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## *Boyle under Siege*

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## BOYLE UNDER SIEGE

COLIN P. CAHOON\*

### TABLE OF CONTENTS

I. INTRODUCTION .....	816
II. LIFE AND LITIGATION — GAMES OF CHANCE .....	818
A. CAPTAIN TUSSING ROLLS THE DICE .....	819
B. CARSON'S SURE BET .....	825
C. A LONG SHOT NAMED DIXON .....	829
D. A JACKPOT FOR MR. BOWLES .....	831
III. THE <i>BOYLE</i> TEST IN ACTION .....	835
A. REASONABLY PRECISE SPECIFICATIONS .....	835
B. PRODUCT CONFORMS TO SPECIFICATIONS ...	837
C. WARNINGS .....	838
IV. THE FIRST WAVE .....	840
A. THE DIRECT ASSAULT .....	841
1. <i>Precise Specifications</i> .....	841
a. Not Specific Enough .....	841
b. Not Government Approved .....	843
2. <i>Conformance</i> .....	845
a. Pile on the Requirements .....	846
b. DD 250 or Other Government Documents .....	848
c. Rubber-Stamping .....	849

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3. Warnings .....	850
B. A LEGAL WAR OF ATTRITION .....	851
C. DIVIDE AND CONQUER .....	853
D. A DEFECT BY ANY OTHER NAME — MANUFACTURING DEFECT .....	855
V. SHORING UP THE DEFENSES .....	857
A. TAKE THE SURE WINNERS UP .....	858
B. PRE-LOAD THE CANNONS .....	859
C. BUILDING STRONGER FACTUAL BARRIERS ...	861
VI. REINFORCEMENTS ON THE WAY? .....	862
VII. CONCLUSION .....	866

## I. INTRODUCTION

THE GOVERNMENT contractor defense was recognized and adopted by the United States Supreme Court in 1988 in *Boyle v. United Technologies Corp.*<sup>1</sup> Since that time, the government contractor defense, also referred to as the *Boyle* defense, has become a versatile shield against liability employed by government contractors defending a wide range of tort lawsuits. Federal courts, otherwise faced with increasingly crowded dockets, have readily applied the *Boyle* defense in dismissing large numbers of tort-based lawsuits at the summary judgment stage. The *Boyle* defense has become a major impediment to the plaintiff's bar in the field of aviation litigation, and lawyers have expended serious efforts attempting to punch a hole through this legal shield recently brandished with impunity by manufacturing defendants.

The *Boyle* case itself has been much maligned by those who disagree with its outcome,<sup>2</sup> misunderstood by those with no experience with the government procurement

<sup>1</sup> 487 U.S. 500 (1988).

<sup>2</sup> "[T]he majority's decision to carve out a new area of uniquely federal interest and then displace state law for no better reason than to prevent what it perceives to be a potential prejudicial impact upon the federal treasury is unprecedented, shocking, and an unabashed act of judicial law-making." 1 LEE S. KREINDLER, *AVIATION ACCIDENT LAW* 7-90 (1993).

process,<sup>3</sup> and factually distorted by writers who know little about the underlying facts of the case. The following article is intended to clear up some of these misconceptions. More important, however, the article is meant to act as a guide to government contractors and manufacturers when faced with tort litigation in the future.<sup>4</sup>

This article is broken down into five major substantive sections. The first section provides the reader with a behind-the-scenes perspective of the *Boyle* case itself. This section recounts the circumstances surrounding the crash and details the resulting litigation from the perspective of eyewitnesses and participants.

The second section illustrates the *Boyle* defense in action. This section explains the three-part test that makes up the government contractor defense and lists examples of how federal courts have applied and interpreted each leg of the defense.

The third section provides a list of tactics used by plaintiffs in their first assault on the government contractor defense. This section not only provides examples of various strategies for attacking the government contractor defense, but also details a defendant's response to each.

