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Attorneys for Defendant Rob Bonta,
9 *in his official capacity*¹

10 IN THE UNITED STATES DISTRICT COURT
11 FOR THE CENTRAL DISTRICT OF CALIFORNIA
12 WESTERN DIVISION
13

14
15 **STEVEN RUPP; STEVEN**
DEMBER; CHERYL JOHNSON;
16 **MICHAEL JONES;**
CHRISTOPHER SEIFERT;
17 **ALFONSO VALENCIA; TROY**
WILLIS; and CALIFORNIA RIFLE
18 **& PISTOL ASSOCIATION,**
INCORPORATED,
19

20 Plaintiffs,

21 v.

22 **ROB BONTA, in his official capacity**
as Attorney General of the State of
23 **California; and DOES 1-10,**

24 Defendants.
25

8:17-cv-00746-JLS-JDE

**SUPPLEMENTAL EXPERT
REPORT AND DECLARATION
OF COLONEL (RET.) CRAIG
TUCKER**

Courtroom: 8A
Judge: The Honorable Josephine
L. Staton

Action Filed: April 24, 2017

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27 ¹ Rob Bonta has succeeded former Attorney General Xavier Becerra as the
28 Attorney General of the State of California. Pursuant to Federal Rule of Civil
Procedure 25(d), Attorney General Bonta, in his official capacity, is substituted as
the defendant in this case.

1 **SUPPLEMENTAL EXPERT REPORT AND DECLARATION**
2 **OF COLONEL (RET.) CRAIG TUCKER**

3 I, Colonel (Ret.) Craig Tucker, declare under penalty of perjury that the
4 following is true and correct:

5 1. I have been asked by the Office of the Attorney General of the
6 California Department of Justice to prepare an expert report and declaration on the
7 purpose, use, and features of certain semiautomatic firearms. This supplemental
8 expert report and declaration ("Report") is based on my own personal knowledge
9 and experience, and, if I am called as a witness, I could and would testify
10 competently to the truth of the matters discussed in this Report.

11 **PROFESSIONAL QUALIFICATIONS**

12 2. I am a Colonel, US Marine Corps, (Retired). I served as an infantry
13 officer in the Marine Corps for 25 years. I have commanded infantry units from
14 platoon to regiment. I commanded Regimental Combat Team -7 (RCT-7) in Iraq
15 from February 2004 to April 2005. During my time in Iraq, I commanded 22
16 different US Marine, US Army, and Iraqi Army battalions and exercised tactical
17 control over Naval Special Warfare and US Special Forces, and supported National
18 Tier 1 assets. I commanded the Regiment in both Fallujah battles and numerous
19 smaller battles. I was the target of 9 assassination attempts and was wounded in
20 Husaybah Iraq in July 2004. Upon my return from Iraq, I was assigned to the US
21 Marine Corps National Training Center and was responsible for training and
22 certifying units for combat in Iraq and Afghanistan.

23 3. I have received two Legion of Merit awards for exceptional
24 meritorious conduct in the performance of outstanding combat services, the
25 Military Order of the Purple Heart, the Navy Commendation Medal for Heroic
26 Action, the Combat Action Ribbon, and seven Sea Service Deployment Ribbons,
27 among other awards.
28

4. After I retired from military service in 2006, I served as an Assistant Deputy Administrator for the Office of Secure Transportation (OST), National Nuclear Security Agency. OST is a paramilitary organization consisting of federal agents armed with M4s.² I was also the Department's Render Safe program in Albuquerque NM.

5. In 2012, I joined Innovative Reasoning LLC, which provides professional support services to the U.S. Department of Defense and other government clients. While at Innovative Reasoning, I developed training programs and planning capabilities for the Marine Corps, and I developed and taught a training course on tactical decision-making for law enforcement officers.

