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UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA

SOUTHERN DIVISION

STEVEN RUPP, et al.,

Plaintiffs,

vs.

XAVIER BECERRA, in his official capacity as Attorney General of the State of California,

Defendant.

Case No.: 8:17-cv-00746-JLS-JDE

EXPERT WITNESS REBUTTAL REPORT OF J. BUFORD BOONE III

ASSIGNMENT

I have been asked by counsel for the plaintiffs in the above described matter to provide my opinion on statements made concerning "assault weapons" and features that California uses to define same in the supplemental expert report and declaration of Colonel (Ret.) Craig Tucker.

COMPENSATION

I am being compensated for my time in this case at the rate of $700 per hour. My compensation is not contingent on the results of my analysis or the substance of my testimony.

BACKGROUND AND QUALIFICATIONS

I am currently the sole member of Boone Ballistics, LLC and a retired Supervisory Special Agent (SSA) of the Federal Bureau of Investigation (FBI). I was the primary SSA with oversight of the FBI Ballistic Research Facility (BRF) from April 15, 1997 – August 31, 2012.

As the Member of Boone Ballistics, LLC, I have been employed as an expert witness in civil and criminal cases. Additionally, I have been employed as a consultant in civil and criminal cases. I teach internal, external and terminal ballistics, including selection of ammunition and weapons for efficiently incapacitating an aggressive human adversary. I have lectured on the applicability of the Hague Convention of 1899 to the selection of ammunition for use by the U.S. Military. I conduct time of flight testing to better document small arms projectile flight as it applies to the use of a Ballistic Coefficient to predict projectile impact at long distances.

Prior to my first full-time law enforcement employment, I served as a reserve police officer or Deputy Sheriff with Tuscaloosa County, Alabama, Upson County, Georgia, Las Animas County, Colorado and Trinidad Colorado.

Approximately May of 1988 I was hired as a Police Officer with the Tuscaloosa, Alabama, Police Department. I was subsequently offered a position as a Special Agent of the Federal Bureau of Investigation (FBI) in July of 1988. I began employment with the FBI on 07/25/1988. I was graduated from the FBI Academy on 10/21/1988. My first duty station was New Haven, Connecticut.

I have maintained an interest in firearms all my adult life. I have shot competitively. My firearms scores at the FBI Academy were sufficiently high to allow me to attempt the "Possible" Club. I was successful on my first attempt. To shoot a "Possible", Agents must fire a perfect score on a very difficult course. Though there were in excess of 10,000 Agents in 1988, my "Possible" was approximately number 1,198 in FBI history.

Upon arrival in New Haven, I was assigned to the Reactive Squad conducting background, bank robbery and fugitive investigations. I later served as the Fugitive Coordinator for the New Haven Division. I was named "Detective of the Month" by the Bronx Homicide Task Force for the capture of an America's Most Wanted fugitive.

I successfully completed FBI Firearms Instructor School in July of 1989. This qualified me to teach firearms to Field Agents.

I was transferred to the Organized Crime/Narcotics Squad in July of 1990. I primarily participated in investigations of drug gangs. These investigations typically involved significant amounts of surveillance, electronic monitoring and the service of multiple search warrants. I also participated in organized crime investigations. I have participated in multiple arrests in urban and suburban areas.

I was named the Principal Firearms Instructor (PFI) of the New Haven Division of the FBI in November of 1992. I maintained that position until I transferred to the Firearms Training Unit at the FBI Academy, Quantico, Virginia.

As PFI, I oversaw all firearm and defensive tactics training of the 90+ Agents in the New Haven Division of the FBI. I coordinated training sessions for all

firearms issued to general Agents. This included revolvers, pistols, carbines and shotguns. It also included coordination of deadly force training with the Principal Legal Advisor. During my time as the PFI, the FBI transitioned from revolvers to semi-automatic pistols. The training for this transition was my responsibility for New Haven Division Agents.