The fourth section is intended as a guide for military contractors and their in-house legal departments on how best to prepare for the future and preserve their government contractor defenses. This section lists several recommendations which, if followed, could substantially increase the chances of a successful *Boyle* defense and reduce future liability exposure for manufacturers. These

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<sup>3</sup> As illustrated by such claims as "[m]anufacturer liability would promote recalls . . . ." WINDLE TURLEY, AVIATION LITIGATION 78 (1986). Imagine the headlines "Gulf War Called Off. Chrysler Recalls M-1 Tanks for Defective Gas Tank Placement." The same author makes the unsupported statement that "[p]lacing the risk of loss on the victim ultimately places the cost on the government in the form of welfare dependency. . . ." *Id.*

<sup>4</sup> This article is written from the manufacturer's perspective. Several outstanding articles have preceded this one written unmistakably from the opposite perspective. Although the author did not participate in the *Boyle* case, he has been involved in litigation involving Sikorsky products, including defending Sikorsky in CH-53D litigation with issues strikingly similar to those in *Boyle*.

recommendations could also provide defense counsel with valuable support in defending future government contractor cases.

The final substantive section provides predictions for the future of the government contractor defense and possible areas of expansion for this powerful litigation tool. While some may hope that the government contractor defense has already enjoyed its heyday, the future for the *Boyle* defense and related legal theories may be bright indeed.

## II. LIFE AND LITIGATION — GAMES OF CHANCE

Ultimately, the *Boyle* case was a tremendous victory for the defendant, United Technologies Corporation (Sikorsky Aircraft Division) and all manufacturers who provide products to the military. Nonetheless, the *Boyle* case remains a bitter memory for many of the Sikorsky employees involved in the trial.

History cannot be changed. Unquestionably, the jury found that an unreasonably dangerous design defect existed in the helicopter that caused a serviceman's death.<sup>5</sup> From a strictly legal sense, the facts are as the jury finds them. Very little cynicism, however, is required to admit that whether a design is found defective depends on a number of factors totally unrelated to the design itself, such as the skill and presentation of the lawyers, the sympathy factor of the case, and the intelligence, political orientation, and prejudice of the jury.

Every writer who discusses the government contractor defense accepts as truth the facts as found by the *Boyle* jury.<sup>6</sup> What follows is the author's presumptuous judg-

<sup>5</sup> *Boyle v. United Technologies Corp.*, 792 F.2d 413, 414 (4th Cir. 1986), judgment vacated by 487 U.S. 500 (1988), on remand to 857 F.2d 1468 (4th Cir.), cert. denied, 488 U.S. 994 (1988).

<sup>6</sup> Ernie Stewart, Comment, *The Government Made Me Do It!: Has Boyle v. United Technologies Extended the Government Contract Defense Too Far?*, 57 J. AIR L. & COM. 981, 987 (1992). "[Boyle] drowned when he could not escape from the helicopter. Boyle and his men were trapped inside the helicopter because the escape hatch, which opened outward rather than inward as required by government spec-

ment notwithstanding the verdict. What really happened to Lieutenant Boyle will never be known with certainty. The circumstances surrounding the accident, however, cast considerable doubt on the judgment that the jury, history, and subsequent writers have passed on the design of the Sikorsky helicopter involved.

#### A. CAPTAIN TUSSING ROLLS THE DICE

Captain Tussing rubbed his eyes and focused on the alarm clock. 0215 hours . . . the beginning of another glamorous day for a helicopter pilot in the United States Marine Corps. He rolled out of bed, put on his flight suit and headed for the 0245 briefing on the day's operations.<sup>7</sup>

Captain Tussing would act as the pilot-in-command of a Marine Corps CH-53D, identified by its bureau number (BUNO) 157151.<sup>8</sup> The crew manifest for BUNO 157151 that morning, April 27, 1983, listed the copilot as First Lieutenant David A. Boyle and the crew chief as Sergeant Charles F. Tubbs.<sup>9</sup> Lance Corporal Jerry D. Trickett would ride along as a passenger in the gunner seat.<sup>10</sup>

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ifications, was pinned by increasing water pressure as the helicopter sank." *Id.* "[T]he helicopter co-pilot died not as a result of the crash of the helicopter into the Atlantic Ocean but rather because the hatch on his helicopter was not designed to open inward. Instead the hatch only opened outward, the co-pilot could not open the hatch against the water pressure, and the co-pilot drowned." Peter W. Hohenhaus, *Purpose and Policy — Further Development to the Federal Government Contractor's Defense Following Boyle v. United Technologies Corporation*, 1981 WL 330766, at \*4-5 (May 1991). "Although Boyle survived the impact, he drowned [because] . . . the escape hatch . . . open[ed] outward . . . [and] [t]he water pressure exerted on the helicopter made it impossible to open the hatch outward." 3 LEE S. KREINDLER, *AVIATION ACCIDENT LAW* § 31.02[3][b] (1993).

