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| District Court, Arapahoe County, Colorado<br>Arapahoe County Courthouse<br>7325 S. Potomac St., Centennial, CO 80112                                                                                                                                                                                                                                          | JUN - 8 2018<br>COURT USE ONLY                                                                                                        |
| THE PEOPLE OF THE STATE OF COLORADO,<br>Plaintiff<br><br>v.<br><br><b>JAMES HOLMES,</b><br>Defendant                                                                                                                                                                                                                                                          |                                                                                                                                       |
| DOUGLAS K. WILSON, Colorado State Public Defender<br>Daniel King (No. 26129)<br>Tamara A. Brady (No. 20728)<br>Chief Trial Deputy State Public Defenders<br>1300 Broadway, Suite 400<br>Denver, Colorado 80203<br>Phone (303) 764-1400 Fax (303) 764-1478<br>E-mail: <a href="mailto:state.pubdef@coloradodefenders.us">state.pubdef@coloradodefenders.us</a> | Case No. <b>12CR1522</b><br><br><div style="font-size: 2em; font-weight: bold; text-align: center;">Redacted</div><br><br>Division 26 |
| <b>MOTION TO PRECLUDE EXPERT OPINION TESTIMONY CONCERNING ANY FORENSIC CHEMICAL AND METALLURGICAL ANALYSES, PURSUANT TO CRE 702 AND 403, DUE PROCESS, AND PEOPLE V. SHRECK, 22 P.3D 68 (COLO. 2001) [D-102]</b>                                                                                                                                               |                                                                                                                                       |

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### CERTIFICATE OF CONFERRAL

The District Attorney states that they object to the motion, and that they will file a response.

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Mr. Holmes moves this Court for a hearing on, and/or an order precluding, expert forensic chemical and metallurgical analysis testimony, and states:

1. The prosecution has endorsed witnesses (including, but not limited to, David A. McCollam, Pamela C. Reynolds, Andria Hobbs Mehlretter, and Robert F. Mothershead, of the Federal Bureau of Investigation) who have authored reports regarding various forensic chemical analyses in this case. The prosecution has also endorsed at least one witness (Susan Kazanjian with the Federal Bureau of Investigation) who has authored reports regarding metallurgical analyses in this case. Mr. Holmes objects to the admission of any and all opinion testimony concerning such analyses that the prosecution intends to introduce at trial. Mr. Holmes objects under CRE 702, 403, and *People v. Shreck*, 22 P.3d 68 (Colo. 2001); *Kumho Tire. Co. v. Carmichael*, 526 U.S. 137 (1995); *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993); and the state and federal due process clauses. U.S. Const. amends. V, XIV; Colo. Const. art. II, sec. 25.

## General Legal Principles

2. Admissibility of expert testimony is governed by CRE 403, 702 and other pertinent evidentiary rules. The reliability of expert testimony (or lack thereof) also implicates due process. U.S. Const. amends. V, XIV; Colo. Const. art. II, sec. 25. The Colorado Supreme Court has explained how a trial court must evaluate proposed expert testimony under CRE 702 and CRE 403:

We hold that CRE 702, rather than [*Frye v. United States*, 293 F. 1013(D.C. Cir. 1923)] is the appropriate standard for determining the admissibility of scientific evidence in Colorado. We hold that under this standard, the focus of a trial court's inquiry should be on whether the scientific evidence is reasonably reliable and whether it will assist the trier of fact, and that such an inquiry requires a determination as to (1) the reliability of the scientific principles, (2) the qualifications of the witness, and (3) the usefulness of the testimony to the jury. We also hold that when a trial court applies CRE 702 to determine the reliability of scientific evidence, its inquiry should be broad in nature and consider the totality of the circumstances of each specific case. In doing so, a trial court may consider a wide range of factors pertinent to the case at bar. The factors mentioned in [*Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993)] and by other courts may or may not be pertinent, and thus are not necessary to every CRE 702 inquiry. In light of this liberal standard, a trial court should also apply its discretionary authority under CRE 403 to ensure that the probative value of the evidence is not substantially outweighed by unfair prejudice. Finally, we hold that under CRE 702, a trial court must issue specific findings as it applies the CRE 702 and 403 analyses.

*People v. Shreck*, 22 P.3d 68, 74 (Colo. 2001).

3. Courts have a responsibility to ensure that evidence admitted at trial is sufficiently reliable so that it may be of use to the finder of fact who will draw the ultimate conclusions of guilt or innocence. That concern implicates principles of constitutional due process. "Reliability [is] the linchpin in determining admissibility" of evidence under a standard of fairness that is required by the Due Process Clause of the Fourteenth Amendment. *Manson v. Brathwaite*, 432 U.S. 98, 114, 97 S. Ct. 2243, 2253, 53 L. Ed. 2d 140, 154 (1977); U.S. Const. amend. XIV; Colo. Const. art. II § 25.