In September of 1989 I was admitted to the FBI New Haven Special Weapons and Tactics (SWAT) Team as a Sniper/Observer. I successfully passed both the two week Sniper/Observer and the two week Basic SWAT courses at the FBI Academy. I served operationally on the New Haven SWAT Team until my transfer to the FBI Firearms Training Unit at the FBI Academy, Quantico, Virginia.

In March of 1996, I was promoted to a position as a Term GS-14 Firearms Instructor at the Firearms Training Unit (FTU), FBI Academy, Quantico, Va. During this assignment, I performed line and PFI instruction of Agent trainees. I provided or oversaw line and combat instruction in handguns, carbines and shotguns. I also provided judgmental instruction utilizing Firearms Training Simulator (FATS) equipment. The FATS training was used primarily to teach Agents when the use of deadly force was appropriate, and when it was not.

I was transferred to the Ballistic Research Facility (BRF) of the FTU on April 15, 1997. I maintained my position at the BRF for more than 15 years, retiring on August 31, 2012. I received a permanent promotion to Supervisory Special Agent in September of 1997.

The BRF has responsibility for testing and evaluating all ammunition used operationally by the FBI. The BRF was created following a 1986 shootout wherein a subject was fatally injured by FBI projectiles but continued fighting and ultimately killing two Agents after receiving the "fatal" wound. A thorough investigation revealed the primary cause of the failure to rapidly incapacitate was the projectiles lack of sufficient penetration in the subject's body. It stopped short of the heart.

This investigation spawned research into the mechanics of wound ballistics. Ultimately, the research led to the creation of a scientifically repeatable method of comparing the potential effectiveness of individual cartridges. The resultant test has been referred to as the "FBI Method". The BRF published test findings available upon official request of Law Enforcement and Military agencies. The BRF became the most trusted source of ballistic information in the Law Enforcement and Military community.

As SSA of the BRF, my responsibility was to oversee all aspects of the research. I was the only full-time person at the BRF until a support person (non-Agent) was assigned as an Engineering Technician, Ballistics (ETB), in the last quarter of 1998. I was the Supervisor and rating official of the ETB.

As SSA, I performed or directed all functions of the BRF. I hand loaded cartridges, put test firearms together, hand-fired firearms for testing, built tissue simulant blocks, conducted penetration testing and reported on same. I created a relational database to store data and report test results. I operated sophisticated ballistic testing and photographic equipment. I was frequently sought out to train others in the use of this equipment.

I was the primary author of specifications for ammunition procurements for the FBI. This included ammunition used for training as well as for operational use, commonly referred to as "Service" ammunition.

I was the primary author of the FBI Body Armor Test Protocol at its inception.

I directed the creation of a procurement of 5.56mm NATO ammunition using piezoelectric conformal transducers for pressure testing.

The BRF served as the primary source of ballistic information regarding ammunition and firearms for all FBI Agents. Field Agents routinely referred local and state partners to me for ballistic information and advice.

During my service at the BRF, a strong liaison was formed with the Department of Defense (DOD). The BRF performed testing for and consultation

with the DOD on many occasions. My expertise has been, and continues to be, sought out and relied upon by the Special Operations Community. During my service at the BRF, the Department of Defense Law of War Chair established protocol that all new DOD small arms munitions required testing and evaluation by the FBI BRF prior to legal authorization being granted for their use.

I have been a participant in a number of government sponsored Integrated Product Teams researching ballistics, including:

Joint Services Wound Ballistics
Lead Free Ammunition
Protective Armor
Armor Piercing Ammunition development

In 2002, I traveled to Darligen, Switzerland, at the specific request of the Department of State, to represent the United States in discussions of wound ballistics.

I have provided numerous live-fire terminal ballistic demonstrations to local, state and federal law enforcement officers as well as to all branches of the United States Military.

I have conducted international presentations on wound ballistics, ammunition selection, weapon selection, sniper operations and body armor.

I have briefed the Secretary of the Army and provided, at his request, my professional opinion of a 5.56mm NATO cartridge intended to replace the M855.

I have functioned (and continue to) as the primary instructor of 57 Basic Law Enforcement Sniper/Observer schools. Approximately 1,091 students have successfully completed this course under my instruction.