<sup>7</sup> *Manual of Judge Advocate General*, Final Investigative Report, Enclosure 4 [hereinafter *JAG Report*] (on file with author). "JAG reports" are investigative reports conducted by the Department of the Navy and are generally available upon request through the Freedom of Information Act, 5 U.S.C. § 552 (1992).

<sup>8</sup> BUNO 157151 was referred to by the crew as "Ol' Number Seven." Bert B. Tussing, *My Time*, *APPROACH* (Commander, Naval Safety Ctr., Norfolk, Va.) Nov. 1984, at 3. "She had been a perennial 'stable queen' among the Sea Stallions. In recent memory, Old Seven had always been the one . . . we really had to stroke before any major operation." *Id.*

<sup>9</sup> *JAG Report*, *supra* note 7, Findings of Fact 5.

<sup>10</sup> Referred to by the Marine Corps as an "authorized passenger." *Id.*, Findings of Fact 5-6.

They were all part of HMH-461, a Marine helicopter squadron taking part in Operation Solid Shield 83<sup>11</sup> while stationed on board the USS Nassau, then cruising just off the Virginia coast.<sup>12</sup>

Captain Tussing had preflighted the aircraft the previous afternoon, carefully looking over the helicopter that was almost as old as his copilot. It is easier to preflight in the daylight, and no right-thinking pilot would relish getting up *before* 2:15 a.m. to conduct a preflight.<sup>13</sup> Two discrepancies with the aircraft came to Captain Tussing's attention during the preflight. First, he noted that the flight ready light was listed in the aircraft log book as intermittent.<sup>14</sup> The flight ready light provides the crew with a single source warning light that, when illuminated, indicates the rotor system is locked and ready for flight prior to departure. When the light extinguishes, the crew's curiosity is necessarily piqued as they try to determine from other sources if the main rotors are ready for flight.<sup>15</sup>

Captain Tussing discussed this write-up with Sergeant Tubbs, who felt that the light was intermittent due to a faulty wiring harness since no other system problems were noted. Sergeant Tubbs was confident that the intermittent light would in no way jeopardize the safety of flight.<sup>16</sup> To compensate for the intermittent light, Sergeant Tubbs would visibly inspect certain rotor components prior to each launch to insure the systems were operating correctly.<sup>17</sup>

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<sup>11</sup> "... a rehearsal exercise for one of those huge interservice efforts." Tussing, *supra* note 8, at 3.

<sup>12</sup> *JAG Report*, *supra* note 7, Enclosure 22.

<sup>13</sup> *Id.*, Enclosure 4; Tussing, *supra* note 8, at 3.

<sup>14</sup> *Id.*

<sup>15</sup> NATOPS FLIGHT MANUAL, RH-53D HELICOPTER, U.S. NAVY 1-95 (1975) [hereinafter NATOPS FLIGHT MANUAL] (on file with the *Journal of Air Law & Commerce*).

<sup>16</sup> "I've always been less than anxious to fly a bird whose caution lights are waving the not-safe-for-flight banner in my eyes. [Quality Assurance] joined in the 'but it's still safe to fly' chorus, and I finally succumbed." Tussing, *supra* note 8, at 3.

<sup>17</sup> *JAG Report*, *supra* note 7, Enclosure 4. It was later demonstrated at the trial arising from this crash that the flight crew did not understand the helicopter rotor

The second write-up regarding BUNO 157151 involved the flight controls. The log book indicated that when the pilot's cyclic<sup>18</sup> was centered, the copilot's cyclic was canted slightly left of center.<sup>19</sup> Sergeant Tubbs felt that the problem was only a matter of positioning and that the cyclic control movements would not be inhibited.<sup>20</sup> If Sergeant Tubbs was wrong, the crew would be unable to utilize the full left cyclic travel if placed in a situation warranting such a severe maneuver.<sup>21</sup>

Captain Tussing could have refused the aircraft for either the intermittent flight ready light or the problem with the cyclic positioning.<sup>22</sup> Every military pilot con-

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system sufficiently to have determined if the rotor system was locked and ready for flight. Telephone interview with Jack Carson (Jan. 18, 1994).