4. In addition, Mr. Holmes asserts that in assessing this evidence, the Court should consider the heightened reliability required in this case under the Eighth Amendment and section II, article 20 of the Colorado Constitution. *See, e.g., Beck v. Alabama*, 447 U.S. 625, 637 (1980) (risk of unreliable conviction "cannot be tolerated" in case where defendant's life is at stake); *Herrera v. Collins*, 506 U.S. 390, 434 (1993) ("The decision in *Beck* establishes that, at least in capital cases, the Eighth Amendment requires more than reliability in sentencing. It also

mandates a reliable determination of guilt.”); *People v. Young*, 814 P.2d 834, 846 (Colo. 1991); *People v. Rodriguez*, 786 P.2d 1079 (Colo. 1989).

5. Further, where there is a question regarding the reliability of certain types of expert evidence, not just scientific, the courts need to determine outside the presence of the jury whether the evidence is unreliable and should not be presented to the jury. See e.g. *People v. Shreck*, 22 P.3d 68 (Colo. 2001) (“The focus of a Rule 702 inquiry is whether the scientific evidence proffered is both reliable and relevant”); see also *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999).

[T]he United States Supreme Court expanded *Daubert's* [*v. Merrell Dow Pharmaceuticals*, 509 U.S. 579 (1993)] general holding concerning the trial judge's gatekeeping function to testimony based not only on scientific knowledge, but also to testimony based on technical and "other specialized" knowledge. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999).

*People v. Shreck*, 22 P.3d 68, 74 (Colo. 2001).

6. Under *Shreck, supra*, and CRE 702 where scientific, technical, or other specialized expert testimony and evidence is involved, a “trial court’s CRE 702 determination must be based upon specific findings on the record as to the helpfulness and reliability of the evidence proffered.” *Id.* at 78. The trial court must also make “specific findings” under CRE 403 as to whether the probative value of the proffered evidence is substantially outweighed by its prejudicial effect. *Id.* *Shreck* clearly requires the trial courts, before admission of expert testimony, to make “specific findings as it applies the CRE 702 and 403 analyses.” *Id.* at 70.

7. In *Goebel v. Denver Rio Grande Western Railroad Co.*, 215 F.3d 1083 (10<sup>th</sup> Cir. 2000) the district court denied the defendant’s request for a pretrial hearing under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), challenging the testimony of a medical doctor who said that the plaintiff’s brain damage was caused by exposure to diesel fumes. When the defendant objected to the testimony during trial, the district court said only “there is sufficient foundation here for the jury to hear this testimony.” *Goebel, supra*, at 1087.

8. On appeal, the Tenth Circuit reversed the case, finding that the district court failed to exercise its gatekeeping duties. The court distinguished between how the district court conducts its analysis under Rules 702 and 403, reviewed on appeal for abuse of discretion, and whether the district court fulfilled its gatekeeping function, reviewed on appeal de novo: “[w]hile the district court has discretion in the manner in which it conducts its *Daubert* analysis, there is no discretion regarding the actual performance of the gatekeeper function.” *Id.* Since the district court had never stated its reason for admitting the expert’s testimony, it could not be examined on appeal. The court held that “a district court, when faced with a party’s objection, must adequately demonstrate by specific findings on the record that it has performed its duty as gatekeeper.” *Id.* at 1088.

## Forensic Chemical and Metallurgical Analysis Testimony

9. Forensic chemistry testimony and analysis is subject to the dictates of *Shreck, supra*. See e.g. *People v. Laurent*, 194 P.3d 1053, 1058 (Colo. App. 2008) (analyzing admissibility of expert testimony of forensic chemist pursuant to *Shreck* and CRE 702). In addition, as discussed elsewhere, the various forms of spectroscopy involve techniques subject to the dictates of CRE 702 and *Shreck, supra*. See e.g. MOTION TO PRECLUDE EXPERT OPINION CONCERNING HAIR AND FIBER ANALYSIS PURSUANT TO CRE 702 AND 403, DUE PROCESS, AND *PEOPLE V. SHRECK*, 22 P.3D 68 (COLO. 2001) [D-104] (discussing spectroscopy).

10. The various reports to date by the above-listed witnesses list a number of scientific, technical or other specialized techniques being employed, including: “scanning electron microscopy with energy dispersive x-ray spectrometry”, “x-ray diffractometry”, “elemental analysis”, “visual and microscopic inspection, flame susceptibility test, Fourier infrared spectroscopy, Raman spectroscopy, gas chromatography with flame ionization detection, scanning electron microscopy with energy dispersive x-ray spectroscopy, X-ray diffraction, and gas chromatograph/mass spectrometry”, “heated headspace gas chromatography/mass spectrometry”, “infrared spectroscopy”, “passive adsorption/elution technique”, “pyrolysis-gas chromatography/mass spectrometry” and “micro-spot XRF.”

