



**DEPARTMENT OF DEFENSE
OFFICE OF THE CHIEF DEFENSE COUNSEL
OFFICE OF MILITARY COMMISSIONS**

13 June 2008

MEMORANDUM FOR THE CONVENING AUTHORITY

Subj: *UNITED STATES v. KHADR* – DEFENSE REQUEST FOR PRODUCTION OF
EXPERT WITNESS JOHN NIXON

Encl: (1) Curriculum Vitae of John Nixon
(2) Letter of John Nixon
(3) Memorandum to Commander, 28 July 2002
(4) After Action Report, 27 July 2002
(5) RIA, 7 Dec 05 Summary of Soldier #3 Interview
(6) RIA, 7 Dec 05 Summary of Soldier #4 Interview
(7) RIA, 7 Dec 05 Summary of Soldier #5 Interview
(8) Michael F. Finkel, *The neurological consequences of explosives*, Journal of the
Neurological Sciences 249, 63–67 (2006)
(9) Autopsy Report of SFC Chris Speer
(10) ARC's Terms & Conditions of Business
(11) MC Form 13-1

1. The defense in the case of *United States v. Omar Khadr* requests the Convening Authority to approve Mr. John Nixon as an expert witness in the field of ballistics.

2. Qualifications: Mr. Nixon is a professional mechanical engineer and consultant with Athena Research & Consulting, specializing in ballistics and munitions. From 1986 to 1989 he worked for the UK Ministry of Defense, developing a computer model of blast overpressure analysis and human exposure limit calculation for NATO. He is the author of several patents relating to munitions design. Mr. Nixon is also a court qualified expert in firearms, ballistics, wound ballistics, and explosives in numerous U.S. state and federal courts.

3. Expert consultant's address and telephone number:

Athena Research & Consulting LLC
PO Box 66
Bippus, IN 46713
Tel: 260 344 1314
Fax: 260 344 1495

4. Synopsis of expected testimony:

a. Relevance:

i. Mr. Nixon will be able to testify as to the degree and effect the blast overpressure would have had on Mr. Khadr and how that would have impaired him physically and mentally at a time he is alleged to have laid in wait and killed a U.S. soldier in a hand grenade attack.

A. Based upon interrogation reports taken from Mr. Khadr, the government alleges that Mr. Khadr *personally* threw a hand grenade that resulted in the death of SFC Christopher Speer. The descriptions extracted from Mr. Khadr have varied considerably in broad substance as well as detail, but the uncontroverted facts of the 27 July 2002 assault detail substantial bombardment of the compound in which Mr. Khadr was allegedly being held.

B. According to a memorandum prepared by the on-scene commander, the compound was strafed by four of F/A-18s, “until dry,” firing over 2000 rounds of 20mm cannon fire into the compound. Memorandum for Commander, 28 Jul 02, at paras. 2(c), 2(G) (encl. 3). The F/A-18s then switch to rockets. “After several runs,” the F/A-18s exhausted their rocket rounds. Two F/A-18s then each dropped an MK-82, 500-pound warhead, bomb with “pinpoint accuracy, both landing inside the compound.” *Id.* But see After Action Report (AAR), 27 Jul 02 at 00766-000586 (encl. 4) (describing four MK-82s being dropped, three on target, one going long). Four Apache helicopters followed suit, directing at least 150 rounds of 30mm cannon fire and 62 Hydra 70 FFAR rockets into the compound. After expending all of their available rounds, the Apache helicopters were followed by a pair of A-10s, who “expended all of their rockets and gun rounds.” This comprised at least 1500 rounds of 30mm cannon fire and 12 Hydra 70mm rockets. One 40mm round from an MK-19 grenade launcher was then fired into the compound. *Id.* Other witness statements discuss U.S. forces tossing hand grenades around the compound throughout the firefight. See, e.g., RIA, 7 Dec 05 Summary of Soldier #3 Interview (encl. 5); RIA, 7 Dec 05 Summary of Soldier #4 Interview (encl. 6); RIA, 7 Dec 05 Summary of Soldier #5 Interview (encl. 7). And the After Action Report states that near the end of the firefight “rounds and grenades were cooking off” in the compound. AAR at 00766-000586 (encl. 4).