<sup>18</sup> A helicopter is controlled by three primary flight controls. The "collective" is a control stick located just outside of the pilot's left leg. When the collective is in the full down position, the main rotor blades are in the flat pitch position, thereby producing no thrust. As the collective is raised by the pilot's left arm, the pitch of the main rotor blades throughout the entire rotor tip path plane is increased, thereby increasing thrust. The term "collective" is simply shorthand for collective pitch control. In simple terms the collective makes the aircraft go up and down. The "cyclic," on the other hand, directs the aircraft left, right, forward, or backward. The cyclic is a control stick located between the pilot's legs. Whereas the collective changes the pitch in the entire main rotor tip path plane, the cyclic alters the pitch in a select portion of the main rotor tip path plane. The net effect is that the tip path plane of the main rotor blades is tilted in the direction that the pilot points the cyclic. The third flight control consists of the anti-torque pedals controlled by the pilot's feet. As the pilot increases the collective pitch on the main rotor system, the helicopter's fuselage experiences torque in the opposite direction of the main rotor rotation. In a single main rotor configuration, a helicopter would spin in the opposite direction of the main rotors because of this phenomenon. Helicopter designers compensate for this by placing a tail rotor at the rear of the aircraft fuselage which provides thrust in the opposite direction of the torque moment. The pitch of the tail rotor is controlled by left and right foot inputs by the pilot on the anti-torque pedals. FUNDAMENTALS OF FLIGHT, FLIGHT MANUAL 1-203, U.S. ARMY 1-42 to 1-44, 3-35 to 3-399 (1983) [hereinafter FUNDAMENTALS OF FLIGHT] (on file with the *Journal of Air Law and Commerce*).

<sup>19</sup> "[P]reflight bore it out: The copilot's cyclic was out of alignment. When the flight controls were neutralized, the pilot's stick was standing up straight and pretty, just like all good cyclics were raised to do, but the copilot's canted slightly to the left." Tussing, *supra* note 8, at 3.

<sup>20</sup> JAG Report, *supra* note 7, Enclosure 4.

<sup>21</sup> Telephone interviews with Jack Carson, Test Pilot, Sikorsky Aircraft Division (Aug. 6, 1993 and Jan. 18, 1994).

<sup>22</sup> *Id.* In fact, the crew should not have accepted the aircraft for flight. Both the intermittent flight ready light and cyclic rigging discrepancies are grounding con-



stantly balances safety considerations against mission accomplishment. Marine Corps pilots have flown with significantly worse problems on numerous occasions without a glitch. It was a judgment call; it was Captain Tussing's call, and he decided to roll the dice.<sup>23</sup>

BUNO 157151 launched as part of a three-aircraft flight at 0420 hours.<sup>24</sup> The large combat assault helicopters looked like green buses taking flight into the dark Atlantic sky.<sup>25</sup>

The aircraft flew like a champ and was recovered from the morning's launch at 0751. The crews were debriefed, had breakfast, and then re-briefed for a second flight. Captain Tussing and Lt. Boyle launched the aircraft for a second time that morning in a flight of four CH-53s at

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ditions. The aircraft was not in a flyable condition and should never have departed. *Id.* In his defense, Captain Tussing wrote "Before you Lazyboy quarterbacks deposit your Delta Sierra ballots for yours truly . . . the call was good. The aircraft, from all that could be determined, was safe for flight . . . ." Tussing, *supra* note 8, at 3.

<sup>23</sup> "[Quality Assurance] joined in on the refrain, and I surrendered, satisfied . . . with a reasonable explanation." Tussing, *supra* note 8, at 4. While Captain Tussing may have believed it was a judgment call, in fact the aircraft did not meet Marine Corps criteria for flightworthiness and should have been grounded by the Unit Maintenance Officer or any pilot that reviewed the aircraft's logs for either the intermittent flight ready light or cyclic rigging discrepancies. The Sikorsky trial team, when conducting investigations relating to the subsequent litigation arising out of this accident, also determined that a hydraulic fluid sample taken by the Unit's maintenance department was known to have been contaminated prior to the flight in question. The Unit's maintenance department, therefore, should have grounded the aircraft for this discrepancy as well. Telephone interview with Jack Carson, *supra* note 21 (Jan. 18, 1994). A fourth problem with the aircraft should also have resulted in a grounding condition. While running up the aircraft for the second morning's mission, Captain Tussing noted a problem with the No. 2 engine's low side torque readings. *JAG Report*, *supra* note 7, Enclosure 4. This discrepancy with the engine instruments was sufficient to have justified declining the aircraft and scrubbing the mission. Telephone interview with Jack Carson, *supra* note 21 (Jan. 18, 1994). In summary, there were four independent reasons why the aircraft in question should not have departed on the morning of April 27, 1983. The aircraft simply was not flightworthy. *Id.*

<sup>24</sup> *JAG Report*, *supra* note 7, Enclosure 4.