I consistently received high performance ratings in the FBI. I received the highest possible, "Outstanding", each of the last 4 years of my service. I have received numerous letters of commendation and performance awards.

I was the 2008 recipient of the National Defense Industrial Association Joint Armaments Committee's Gunnery Sergeant Carlos Hathcock Award.

Publications I authored during my FBI employment and restricted to official law enforcement or government request:

Review of Accuracy 1st Training
Weapon Selection – Revision III
Ammunition Selection 2007
TSWG MURG Briefing Accuracy Expectations
AIM III TSWG Briefing 3/16/2010
Wound Ballistics
B2 Sniper Rifle Cleaning Method

Publication I authored during my FBI employment that is publicly available:

FBI Body Armor Test Protocol

Publication that I have co-authored that is publicly available:

Terminal Ballistics: The Science of Ballistic Projectile Wounding

I currently teach a two-hour basic wound ballistics class for recruits at the Law Enforcement Academy-Tuscaloosa, a branch of the Alabama Peace Officers Standards & Training Commission. I also teach an annual eight hour wound ballistics and ammunition selection class at the Tuscaloosa Police Department, Tuscaloosa, Alabama.

OPINIONS AND ANALYSIS

It is my opinion that Colonel (Ret.) Tucker's report is plagued by inaccuracies and opinions that are contradicted by fact.

His claim that a single small arms projectile is capable of "severing the upper body from the lower body, or decapitation" is so ridiculous that it should, and actually does, cast doubt on his qualifications as an expert in the field of firearms, particularly as it relates to wound ballistics.

Additionally, there is an inconsistency in his opinion in that, at one point, he states that stabilizing attributes (pistol grips) are inappropriate for self-defense while in the next point he says an attribute (folding stock) is inappropriate for self-defense because it is destabilizing.

Examples and explanations supportive of my opinion follow. For clarity, I have placed Colonel (Ret) Tucker's words in italics.

It is important to define and understand the words "Caliber", "Cartridge", "Round" and "Yaw". Appropriate definitions can be found in the Glossary on the website of the Sporting Arms and Ammunition Manufacturer's Institute (SAAMI): https://saami.org

Caliber

1. A term used to designate the specific cartridge(s) for which a firearm is chambered.
2. Firearms: The approximate diameter of the circle formed by the tops of the lands of a rifled barrel, often expressed in hundredths of an inch (".38 caliber") or millimeters ("7mm Caliber).
3. Ammunition: A numerical term included in a cartridge name to indicate a rough approximation of the bullet diameter.

Cartridge – A single round of ammunition consisting of the case, primer and propellant with or without one or more projectiles. Also applies to a shotshell.

Round – One complete small arms cartridge.

Yaw – The angle between the longitudinal axis of a projectile and a line tangent to the trajectory through the center of gravity.

Page 5, line 18 – *The AR-15 and M4 are both designed to fire a .223 round…*

This statement is inaccurate inasmuch as AR-15 type rifles and pistols have been manufactured in a multitude of calibers, to include .223 Remington (.223). Additionally, the M4, is not chambered for .223 but for the similar 5.56x45mm NATO (5.56mm NATO).

Page 5, Line 18 - …*that tumbles upon hitting flesh and rips thru the human body*.

The projectile is the only portion of a "Round" that is expelled significantly forward of the firearm upon firing. Those components not consumed by the discharge are ejected out the side of the AR-15/M4. I proceed under the assumption that Colonel (Ret.) Tucker's opinions on the terminal performance of a "round" are actually referring to the projectile as opposed to the entire cartridge.

In my opinion, it is factually inaccurate and misleading to state or imply that either the AR-15 or the M4 have been designed solely to fire any singular type of projectile.

Cartridges typically are manufactured with varying types of projectiles. For example, I have consulted with the U.S. Military (including the USMC) on the effectiveness of at least the following 5.56mm NATO cartridges which contain different projectiles:

M193 – A 2-part projectile consisting of a copper jacket and a lead slug.

