department reportedly sent evidence from the murder scene to CA DOJ on 10/16/01 — for DNA comparison testing at the DOJ / BFS. However, there are two documents requesting evidence testing authored by Det. Anderson (dated 10/16/01 and 1/22/02). The second is clearly identical to the first one, with all of the same idiosyncratic features — including language, stamps and other marks. This is problematic, as there should be no need to send the exact same request to the same lab. This begins to suggest a lack of evidence integrity with respect to evidence examination and related *Chain Custody*.

IV. The Knife: Chain of Custody Issues with the DNA Swabs

The *Chain of Custody* documents provided in this case, related to the DNA swabs of knife, are problematic. They indicate a lack of evidence integrity with respect to evidence examination and related *Chain Custody*.

This includes the following:

- A. As mentioned prior, the location /storage of the blood swabs taken from the knife are unknown and undocumented until they were reportedly sent to the DOJ / BFS lab for DNA comparison testing on 10/16/01.
- B. There was no evidence of testing by DOJ / BFS related to these blood swabs provided to the defense at any point.
- C. Mr. Nuccio was arrested on Oct. 6, 2006, and requested that law enforcement test the knife for his DNA to establish his innocence.
- D. Det. Rodriguez subsequently removed the knife from evidence at Stockton PD on approximately Oct. 10, 2006 — ostensibly for latent fingerprint examination.
- E. Det. Rodriguez subsequently transported this and other items of evidence, including victim blood from the rape kit and buccal swabs freshly collected from Mr. Nuccio, to the DOJ / BFS lab in Ripon. Their latent print examination was negative. Note: they did not conduct DNA analysis at The DOJ Ripon or Central Valley lab until after 2012.
- F. In her report of December 20, 2007, Department of Justice (DOJ) Central Valley Senior Criminalist Elizabeth Schreiber documents Terry D. Sprinkle and Joseph Nuccio as subjects / suspects in this case. Terry D. Sprinkle is not

documented in any other DOJ documents or reports prior to this mention. This information, that Mr. Sprinkle was a suspect, would only come from law enforcement outside of the DOJ.

- G. In her report of December 20, 2007, Department of Justice (DOJ) Central Valley Senior Criminalist Elizabeth Schreiber documents her preparation of new 2007 swabs from the blade and handle of a knife purportedly used to kill Zunino. In her report of January 9, 2008, DOJ Richmond Senior Criminalist Sarah Calvin documents the DNA analysis of a portion of the knife swabs. Criminalist Calvin concluded that Zunino could not be eliminated as a possible contributor, while Nuccio was eliminated as a possible contributor to the DNA recovered from the knife blade and handle swabs. No explanation as to the reason for the preparation of new 2007 swabs from a clean knife was provided.
- H. Elizabeth Schreiber's report also included her review of the knife for trace blood. Notably, in 2007, Schreiber found no trace blood. Schreiber's report does not reference or explain this finding in contrast to the state of the evidence in 2001 — at that time it was found next to the body with blood on the blade. Schreiber then created 6 new swabs from the "clean" knife. Again, Schreiber does not reference or explain the creation of these swabs with respect to the initial "blood swabs" which were last reported as stored at the Central Valley Lab in 2002.
- I. The blood swabs taken from the knife were eventually identified as missing / corrupted subsequent to a request by Mr. Nuccio for independent DNA testing in 2019. Given the report from DOJ / Ripon in January of 2002, this creates problems with the *Chain of Custody* for these blood swabs, as they had been identified and inventoried in laboratory custody at that time.

The lack of a reliable *Chain of Custody* — and negative evidentiary findings — evident in this record indicates serious problems with the reliability / integrity of this evidence and any subsequent testing efforts.

V. Forensic Questions Regarding DNA Evidence & Findings

This examiner was asked to address specific questions related to the chain of custody and the existence of DNA testing in this case prior to 2002. To be clear, the 2002 DNA report Case Review Checklist for the DOJ / BFS Berkeley Laboratory identifies a Cold Hit entry: OCJP# 003-433². This is made clear in both the Administrative Review section and Additional Documentation section of that report. There was also both a completed CODIS upload and a CODIS Specimen Report.

² The California Office of Criminal Justice Planning (OCJP) DNA Cold Hit Grant Program funded DNA analysis for unsolved sexual assaults and homicides. The program was established in 2000 by the California Budget Act. This program ended in 2005. See generally: Newsome & Everhart (2003).