<sup>25</sup> The helicopter's fuselage is boxcar shaped, almost nine feet wide, and over 67 feet long from nose to tail. NATOPS FLIGHT MANUAL, *supra* note 15, at 1-4. The aircraft's design gross weight is 42,000 pounds and normally seats 37 passengers. *Id.* at 1-3.

1120 hours.<sup>26</sup> BUNO 157151 cleared the deck of the USS Nassau and proceeded with the other helicopters to the USS Inchon for simulated troop pickup landings. It was a clear day with high scattered clouds and a moderate breeze out of the south.<sup>27</sup> Later in the afternoon, the USS Shreveport requested that two of the CH-53s come to her decks for practice landings. BUNO 157151 and one other CH-53D were cut loose from the flight of four and proceeded toward the Shreveport.<sup>28</sup>

Lt. Boyle was piloting the aircraft from the left seat as they approached the Shreveport. Lt. Boyle was a brand-new pilot in the squadron. He was low time in the CH-53D, but had been an above average student at flight school. He was well-liked, confident, and an excellent swimmer.<sup>29</sup> His attention was momentarily drawn to an F-14 flying nearby, and Captain Tussing admonished him to expedite his approach. After being cleared to land, BUNO 157151 lined up behind the other CH-53D, which was approaching the landing spot in front of BUNO 157151's intended touchdown.<sup>30</sup>

Captain Tussing noticed the aircraft in front of them begin to slow down for approach too soon. They would probably have to take their aircraft around to prevent rushing the lead aircraft.<sup>31</sup> Lt. Boyle was having trouble with the approach angle, and Captain Tussing continued to offer constructive criticism and admonishment.<sup>32</sup> He started to get that uneasy feeling that something wasn't quite right. They were getting very low, very slow, and

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<sup>26</sup> *JAG Report*, *supra* note 7, Enclosure 4.

<sup>27</sup> *Id.*, Findings of Fact 2.

<sup>28</sup> *Id.*, Enclosure 4.

<sup>29</sup> *Id.* Although recognized as competent, Captain Tussing was considered a below-average pilot in his unit. *Id.*, Enclosure 20. A common trend in CH-53 military helicopter accidents involves below-average aircraft commanders flying with aggressive and talented young co-pilots. Telephone interview with Jack Carson, *supra* note 21 (Jan. 18, 1994).

<sup>30</sup> *JAG Report*, *supra* note 7, Enclosure 4.

<sup>31</sup> *Id.*

<sup>32</sup> "Capt[ain] Tussing was instructing Lt. Boyle all the time that he was trying to land. Lt. Boyle's approach was bad so we were waved off to try again." *Id.*, Enclosure 6.

very close to the water.<sup>33</sup>

Lt. Boyle announced "I am going to wave it off," and he broadcast his intentions to the Shreveport. Captain Tussing took the controls and began to initiate the right turn to set up another approach. Lt. Boyle, apparently not yet having relinquished the controls, shouted "I can't get enough left cyclic!"<sup>34</sup> These were the last words anyone would hear from the newest pilot in the squadron.

The aircraft continued to turn to the right. Captain Tussing attempted to arrest the roll with left cyclic input to no avail. The aircraft settled into the water on its right side, slightly nose-down.<sup>35</sup>

Captain Tussing immediately began screaming for the crew to egress the aircraft. He reached for the pilot's window emergency release and saw about four inches of light between the top of the window and the water. He pushed the window out and released his harness as the aircraft cockpit began rolling to the right. He would have to swim down and out from under the wreckage.<sup>36</sup>

The time seemed like an eternity, but it must have been only one or two seconds before Tussing finally broke to the surface. Then he was sucked back into the ocean by the water rushing into the empty cabin and cargo compartments. He fought his way back to the surface after a time period that seemed even longer than the first.<sup>37</sup>

Splashing around in the water, he saw Lance Corporal Trickett on top of part of the aircraft that was sticking out of the water.<sup>38</sup> Sergeant Tubbs was trying to climb on the

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<sup>33</sup> *Id.*, Enclosure 4; Tussing, *supra* note 8, at 4.

<sup>34</sup> *JAG Report*, *supra* note 7, Enclosure 4. This statement supports the theory that Lt. Boyle was attempting to make a left turn while Captain Tussing was trying to make a right turn. Telephone interview with Ron Bowles, Deputy Counsel, Sikorsky Aircraft Division (Feb. 11, 1994).