6. Through my military service, I gained extensive knowledge and familiarity with the full range of US combat weapon systems. The automatic rifle is the foundational combat weapon system. Ground and aviation weapon systems are specifically designed to support the automatic rifle. My primary purpose in the latter stages of my career was coordinating, and teaching others to coordinate, air and ground weapon systems to support the rifleman and his automatic rifle.

7. I have fired the Colt AR-15 5.56 rifle and the Smith and Wesson 5.56 AR rifle. Both are advertised as the civilian version of the M16 combat rifle. In addition to my automatic rifle experience, I have extensive experience with the AK-47, having been on the receiving end of hundreds of 7.62 rounds; an experience best typified during the Battle of Hit when a single individual with one rifle and apparently inexhaustible supply of 7.62 ammo and magazines kept nine Marines pinned down for 15 minutes until a LAV-25 20mm chain gun solved the problem. I have extensive experience with the Colt 1911 .45 caliber semi-automatic and the Berretta .9m semi-automatic pistol and used both weapons in Iraq.

² The M4 is a gas-operated, magazine-fed carbine. It is the shortened version of the M16 assault rifle.

8. I currently serve as a trainer and planner for the City of Albuquerque's Office of Emergency Management.

9. I hold a B.S. in Criminal Justice from the University of Dayton, a Master of Military Art and Science from U.S. Army Command and General Staff College and the U.S. Army School of Advanced Military Studies, and a Master's degree in National Security and Strategic Studies from the College of Naval Warfare, where I graduated with the highest distinction.

10. A copy of my curriculum vitae is attached as **Exhibit A** to this Report.

11. I have been retained by the California Department of Justice to serve as an expert witness in this case. I am being compensated at a rate of \$200 per hour.

OPINIONS

12. I have reviewed the statutory definitions of an “assault weapon,” as defined under California’s Assault Weapons Control Act (AWCA) in California Penal Code section 30515(a).³ Under Penal Code section 30515(a), a semiautomatic centerfire rifle that does not have a fixed magazine qualifies as an assault weapon if it has any of the following features: (1) a pistol grip that protrudes conspicuously beneath the action of the weapon; (2) a thumbhole stock; (3) a folding or telescoping stock; (4) a grenade or flare launcher; (5) a flash suppressor; or (6) a forward pistol grip.⁴ A semiautomatic centerfire rifle also qualifies as an assault weapon if it is equipped with a fixed magazine with the capacity to hold more than 10 rounds or has an overall length of less than 30 inches.⁵ I have also reviewed the list of rifles that qualify as “assault weapons”

³ See Cal. Penal Code § 30515, <https://bit.ly/3CtXF Ej>.

⁴ Cal. Penal Code § 30515(a)(1)(A)-(F).

⁵ Cal. Penal Code § 30515(a)(2)-(3).

1 under California Penal Code § 30510(a), which have many of the same features and
2 accessories listed in § 30515(a).

3 13. I am familiar with the features, accessories, and capabilities of rifles
4 regulated by Penal Code § 30515(a). The AR-15, like the M4, is an offensive
5 combat weapon system. The only difference is the AR-15 cannot fire on full-auto
6 (continual shots fired in succession so long as the trigger is pulled) or burst (several
7 shots fired in succession with a single pull of the trigger)—a picayune difference
8 that cannot serve to support a non-combat role for the AR-15. In my experience,
9 soldiers are trained to set select-fire weapons to semi-auto mode, so that a single
10 round is fired with each pull of the trigger. An M4 or M16 on full-automatic is an
11 area fire weapon: the auto rate of fire makes the weapon too difficult to control on a
12 point target. Rifle fire on full automatic is not aimed fire, uses an excessive amount
13 of ammunition and will damage the weapon if used too often. In fact, in my 14
14 months of combat, I did not once see an M4 or M16 fired on full auto. Semi-auto
15 function is used almost exclusively in combat. When operated in semi-auto mode,
16 the AR-15 and M4 share the same rates of fire, the same maximum effective range,
17 the same maximum range, use the same magazines designed for combat and the
18 same ammunition. The AR-15 and M4 are both designed to fire a .223 round that
19 tumbles upon hitting flesh and rips thru the human body. A single round is capable
20 of severing the upper body from the lower body, or decapitation. The round is
21 designed to kill, not wound, and both the AR-15 and M4 contain barrel rifling to
22 make the round tumble upon impact and cause more severe injury. The
23 combination of automatic rifle and .223 round is a very efficient killing system.
24 The same can be said of the AR-15.