M855 – A 3-part projectile consisting of a copper jacket, a lead slug and a steel penetrator.

M855 A1 – A 3-part projectile consisting of a copper jacket, a non-lead slug and a steel penetrator.

MK318 Mod-1 SOST – A 2-part projectile containing a copper jacket and a non-lead slug.

MK 262 Mod-1 – A 2-part projectile consisting of a copper jacket and a lead slug.

Inasmuch as it is inaccurate to state that either of the discussed firearms was designed specifically to fire a single type of projectile, it is similarly inaccurate to state that they were designed to fire a projectile "that tumbles upon hitting flesh and rips thru the human body".

The firearms community has traditionally used the term "Tumble" to indicate a projectile overturning when in contact with tissue. The more correct word is "Yaw".

When using "Tumble", it is easy to envision a projectile turning end over end, similar to a gymnast "tumbling" across a gymnasium floor. This is misleading as I have witnessed very few projectiles that actually make a complete revolution of point forward - base forward – point forward in tissue simulant or animal tissue.

It is quite common for a projectile to yaw or turn in tissue. This yaw can continue until the projectile base is traveling forward.

In my training and experience, projectiles can deform, expand, fragment and/or a combination of all three. Yaw is typically seen most while a projectile remains intact. It can contribute to expansion and fragmentation.

Page 5, line 19 - *A single round is capable of severing the upper body from the lower body, or decapitation.*

As previously pointed out, the statement is unsupported by any reference and is so ridiculous as to bring discredit to the entire opinion.

In almost 26 years of professional involvement in the field of wound ballistics, I have never heard, even anecdotally, of an incident wherein a person was decapitated or their upper body was severed from their lower body as a result of being shot by a single projectile fired from any small arm. It is notable that the .223/5.56 is on the lower end of terminal performance potential of the vast calibers available in centerfire rifles. In fact, the .223/5.56 is below the allowable minimum cartridges for deer hunting in some states.

Additionally, since reading Colonel (Ret.) Tucker's supplemental report, I have shared that statement with many associates in the firearms field. All have questioned the credentials of an "expert" that would make such a claim.

It is my opinion that no examples have been provided because such performance has never been witnessed.

Page 5, line 20 - *The round is designed to kill, not wound…*

The vast majority of cartridges or projectiles can reasonably be described as "designed to kill". Other than specialized cartridges, typically marketed as "Less than Lethal", I am unaware of any cartridge or projectile that is "designed to wound".

Page 5, Line 21 - …b*oth the AR-15 and M4 contain barrel rifling to make the round tumble upon impact and cause more severe injury.*

The aforementioned Glossary of the SAAMI defines "Rifling" as:

> Any type of spiral internal bore feature of the barrel wall that imparts spin on the projectile for the purpose of stabilizing it in flight. This may be a series of lands and grooves, polygonal, hexagonal, or other configurations.

It defines "Twist" as:

> The distance required for one complete turn of rifling usually expressed as a ratio, e.g., 1 in 10 inches.

The AR-15 was originally manufactured with a 1:14 twist rate but has also been offered with faster twist rates (I am aware of more than 5 others). To my knowledge, the M4 has only been offered with a 1:7 twist rate (twice as fast as 1:14).

Inasmuch as it is inaccurate to refer to the "rifling" as a static feature of "Both the AR-15 and M4", it is similarly inaccurate to state that they "contain barrel rifling to make the round tumble upon impact and cause more severe injury." As the aforementioned definition states, the rifling exists for the purpose of stabilizing the anticipated projectiles fired while they are in flight, an aspect of external ballistics. Faster twist, as seen in the 1:7 rate of the M4 vs. the 1:14 twist of the original AR-15, results in greater stability and increased resistance to yaw.

Page 5, Line 25 – *Automatic rifles, like the M-16 and its more modern carbine variant M4, are functionally similar to semiautomatic rifles regulated under California's AWCA and often are equipped with the very same features, like pistol grips and adjustable stocks. It is my opinion, based on my military service, that*

these features, individually and in combination, make semiautomatic rifles more lethal and most useful in combat settings, as described in more detail below.