<sup>35</sup> *JAG Report*, *supra* note 7, Enclosure 4. The touchdown was relatively gentle, as demonstrated by Sgt. Tubbs's trial testimony that he was standing in the helicopter's cargo compartment prior to impact and was not knocked off his feet by the impact. Telephone interview with Ron Bowles, *supra* note 34 (Feb. 11, 1994).

<sup>36</sup> *JAG Report*, *supra* note 7, Enclosure 4; Tussing, *supra* note 8, at 5.

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* The depth at the crash site was less than fifteen feet. The aircraft had

aircraft's sponson tanks. Captain Tussing began to yell for Lt. Boyle and to splash about frantically looking for him.<sup>39</sup> He never surfaced.<sup>40</sup> Lady Luck would smile on only three of the four crew members that day.

### B. CARSON'S SURE BET

"Jack, the jury came back for the plaintiff."

Jack Carson was stunned. The confidence and pride he felt as the chief pilot witness for Sikorsky Aircraft vaporized into a feeling of sickening bewilderment. The plaintiff had no case. Everybody knew it, including the plaintiff's attorney. Everybody . . . except the jury.<sup>41</sup>

The plaintiff was the father of Lt. David A. Boyle, the Marine helicopter pilot who drowned when his CH-53D helicopter crashed into the ocean off the coast of Virginia.<sup>42</sup> Jack Carson, a former Marine pilot and a Sikorsky test pilot for the CH-53 program, was appalled that the case had ever been brought to trial. There was no evidence that any component of the aircraft failed prior to the crash or that any defect caused Lt. Boyle's death.<sup>43</sup>

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rolled upside down leaving the flat belly exposed about two feet above the water line. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>39</sup> *JAG Report*, *supra* note 7, Enclosure 4. "It didn't make sense to me . . . [M]y side of the aircraft was the one that impacted the heaviest; the roll was in my direction; where the hell was he?" Tussing, *supra* note 8, at 5.

<sup>40</sup> His body was recovered later that day by divers who found him tangled in nylon straps in the passenger compartment. *JAG Report*, *supra* note 7, Enclosure 14. The cause of death was later determined as drowning. *Id.*, Findings of Fact 17. There was no evidence that he was rendered unconscious or otherwise injured during the crash sequence. *Id.*, Enclosure 24. There was some evidence that he had clawed at the compartment's interior while drowning. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>41</sup> Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993). Mr. Carson was not actually present when the jury verdict was returned. He recalls receiving a telephone call after dinner in his hotel room informing him of the verdict. *Id.*

<sup>42</sup> *Boyle v. United Technologies Corp.*, 487 U.S. 500, 502 (1988).

<sup>43</sup> An engineering investigation performed by the Navy determined that the aircraft had hydraulic contamination in all flight control servos. Such contamination was attributable to hydraulic servicing by squadron maintenance personnel. A Navy investigation of the accident noted that the squadron had not followed proper hydraulic fluid sampling procedures, but did not attribute the accident to this. A metallic chip was found on one of the automatic flight control system's

The pilots allowed the aircraft to get too low and slow and simply flew the aircraft into the ocean.<sup>44</sup>

The plaintiff had shifted gears in the middle of trial and focused on a design defect theory directed at the emergency exits.<sup>45</sup> It was evident that Lt. Boyle had survived the initial impact with the water and died from drowning.<sup>46</sup> His first line of egress was the copilot's emergency window exit located at his left shoulder as he sat in the cockpit. The copilot's window swings outward much like a car door, but the emergency window exit is actually an escape hatch comprised of the window and its frame which fall away from the helicopter when activated.<sup>47</sup> Lt. Boyle's body was found in the cargo area of the helicopter unbuckled from his seat belt. From this fact, the plaintiff