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

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

3 15. Detachable magazines: In order for a rifle to qualify as an assault
4 weapon under California Penal Code § 30515(a), the rifle must have the capability
5 of accepting a detachable ammunition magazine (by not having a fixed magazine).
6 Detachable magazines improve the killing efficiency of automatic rifles, allowing
7 the combat rifleman to efficiently carry a combat load of 120 rounds in four 30-
8 round magazines, to rapidly change magazines in combat, and to increase killing
9 efficiency by significantly reducing reload time. Changing magazines during
10 intense combat is the most important individual skill taught to Marines. During
11 intense combat, the detachable magazine provides a rifleman the capability to fire
12 120 rounds on semi-automatic in three minutes at a high-sustained rate of 45 rounds
13 per minute. In a civilian self-defense context, by contrast, an individual would not
14 have a need for such a high rate of fire.

15 16. Pistol grip protruding beneath the action of a rifle: I am a 15th Award
16 Expert on the M16 and M4. I carried an M4 every day for 14 months during my
17 time in command of RCT-7 in Iraq. I used an M4 in combat, and I killed with it.
18 The pistol grip beneath the action of an automatic rifle serves only two purposes.
19 First, the pistol grip allows the rifleman to pull the rifle into her shoulder with each
20 shot, an action which increases stock weld, reduces semi-automatic/automatic
21 recoil, and reduces barrel rise. Stock weld or cheek weld refers to the firmness of
22 the contact between the rifle stock, the shooter's cheek, and the shooter's shoulder.
23 A firm stock weld is required for effective semi-automatic and automatic rapid fire.
24 Absent any pistol grip, a semi-automatic rifle would be difficult to operate when
25 fired rapidly, as the rifle barrel would seesaw up and down with each shot fired in
26 succession. Second, the pistol grip functions as a hand rest to reduce hand/finger
27 fatigue during long combat engagements. Both actions increase the killing
28

1 efficiency of automatic rifles and are necessities in sustained combat operations of
2 weeks or months when firing a rifle rapidly.

3 17. Forward pistol grip: The forward pistol grip provides leverage to
4 tighten a stock weld on short barrel automatic weapons and reduces recoil and
5 barrel rise on short barrel automatic rifles. Forward pistol grips were added to the
6 M4 to increase M4 killing efficiency.

7 18. Folding stock: A folding stock causes weapon instability. For that
8 reason, folding stock automatic rifles are designed for military personnel, whose
9 primary weapon is vehicle or air-mounted (tank, Bradley, Apache), who may be
10 required to escape from a mangled vehicle, or who may need to abandon a
11 destroyed weapon system and need a substitute weapon for offensive combat.
12 Outside of the military context, folding stocks that are not properly locked in place
13 can cause significant safety risks to the shooter due to recoil.

14 19. Grenade or flare launcher: A Marine Corps fireteam consists of a
15 fireteam leader, a rifleman, an assault gunner, and a grenadier. The grenadier is
16 armed with a grenade launcher. The grenadier uses the grenade launcher to
17 suppress or kill human beings so the rest of the fireteam can maneuver into position
18 to kill those humans with automatic rifle fire. The launcher is a separate weapon
19 system attached to as few rifles as possible dependent on the combat mission. In
20 my experience, grenade launchers attached to rifles are cumbersome, difficult to
21 aim, difficult to carry, and are not as effective as a standalone grenade launcher.
22 They have no legitimate use in self-defense.