Pistol grips and adjustable stocks help increase the ability of a shooter to control a firearm. Firearms, by their very nature, are dangerous weapons. They are capable of launching projectiles which have the potential to seriously injure and potentially kill. Increasing the ability to control a dangerous device is not a benefit solely limited to combat. It is something that should be sought for all firearms in all contexts. There is no legitimate reason to inhibit any model of firearm's accuracy or controllability.

Page 6, Line 9 – *Changing magazines during intense combat is the most important individual skill taught to Marines.*

Though I have never served in the military, all training that I have received says that the ability to hit the target (Marksmanship) is a more important skill than "changing magazines during intense combat" or in my case, use of a firearm in defense of myself or others.

Page 6, Line 13 - *In a civilian self-defense context, by contrast, an individual would not have a need for such a high rate of fire.*

First, Colonel (Ret.) Tucker conflates volume of projectiles fired with rate of projectiles fired. The rate he quotes, 45 rounds/minute, is equivalent to approximately 1 round in 1.3333 seconds. Time is of the essence in situations wherein one's life is in danger. It is certainly reasonable to believe that a person in a self-defense situation would have a need to fire 1 round every 1.3333 seconds (e.g., 3 rounds in about 4 seconds). In any event, Col. (Ret.) Tucker's point is irrelevant because none of the features that can qualify a semiautomatic, centerfire rifle with a non-fixed magazine as an "assault weapon" (pistol grip, flash suppressor, adjustable/folding stock) affects the rifle's rate of fire or its capacity for ammunition. A civilian can have the same "rate of fire" or ammunition capacity regardless of whether the rifle is an "assault weapon."

Page 6, line 18 – *The pistol grip beneath the action of an automatic rifle serves only two purposes. First, the pistol grip allows the rifleman to pull the rifle into her* (sic) *shoulder with each shot, an action which increases stock weld, reduces semi-automatic/automatic recoil, and reduces barrel rise.*

I do not disagree with Colonel (Ret.) Tucker's opinion on two of the advantages of a pistol grip beneath the action. However, there are other advantages as well, which I'll address later. Increasing stock weld, reducing recoil and reducing barrel rise all lead to improved control of the firearm and accuracy. The disagreement is only to Col. (Ret.) Tucker's value of that purpose. As previously stated, improving control of any firearm is a desirable endeavor for both combat and self-defense, not a negative feature.

Practically all shoulder-fired weapons have a "pistol grip". Some are more horizontal than others. For purposes of this discussion, I will assume that Colonel (Ret.) Tucker is referring to pistol grips that are more vertical, such as those typically found on the AR-15 and M4 firearms as issued to the U.S. Military.

Ergonomics is the primary purpose of the pistol grip. The use of a near-vertical pistol grip far predates the AR-15 series of rifles. For example, the Thompson Sub Machine Gun had a near-vertical rear pistol grip. Some versions also had a near-vertical forward pistol grip.

The vertical pistol grip design is easier to operate with one hand than less-pronounced pistol grips, such as those found on the M1 Garand. This is because it places the hand in a location where the user can manipulate the rifle's primary controls, including the trigger and selector (safety). This can also be of particular benefit when needing to use one hand to hold a flashlight or call 911.

This would certainly be a desirable attribute of a firearm used for self-defense. Anything that decreased ergonomics could lead to a failure to defend oneself.

Page 6, line 24 - *Absent any pistol grip, a semi-automatic rifle would be difficult to operate when fired rapidly, as the rifle barrel would seesaw up and down with each shot fired in succession.*

The above statement, combined with a prohibition on vertical pistol grips on civilian-owned semi-automatic rifles, appears to infer that any semi-automatic rifle suitable for self-defense should be difficult to operate, or at least at certain rates of fire. That is counterintuitive and finds no support in any training materials I have ever reviewed.