C. Simply the concussive effect of these munitions, let alone the shrapnel injuries suffered by Mr. Khadr, cast considerable doubt on his ability to behave volitionally, let alone rationally. Academic literature describes the common neurological consequences of considerably less blast overpressure than Mr. Khadr would have experienced as “pain, altered consciousness, cognitive impairment, loss of function, and epilepsy.” See Michael F. Finkel, *The neurological consequences of explosives*, Journal of the Neurological Sciences 249, 63–67 (2006) (encl. 8).

D. The physical impact this would have had on him is critical to the presentation of defenses such as lack of mental responsibility. “It is an affirmative defense to any offense that, at the time of the commission of the acts constituting the offense, the accused, as a result of a severe mental disease or defect, was unable to appreciate the nature and quality or the wrongfulness of his or her acts.” R.M.C. 916(k)(1); see also MCA § 949k.

E. An element of the offense of Murder in Violation of the Law of War is that the accused “intended to kill the person or persons.” M.M.C. Part IV § 15(b)(4). If Mr. Khadr was suffering from “altered consciousness,” “cognitive impairment,” or “loss of function,” then he could not have had the requisite *mens rea* to be guilty of the charge.

ii. The government will rely on a statement in which Mr. Khadr allegedly reported throwing an F-1 grenade. Mr. Nixon will be able to testify as to the consistency of SFC

Speer's wounds with an F1 grenade, or any similar "pineapple" shaped grenade that could be confused with the F1, or if there are other possible causes of SFC Speer's injuries.

A. The cause of death identified in the autopsy report for SFC Speer is the penetration of shrapnel into the head, resulting in damage to the brain tissue beneath. Final Report of Postmortem Examination, at 1 ("Autopsy Report") (encl. 9). The report identifies two wounds to the forehead of $\frac{1}{2}$ and $\frac{1}{4}$ an inch in diameter respectively, which were likely fatal. The report further details three other shrapnel penetrations on the right shin and ankle, each no greater than $\frac{1}{4}$ an inch in diameter. *Id.* at 4. Furthermore, the autopsy report and the accompanying photographs show no burn injuries that would be expected if a grenade had fallen "at his feet" as government witnesses have claimed.

B. Mr. Nixon will testify as to the fragmentation patterns likely to result from grenades that would have been widely available in Afghanistan in 2002. Through the course of serial interrogations, the government has extracted out of Mr. Khadr an admission to using a specific type of grenade in the attack on SFC Speer – the Russian F1. Mr. Nixon will testify that the F1 is a heavy grenade, that contains a small 60g explosive charge of TNT that results in the erratic dispersion of a few, large cubical fragments. The wounds described in SFC's Speer's autopsy report, however, describe a number of small wounds scattered over his body.

C. Mr. Nixon will testify as to the types of grenades, or other weapons, that would cause injuries such as those suffered by SFC Speer. Given the distribution of fragmentation wounds across his body, as well as their size, Mr. Nixon will testify that the type of fragmentation grenade that killed SFC Speer was much more likely to be an M67 than an F1. Mr. Nixon will testify that the M67 blasts in a predictable "mist" of fine shrapnel in a casualty radius of up to 15 meters. Based upon the wide distribution of penetration wounds extending from his forehead to his ankle, coupled with the lack of burn injuries on his body, Mr. Nixon will testify that SSG Speer's injuries are consistent with an M67 grenade exploding a few meters away, like those being thrown by coalition forces inside the walls of the compound.

b. Necessity:

i. Mr. Nixon is an expert on firearm and explosive ballistics. The government's case on Charge I is built around allegations that Mr. Khadr personally threw a hand-grenade, an allegation repeated in Charges III and IV. The government believes it has identified the make and model of the grenade that allegedly killed SFC Speer. Furthermore, the government's theory of the case rests upon Mr. Khadr's allegedly voluntary and intentional conduct after suffering substantial injuries in a massive bombardment by combat support aircraft. Mr. Nixon's testimony is directly relevant and necessary to the defense's rebuttal both of the government's theory as to how SFC Speer was killed and to Mr. Khadr's capacity to have done it.