23 20. Flash suppressor/flash hider: The purpose of the flash suppressor is to
24 reduce combat signature by cooling and dispersing burning gases. This makes it
25 more difficult for the enemy to pinpoint a rifleman's location, especially in low
26 light conditions. The flash suppressor facilitates night combat operations by
27 reducing muzzle flash and mitigating muzzle flash impact on night vision goggles.
28

1 This accessory serves specific combat-oriented purposes and is not needed for self-
2 defense.

3 21. Fixed magazine with the capacity to accept more than 10 rounds:

4 Automatic rifles are offensive combat weapons systems designed to kill efficiently
5 and effectively. Any increase to magazine capacity increases the killing efficiency
6 of the automatic rifle. A 30-round fixed magazine can fire more rounds in a given
7 amount of time than three 10-round detachable magazines, which would need to be
8 reloaded to fire the same number of rounds, slowing down the rate of fire.

9 Similarly, a 100-round drum magazine can fire more rounds in a given period of
10 time than ten 10-round detachable magazines. As noted above in connection with
11 detachable magazines, an individual using a rifle in self-defense would not need
12 such a high, continuous rate of fire.

13 22. The AR-15 is an offensive combat weapon no different in function or
14 purpose than an M4. In my opinion, both weapons are designed to kill as many
15 people as possible, as efficiently as possible, and serve no legitimate sporting or
16 self-defense purpose. Self-defense and military combat are different. The weapons
17 and accessories needed in one may not be needed or appropriate in the other. For
18 instance, when I was serving in the military, I carried my M4 for offensive combat
19 and a handgun for self-defense. Defensive combat is generally up close and very
20 personal. At that range, it is very difficult to use a rifle as a defensive weapon,
21 except as a blunt force instrument. My 9mm pistol was the self-defense weapon of
22 choice, and we were trained to expend only 1-2 rounds per adversary in pistol
23 combat. The features identified in California Penal Code § 30515(a) enhance the
24 lethality of both semiautomatic and automatic rifles and are most appropriate for
25 combat applications when used in conjunction with those types of weapons
26 systems.

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I declare under penalty of perjury that the foregoing is true and correct.
Executed on January 6, 2023 at Sandia Park, New Mexico

A handwritten signature in black ink, appearing to read 'C. Tucker', written over a horizontal line.

Col. (Ret.) Craig Tucker

EXHIBIT A

CITY OF ALBUQUERQUE OFFICE OF EMERGENCY MANAGEMENT (07/2021-PRESENT)

- Training and Education Coordinator/Acting Senior OEM Planner
 - Coordinate with County and State agencies to develop training and exercise programs that prepare the City of Albuquerque to mitigate, respond to, and recover from disasters.
 - Develop response plans for wildfire, flood, earthquake, and weapons release and test the plans in tabletop exercises and drills.
 - *In coordination with Albuquerque Public Schools developed and executed a school drill assessment/evaluation program.*
 - *Created, developed, and initiated training for APS, APD, and AFR on a doctrinal, best-practices-based approach to “Command and Control, Active Shooter, in a School, School in Session”*
 - Develop a training and exercise program to meet FEMA National Qualification Standards.
 - Serve as the Operations Chief for EOC activations and training.
 - Responsible for Plans updates and revisions, including a rewrite of the CABQ Comprehensive Emergency Management Plan.
 - Write and manage OEM Grants, including SHSGP, EMPG and Hazard Mitigation Grants.

RAVENSWOOD SOLUTIONS INC. (10/2019 – 06/2021)

- Program Manager, US Marine Corps Operations
 - Provide subject matter expertise and develop capture plans to provide live, virtual, and constructive capabilities in support of the Commandant’s Planning Guidance.
 - Project Manager for Ravenswood Solutions live-instrumented training and AAR support to MAGTF Warfighting Exercise-20 (MWX 20), the largest instrumented exercise in USMC history.
 - Co-authored White Paper on the application of machine-learning and Artificial intelligence to support unit readiness reporting.
 - Provided subject matter expertise to support ML/AI Wargaming prototype development.