11. Clearly, these are scientific, technical or specialized techniques subject to CRE 702 and *Shreck*. See e.g. *Laurent, supra*; see also MOTION TO PRECLUDE EXPERT OPINION CONCERNING HAIR AND FIBER ANALYSIS PURSUANT TO CRE 702, DUE PROCESS, AND *PEOPLE V. SHRECK*, 22 P.3D 68 (COLO. 2001) [D-104] (discussing spectroscopy). In addition, any expert opinions based on such techniques – if determined to be reliable - would require scientific, technical, or other specialized knowledge. Further, any expert opinions must be helpful to the jury and admissible pursuant to CRE 403.

12. In addition to proving reliability generally, the prosecution must establish that the actual procedures used are reliable *and* that the “experts” are qualified to render an expert opinion. This depends upon whether the proposed expert utilized procedures recognized as reliable in the field, and whether relevant personnel are properly trained and tested.

13. Mr. Holmes asserts that such scientific, technical and specialized techniques, and any opinions derived therefrom, must be determined to be reliable and admissible pursuant to *Shreck* and CRE 702 and 403 prior to any testimony related to such techniques and resulting opinions being presented to the jury. Admission of unreliable evidence and opinion testimony would not only violate the rules of evidence but also Mr. Holmes’ constitutional right to due process of law under the state and federal constitutions. Further, this Court must determine whether any opinions derived from such techniques – if those techniques are determined to be reliable - are actually helpful to the jury under CRE 702 and admissible pursuant to CRE 403. Without such determinations, this Court should enter an order precluding the admission of any such expert testimony at trial.

## Request for a Hearing

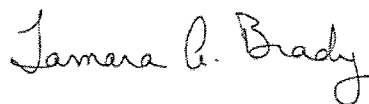
14. Mr. Holmes moves for an evidentiary hearing on this motion.

Mr. Holmes files this motion, and makes all other motions and objections in this case, whether or not specifically noted at the time of making the motion or objection, on the following grounds and authorities: the Due Process Clause, the Right to a Fair Trial by an Impartial Jury, the Rights to Counsel, Equal Protection, Confrontation, and Compulsory Process, the Rights to Remain Silent and to Appeal, and the Right to be Free from Cruel and Unusual Punishment, pursuant to the Federal and Colorado Constitutions generally, and specifically, the First, Fourth, Fifth, Sixth, Eighth, Ninth, Tenth, and Fourteenth Amendments to the United States Constitutions, and Article II, sections 3, 6, 7, 10, 11, 16, 18, 20, 23, 25 and 28 of the Colorado Constitution.



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Daniel King (No. 26129)  
Chief Trial Deputy State Public Defender



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Tamara A. Brady (No. 20728)  
Chief Trial Deputy State Public Defender



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Kristen M. Nelson (No. 44247)  
Deputy State Public Defender

Dated: June 3, 2013

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| District Court, Arapahoe County, Colorado<br>Arapahoe County Courthouse<br>7325 S. Potomac St., Centennial, CO 80112                                                                                                                                                                                                                                          | <br><br><br><br><br><br><br><br><br><br>σ COURT USE ONLY σ                  |
| THE PEOPLE OF THE STATE OF COLORADO,<br>Plaintiff<br><br>v.<br><br><b>JAMES HOLMES,</b><br>Defendant                                                                                                                                                                                                                                                          |                                                                             |
| DOUGLAS K. WILSON, Colorado State Public Defender<br>Daniel King (No. 26129)<br>Tamara A. Brady (No. 20728)<br>Chief Trial Deputy State Public Defenders<br>1300 Broadway, Suite 400<br>Denver, Colorado 80203<br>Phone (303) 764-1400 Fax (303) 764-1478<br>E-mail: <a href="mailto:state.pubdef@coloradodefenders.us">state.pubdef@coloradodefenders.us</a> | Case No. <b>12CR1522</b><br><br><br><br><br><br><br><br><br><br>Division 26 |
| <p style="text-align: center;"><b>ORDER RE: MOTION TO PRECLUDE EXPERT OPINION TESTIMONY<br/>         CONCERNING ANY FORENSIC CHEMICAL AND METALLURGICAL ANALYSES,<br/>         PURSUANT TO CRE 702 AND 403, DUE PROCESS, AND PEOPLE V. SHRECK, 22<br/>         P.3D 68 (COLO. 2001) [D-102]</b></p>                                                           |                                                                             |

Defendant's motion is hereby GRANTED \_\_\_\_\_ DENIED \_\_\_\_\_.

BY THE COURT:

\_\_\_\_\_ JUDGE

\_\_\_\_\_ Dated

I hereby certify that on June 3rd, 2013, I

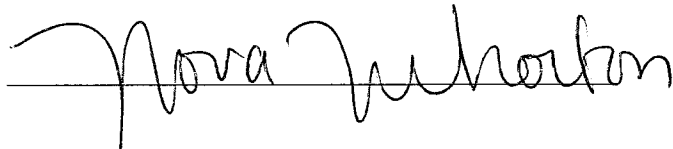
mailed, via the United States Mail,

faxed, or

hand-delivered

a true and correct copy of the above and foregoing document to:

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