Additionally, the statement can be proven false simply by pointing out that the M1 Carbine, M1 Garand, M14 and BAR rifles were all used by the USMC, with great effectiveness, despite not possessing a vertical pistol grip. Indeed, the infamous Lieutenant General George S. Patton, Jr. described the M-1 Garand as "the greatest battle implement ever devised." That rifle has no vertical pistol grip, no flash suppressor, no adjustable/folding stock, and its magazine is fixed as far as California law is considered.

Page 7, line 3 – *The forward pistol grip provides leverage to tighten a stock weld on short-barrel automatic weapons and reduces recoil and barrel rise on short-barrel automatic rifles. Forward pistol grips were added to the M4 to increase the M4 killing efficiency.*

The statement specifically refers to "short barrel automatic rifles" a class of firearms not contemplated under California's Assault Weapon Control Act.

Furthermore, I am unaware of any evidence that this statement is true. As previously mentioned, pistol grips are used for ergonomics and control. A forward pistol grip is similarly used to enhance control.

Although Colonel (Ret.) Tucker mentions the forward pistol grip's ability to "increase the M4 killing efficiency", most Thompson Submachine Guns exhibiting this trait were civilian weapons. The M1 Thompson most commonly issued to the U.S. Military did not have a vertical pistol grip. The U.S. Military, prior to WWII,

purchased the 1928A1 model Thompson, lacking a forward pistol grip. During WWII, the Thompson was modified into the M1 and M1A1 models, both lacking a forward pistol grip.

Page 7, Line 7 –*A folding stock causes weapon instability*.

Not all folding stocks are the same. There are numerous examples of folding stocks that are stable when deployed. Additionally, the M4, as issued, has a telescoping stock, not a folding stock. There are aftermarket accessories that will allow for a folding stock on an M4 but, in my experience, they are the exception on AR-15/M4 rifles/carbines. The folding adapters for typical AR-15/M4 series of rifle are not capable of semi or full automatic fire with the stock folded.

Page 7, line 12 - *Outside of the military context, folding stocks that are not properly locked in place can cause significant safety risks to the shooter due to recoil.*

I am unaware of any reports, even anecdotally, of recoil injuries received by any shooter of a .223 or 5.56mm NATO chambered pistol or rifle fired with an unlocked folding stock.

A telescoping/adjustable stock enables the length of pull of a firearm to be quickly adjusted to fit people of different sizes. It is well understood that a stock fitted to a tall person would likely be too long for a short person. The aforementioned SAAMI Glossary defines length of pull as:

> The distance from the center of the trigger to the center of the buttplate or recoil pad.

Additionally, because it allows for a more compact overall size, it enhances the user's ability to maneuver in the tight spaces of a home.

Page 7, Line 23 – *The purpose of the flash suppressor is to reduce combat signature by cooling and disbursing burning gases. This makes it more difficult for the enemy to pinpoint a rifleman's location, especially in low light conditions. The flash suppressor facilitates night combat operations by reducing muzzle flash and*

mitigating muzzle flash impact on night vision goggles. This accessory serves specific combat-oriented purposes and is not needed for self-defense.

Flash suppressors dissipate the bright light created by the burning of residual propellant once the projectile exits the muzzle. This dissipation of light reduces the level of light exposure experienced by the shooter and can shorten the recovery time of vision in a dark environment. This shorter recovery time enables a more rapid evaluation of the remaining threat and need, or lack thereof, to continue the application of force. It is my opinion that any device which can shorten the recovery time of vision in a dark environment is useful for self-defense.

The definition of "Flash Suppressor", according to 11 CCR § 5471(r), says nothing about hiding flash from those in the direct line of fire :

> Any device attached to the end of the barrel, that is designed, intended, or functions to perceptibly reduce or redirect muzzle flash from the shooter's field of vision.

Page 8, Line 5 – *Any increase to magazine capacity increases the killing efficiency of the automatic rifle.*

California's Assault Weapon Control Act only limits magazine capacity on rifles with fixed magazines. Therefore, Colonel (Ret.) Tucker's statement is irrelevant.