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- Project Director, Middle East Operations
 - Lead planner and primary proposal author of a multi-corporation proposal to develop an 800-structure urban live fire and maneuver range in a Gulf Coast Coalition country.
 - Lead planner and primary proposal author of a multi-corporation proposal to develop a comprehensive training program for an emergent Marine Corps in a Gulf Coast Country.
- Program Manager, National Security Operations
 - Provide subject matter expertise, develop, and supervise training services in support of Department of Energy nuclear security and non-proliferation operations.
- Independent Contractor (01/2022 – 06/2022)
 - Acted as the Ravenswood Solutions Inc. US Marine Corps subject matter expert.
 - Acted as the Ravenswood Solutions Inc., training and leadership subject matter expert.

INNOVATIVE REASONING, LLC (08/2012 - 09/2019)

- Director, Studies and Analysis
 - Provided analyses, recommendations and participated as the senior tactical SME in support of the following Marine Corps Combat Development Command requirements.
 - Development of the U.S. Marine Corps post-war on terror Training Strategy.
 - Development of an adaptive planning capability employing multi-agent modeling, experiential learning theory, and machine learning.
 - Improving Small Unit Leader Decision-making through training in Recognition Primed Decision-making and experiential learning theory.
 - Chaired US Marine Corps 3d Annual Maneuver Warfare Conference (2018).
- Director, Federal Programs
 - Provided direction, supervision, and oversight to 5 program managers assigned to DOD and Department of Energy contracts in the United States and overseas.

- Program Director, Law Enforcement Tactical Decision-making
 - Created, certified, and taught tactical decision -making courses focused on making decision in high risk, low occurrence, fast moving circumstances with risk of death, serious injury.
 - Developed and taught 400+ series of National Incident Management Courses to support local law enforcement requirements.

DEPARTMENT OF ENERGY (09/2006 – 07/2012)

- Render Safe, Program Manager (SES)
 - Responsible for the Department of Energy (DOE) operational elements conducting nuclear counterterrorism and nuclear accident response in support of Tier 1 elements.
 - Responsible for organizing, resourcing, developing, and executing crisis response render-safe operations in support of Presidential and National Security policy.
- Assistant Deputy Administrator (SES), Office of Secure Transportation (OST)
 - Responsible for the safe and secure transportation of nuclear weapons, materials, and components in the continental United States.
 - Acted as the Senior Energy Official and National Nuclear Security Administration Incident Commander for incidents involving OST assets and during DHS-directed NIMS National Training Programs
 - Provided leadership, vision, and direction to a 1000+ mixed para-military and civilian workforce.
 - Developed and implemented innovative security practices focused on intelligence-driven operations, leadership, and performance-based approach to training. Resulting security Doctrine provided a blueprint for significant changes to DOE physical security doctrine.
 - Provided astute and responsible management of a \$270 million budget.

UNITED STATES MARINE CORPS (06/1981- 08/2006)

- Director of Training, Tactical Training Exercise Control Group (TTECG) (07/2005-08/2006)
 - Selected by the Commandant to rebuild and lead the Marine Corps

Service-level pre-deployment training program.