ii. Charge II alleges attempted murder on the theory that Mr. Khadr planted mines intended to kill U.S. servicemembers. The government contends that mines found miles away from the compound are the same as those depicted in a video of Mr. Khadr and his alleged

co-conspirators. Mr. Nixon will review the available documents and video to assess whether the mines found are those depicted in the video.

iii. Defense counsel are wholly ill-equipped to educate themselves or the commission on mechanical engineering and forensic ballistics. Defense counsel are lawyers, and though both have served in the United States Navy, neither have received training in ballistics or munitions manufacture. Even if defense counsel could obtain the necessary education on these issues, defense counsel cannot testify at the commission. Mr. Nixon's testimony is therefore necessary to assist the members determine facts relevant to Charges I through IV.

iv. Furthermore, the government has had the benefit of extensive pre-trial preparation and had access to the forensic evidence from the battlefield and from SFC Speer's remains. The defense has not. The loss or destruction by the government of physical evidence that would be highly relevant and available in almost any other murder case has put the defense at a substantial disadvantage. The testimony of an expert is therefore necessary to interpret and piece together what little forensic evidence remains available to the defense in contradicting the government's theory of the case. *United States v. Lee*, 64 M.J. 213, 218 (CAAF 2006) ("[T]he playing field at trial is rendered even more uneven when the Government benefits from scientific evidence and expert testimony while the defense is wholly denied a necessary expert to prepare for and respond to the Government's expert."); *see also United States v. Warner*, 62 M.J. 114, 120 (CAAF 2005).

5. Estimated Cost:

a. Total hours/days and total cost:

Mr. Nixon's fees are \$350.00 per hour plus expenses for consultation, analysis and/or review. Mr. Nixon will require time to review the complete photographic and medical records of Mr. Khadr and SFC Speer. He will require additional time to write-up his findings in a formal report that will be submitted to the military commission. He will also require time to be consulted by counsel in the case and to testify at trial. He will also require time to consult with physicians who can provide him with detailed descriptions of the physical effects of blast overpressure. The defense, therefore, requests a maximum authorization of 50 hours, excluding travel time to and from GTMO, be allotted to Mr. Nixon resulting in authorization for up to \$17,500 in fees.

b. Total days TDY at the per diem rate (such as travel days and casual status):

Assuming two days of travel time, plus the typical two days at Guantanamo Bay, Cuba for hearings, Mr. Nixon would need a minimum of eight days TDY to testify both at pre-trial hearings relating to admissibility and at trial.

c. Travel costs:

Mr. Nixon would, at a minimum, require travel to and from Guantanamo Bay, Cuba and lodging there, Cuba for the purpose of testifying at Mr. Khadr's trial.

Mr. Nixon charges \$300 per hour for travelling time and \$250 per hour for travelling time when public transport is used.

d. Rate for professional services and hours/days (when neither travel nor in-court testimony is involved):

Mr. Nixon's fees are \$350.00 per hour plus expenses for consultation, analysis and/or review.

e. Rate for in-court testimony and number of hours/days:

Mr. Nixon charges his hourly rate for testimony. We anticipate Mr. Nixon appearing during trial as a defense witness. His testimony should last no longer than one or two days on each occasion.


f. Inconvenience fee, if any:

A charge of \$500 shall be levied when a scheduled court attendance is cancelled less than three full business days before Mr. Nixon departs from his usual place of business. If he has already travelled to Guantanamo Bay, then a charge of \$1,000 plus travel time and expenses shall be applied irrespective of the notice period given.

6. If Mr. Nixon is produced, the agreement for his services will need to be made with Athena Research & Consulting, LLC rather than with Mr. Nixon personally. ARC's terms and conditions of business is attached. (encl. 10).

7. On 13 June 2008, I notified the opposing party of this request.

8. In the event this request is denied, the Defense requests a written response articulating the reasons for the denial. Should you have any questions or require further information, please contact me at (202) 761-0133 ext. 116 or kueblerw@dodgc.osd.mil.


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