This indicates that the DNA evidence from this case was analyzed by the DOJ / BFS Lab before 2002, and that the 2002 DNA request and examination was a follow-up exam related to an original request for testing. This is corroborated by the following:

- A. There are several documents which indicate that there was a "Cold Case Hit" with respect to DNA testing in this case prior to 2006. This includes the request for Comparison DNA testing by Det. Anderson, as reflected on the "Physical Evidence Submission Form" and the renumbering of the evidence by DOJ — which is reflected on the form next to the 4 pieces of evidence (numbering sequentially 1-4), and referenced again in the 2002 report that repeatedly cites to evidence based upon the numbering on the form. The initial DNA testing on the 4 pieces of evidence submitted in 2001 by Officer Anderson appear in DOJ case no. BK 01-00181. In the 2002 subsequent report, identified as BK 02-00015, the DNA analyst identifies the BK 01-00181 as the original report, and cites to items as identified as DOJ items #1-4. Specifically, the DNA analyst references items numbered 1, 2 and 3. "3F" is the focus of the 2002 retest. Evidence item #3 is the sexual assault kit and item "F" which is the anal swab. The report also cites 3A which is the victim's blood sample from the kit.
- B. The 2002 DNA testing includes an OCJP DNA case number at the time that the anal swab was received in 2002. This indicates that it had already been tested, and a Cold Case Hit was found. The cold hit DNA program related to the cold hit on the DNA in this case was ended in 2005.
- C. Is there evidence in the 2002 DNA Report that supports a finding that the requested Comparative DNA testing is reflected in the referenced "original" case BK01-000181? Yes there is. This is evidence by the fact that DNA Analyst Young Keung referenced this Cold Hit number when receiving the evidence in 2002, as well as in his bench notes. This number, BK01, indicates that the evidence had been received, numbered and tested in the year 2001.
- D. Do the 2002 and subsequent DNA reports suggest that there was at least one CODIS hit based upon the DNA evidence in 2002 / 2003? Yes they do, based on the prior information and items described above. Of note: The DOJ DNA Case Review Checklists from 2002-2005 each identify "CODIS Upload Complete" and "CODIS Specimen Report" but no CODIS reports are included in the DNA reports. These reports would normally be included to identify the CODIS "hit" suspect.

Also of note in this case is that the DA's DNA files for this case were recreated by that office in 2007, at the direct request of the DA. This indicates that their office did not have a complete set of original DNA files; and that what has been provided from them is also likely not a complete set of original DNA files. To be clear, the need to recreate the DNA files by request indicates that there are related documents / reports that have been lost (aka spoliated) and possibly not provided to the defense. As the literature and protocols referenced in the first section of this Memorandum

January 29, 2025

would suggest, a reconstituted or recreated *Chain of Custody* is not a reliable substitute for the original *Chain of Custody*. Without the original, the recreated version must be called into question.

A handwritten signature in black ink, consisting of a large, stylized 'B' followed by a horizontal line and a diagonal stroke.

Brent Turvey, PhD – Forensic Science

REFERENCES

Bay, N. (2008) "Old Blood, Bad Blood, and Youngblood: Due Process, Lost Evidence, and the Limits of Bad Faith" *Washington University Law Review*, Volume 86, Issue 2; pp.241-311.

Black, H. C. (Ed.). (1990) *Black's Law Dictionary*, St. Paul, MN: West Publishing.

Chisum, W.J. & Turvey, B. (2012) *Crime Reconstruction, 2nd Ed.*, San Diego: Elsevier Science.

Crowder, S. & Turvey, B. (2017) *Forensic Investigations*, San Diego: Elsevier Science.

Edwards, H. & Gotsonis, C. (2009) *Strengthening forensic science in the United States: A Path Forward*. Washington, DC: National Academies Press.

Gardenier, J. (2011) "Data integrity is earned, not given" Office of Research Integrity Newsletter, 19(3); p.3.

Newsome, T. & Everhart, K. (2003) "A Process Evaluation of the California DNA Cold Hit Program" Governor's Office of Criminal Justice Planning Evaluation Monitoring and Audits Division, July; url: <https://archive.gfjc.fiu.edu/fse/pdfs/DNAfinrt.pdf>

NIJ (1999a) *Death Investigation: A Guide for the Scene Investigator*, Washington, DC: National Institute of Justice, Research Report NCJ 234457, June.

NIJ (2011) *Death Investigation: A Guide for the Scene Investigator*, Washington, DC: National Institute of Justice, Research Report NCJ 234457, June.

NIJ (2024) *Death Investigation: A Guide for the Scene Investigator*, Washington, DC: National Institute of Justice, Research Report NCJ 234457, June.

NIJ (1999b) *Crime Scene Investigation: A Guide for Law Enforcement*, Washington, DC.: National Institute of Justice, Research Report NCJ 234457, June.

NIJ (2013) *Crime Scene Investigation: A Guide for Law Enforcement*, Washington, DC.: National Institute of Justice, Research Report NCJ 234457, June.

O'Hara, C. (1970) *Fundamentals of Criminal Investigation* (2nd ed.). Springfield, IL: Charles C. Thomas.

Sweet v. Sisters of Providence (1995) Supreme Court of the State of Alaska, 895 P 2d 484, March 12.

Turvey, B. (2013) *Forensic Fraud: Evaluating Law Enforcement and Forensic Science Cultures in the Context of Examiner Misconduct*, San Diego: Elsevier Science