- Responsible for the successful integration of emergent and innovative urban operations with conventional combined arms operations. Trained organizations from the US and numerous allied countries.
 - Managed a training budget of \$30 million. Developed and implemented new approaches to training to maximize effective use of increased training budget. Increased the number of Marines/units trained per year and successfully integrated complex, multi-discipline training requirements into a coherent, effective training program
- Commanding Officer, Regimental Combat Team 7 (RCT-7) (06/2003 - 07/2005)
 - Commanded U.S. Marine Corps Regimental Combat Team 7 during Operation Iraqi Freedom II. Tour included 14 months of continuous combat command in Al Anbar Province.
 - Commanded RCT-7 during major urban combat operations to include battles of Fallujah I, Al Fajr (Fallujah II), Husaybah, Ramadi, and Hit.
 - Developed and implemented successful strategic plans for reconstruction of western Iraq; managed over \$200 million in construction and procurement contracts. Responsibilities included establishing border security, counter-terrorism operations, infrastructure development, and security forces training.
 - Acted as Superintendent for an elementary school system consisting of 12 elementary schools throughout Al AnBar province. Constructed the schools, hired teachers, hired administrators, and provided safety and security for students, teachers, and staff.
 - Responsible for the Force Protection and security of US bases and approximately 20,000 military and contractor personnel.
 - Director of Operations, Training and Education Command (06/2002-05/2003)
 - Responsible for the Marine Corps' training programs, with an 80,000+ personnel annual throughput.
 - Developed and successfully initiated programming and procurement for the Marine Corps' 10-year range modernization and instrumentation plan. Established and chaired Range Instrumentation Working Group.
 - U.S. Marine Corps Service-level representative to the OSD working group responsible for developing training transformation strategies.

- Successfully led USMC effort to meet the congressionally mandated requirement to replace Vieques Island with a CONUS based amphibious live-fire training capability within the year.
- Commander, 2nd Battalion, 7th Marine Regiment,
- Director of Operations, 7th Marine Regiment.
- Director of Operations, 13th Marine Expeditionary Unit (13th MEU).
 - Responsible for leadership and performance of a task-organized team with 1000+ members.
 - Served as primary planner in Naval and Joint crisis action planning and execution, to include the development of training plans, equipment procurement, and exercise development for the organization's worldwide contingency operations.
- Operations Planner, I Marine Expeditionary Force (I MEF). Primary planner and architect for a multi-national effort to rewrite the operations plan for defense of the Republic of Korea.
- Commander, Presidential Security Force, Camp David, MD
 - Commanding Officer of Marine Corps Detachment responsible for the security of the Presidential Retreat at Camp David.
 - Successfully balanced a 33% reduction in force structure with implementation of an innovative physical security plan that integrated personnel reductions, new technologies, and manpower, while increasing the security posture.
- Commanding Officer:
 - Weapons Company, Marine Infantry Battalion. (1988-1989)
 - Infantry Company, Marine Infantry Battalion. (1986-1988)
 - Guard Company, Nuclear Weapons Security, Adak, AK. (1984-1986)
 - Headquarters Company, Supply Battalion. (1983-1984)

AWARDS

(2) Legions of Merit with Combat Valor device, Purple Heart, Navy Commendation Medal for Heroic Action, Combat Action Ribbon, (7) Sea Service Deployment Ribbons, numerous other awards, and

Craig A. Tucker
Colonel, US Marine Corps, (Ret)

decorations.

PAPERS

- “On Demand Readiness for Army Commanders Through AI and Machine Learning” (2020) (White Paper for Army Applied Laboratory and the Office of Naval Research. (co-authored with SOMETE Technology and Lockheed Martin)
- “Band of Brothers: The 2D Marine Division and the Tiger Brigade in the Persian Gulf War”
An Analysis of the Impact of Organizational Culture on Tactical Joint Warfare (School of Advanced Military Studies, US Army Command and General Staff College)
- “False Prophets: The Myth of Maneuver Warfare and the Inadequacies of FMFM ‘Warfighting’”
(School of Advanced Military Studies, US Army Command and General Staff College,
- “Towards an Intellectual Component to Joint Doctrine: The Philosophy and Practice of Experiential Intelligence” (Naval War College)

EDUCATION

- B.S. Criminal Justice, University of Dayton
- MMAS, U.S. Army Command and General Staff College
- MMAS, US Army School of Advanced Military Studies
- MA, National Security and Strategic Studies, College of Naval Warfare (Highest Distinction)