Page 8, line 10 - *As noted above in connection with detachable magazines, an individual using a rifle in self-defense would not need such a high, continuous rate of fire.*

Once again, Colonel (Ret.) Tucker conflates rate of fire with volume of fire. No explanation is provided as to why the appropriate number of cartridges for self-defense use of a fixed magazine rifle has been determined to be 10 or less.

Page 8, Line 13 – *The AR-15 is an offensive combat weapon no different in function or purpose than an M4*.

This contradicts his previous statement that the AR-15 and M4 differ in function (automatic vs. semi-automatic fire).

The ability to use the AR-15, or any weapon, for offensive purposes does not negate that it can also be used for defensive purposes, just like a handgun. Colonel (Ret.) Tucker has not identified any military that employs the AR-15. Its use as a combat tool thus has not been established. In my experience as a law enforcement officer and trainer, the AR-15 is a preferred tool for defense of officers and individuals.

Page 8, Line 14 – *In my opinion, both weapons are designed to kill as many people as possible, as efficiently as possible, and serve no legitimate sporting or self-defense purpose.*

In my opinion, the AR-15 was not designed to "kill as many people as possible, as efficiently as possible". The intent of the design was to be effective in all anticipated use, including law enforcement and self-defense.

In any event, Colonel (Ret.) Tucker fails to explain why a weapon "designed to kill as many people as possible, as efficiently as possible" could "serve no legitimate sporting or self-defense purpose".

Hunting, target shooting or self-defense cannot be considered to be illegitimate simply by the choice of a particular type of firearm. It is the abuse or misuse of any firearm that is illegitimate. I have personally provided training to FBI Agents and other law enforcement officers in the use of the types of firearms being discussed here. As I've stated in previous opinions, all legal law enforcement use of firearms is defensive in nature.

Page 8, Line 19 – *Defensive combat is generally up close and very personal. At that range, it is very difficult to use a rifle as a defensive weapon, except as a blunt force instrument.*

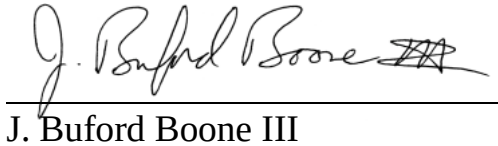
Defensive combat is not "generally up close and very personal", though it certainly can be. Soldiers attacked by long-range rifle fire who then respond with fire of their own are certainly engaged in defensive combat.

A term common to both law enforcement and the military is "Close Quarters Combat" (CQB). Although pistols can and have been employed for CQB purposes, the use of an M4-style carbine is very common in both law enforcement and the military. Over the past 20 years, there has been news coverage of U.S. Marines engaged in or on their way to potentially engage in CQB. The vast majority of those Marines were armed with M4 or M16 style carbines/rifles and/or squad automatic weapons.

Page 8, Line 23 – *The features identified in California Penal Code § 30515(a) enhance the lethality of both semiautomatic and automatic rifles and are most appropriate for combat applications when used in conjunction with those types of weapons systems.*

Despite a failure to define "enhance the lethality", there is no explanation as to why these features are most appropriate for combat and less appropriate for self-defense.

I declare under penalty of perjury that the foregoing is true and correct. Executed within the United States on February 3, 2023.



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CERTIFICATE OF SERVICE
IN THE UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA
SOUTHERN DIVISION

Case Name: *Rupp, et al. v. Becerra*
Case No.: 8:17-cv-00746-JLS-JDE

IT IS HEREBY CERTIFIED THAT:

I, the undersigned, am a citizen of the United States and am at least eighteen years of age. My business address is 180 East Ocean Boulevard, Suite 200, Long Beach, California 90802.

I am not a party to the above-entitled action. I have caused service of:

EXPERT WITNESS REBUTTAL REPORT OF J. BUFORD BOONE III

on the following party by electronic mail.

Xavier Becerra
Attorney General of California
Anna Ferrari
Deputy Attorney General
Email: anna.ferrari@doj.ca.gov
455 Golden Gate Ave., Suite 11000
San Francisco, CA 94102

I declare under penalty of perjury that the foregoing is true and correct.

Executed February 3, 2023.

Laura Palmerin