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servo valves. The Navy investigator noted that this metallic chip would have been sufficient to jam the valve and cause a cyclic stick drive to the right. Although there was little evidence that this caused the crash, the Navy investigation team concluded that it was the most probable cause of a reported flight control problem. *JAG Report*, *supra* note 7, Enclosure 36. The Sikorsky accident investigation team concluded that the Navy's probable cause finding was insupportable and incorrect. Sikorsky did not adopt the Navy's conclusion at trial, despite the fact that the metallic chip contamination would have been introduced into the system by the Navy. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>44</sup> After participating in an investigation of the crash and the trial presentation for Sikorsky, and after listening to a majority of the testimony in the *Boyle* case, Jack Carson concluded that one of the two pilots had initiated an aggressive button-hook turn close to the water on wave off during approach. The copilot's cyclic stick was reported to be two to three inches out-of-rig to the left. This may have limited the crew's ability to induce sufficient left cyclic input to level the aircraft. Sikorsky attributed the cause of the accident to pilot error. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>45</sup> The plaintiff initially adopted the Navy's theory of the cause of the accident. Plaintiff's expert testified that a metallic particle had jammed one of the automatic flight control system hydraulic switches and caused the aircraft to bank uncontrollably to the right. There was overwhelming evidence that the metallic particle could only have been introduced into the aircraft's hydraulic system by Marine Corps maintenance activities. This theory of plaintiff's case became unattractive when plaintiff's engineering expert witness admitted to the jury that the design of the hydraulic flight control system by Sikorsky was sound. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>46</sup> *Boyle*, 487 U.S. at 502.

<sup>47</sup> NATOPS FLIGHT MANUAL, *supra* note 15, at 1-64. Navy design criteria mandates that all aircraft escape hatches open outward in order to ensure uniform design and allow for easy extraction of crews by ground rescue personnel. Telephone interview with Ron Bowles, *supra* note 34 (Feb. 11, 1994).

concluded that Lt. Boyle had been unable to open his exit and had attempted to depart the sinking aircraft through the rear cargo area. The plaintiff argued that the copilot's exit should have been designed to open inward rather than outward, thereby precluding the possibility that water pressure outside a sinking aircraft would impede the crew in their efforts to open it.<sup>48</sup>

Jack Carson was in disbelief when he first heard this preposterous theory. From a practical standpoint, there simply is not any room in the cockpit of a helicopter for the pilot exit to open inward. There are several objects inside the cockpit that would restrict such movement, not the least of which were the pilot's seat, the aircraft controls, and the pilot himself. Besides, the plaintiff's theory was not supported by history. Pilots had been opening crew exits outward in water accidents for years.<sup>49</sup> In fact, Lt. Boyle was the only member of the four-man crew who was unable to escape drowning.<sup>50</sup> The pilot seemed to have no difficulty in opening his door on the opposite side of the aircraft.<sup>51</sup>

Most damning of all to the plaintiff's theory, however, was the conclusive evidence that Lt. Boyle never attempted to open his emergency exit. The CH-53 was designed with an emergency exit release mechanism activated by a handle next to the pilot's left hand. Pulling the handle not only opens the exit, but loosens it from all of its hinges. The exit hatch then simply drops away after being pushed out by the crew member.<sup>52</sup> In order to pro-

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<sup>48</sup> *Boyle*, 487 U.S. at 503.

<sup>49</sup> Jack Carson thought the theory was "stupid." The Navy and Marine Corps had never experienced problems with the design of the exit after almost twenty years of CH-53 operations. Jack Carson knew a personal friend who had used the same exit when exiting a sinking CH-53 in Vietnam. Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>50</sup> *Boyle v. United Technologies Corp.*, 792 F.2d 413, 414 (4th Cir. 1986).

<sup>51</sup> *JAG Report*, *supra* note 7, Enclosure 4. "There was no reason for him to have remained in that helicopter. Mine was the side that had impacted. If anyone overhead had wanted to guess whose was the helmet bobbing among the wreckage, the safe bet would have been mine." Tussing, *supra* note 8, at 5.

<sup>52</sup> NATOPS FLIGHT MANUAL, *supra* note 15, at 1-64.

vide a visual check for inadvertent activation of this jettison feature, the release handle is secured with a thin safety wire designed to show that the handle is in the locked position until a small amount of force is applied to the handle by the pilot, thereby breaking the safety wire.<sup>53</sup>

After the aircraft was recovered, investigators found that the safety wire on Lt. Boyle's door was still intact.<sup>54</sup> As far as Jack Carson was concerned, Lt. Boyle never attempted to escape through his own emergency exit. Dazed and perhaps confused from the impact and the gushing water that was pouring into the cockpit, Lt. Boyle had unstrapped himself and become disoriented inside the large helicopter's fuselage,<sup>55</sup> which is about the size of a Greyhound bus.<sup>56</sup>

The Sikorsky trial team felt confident at the end of their case. The CH-53D had long been touted as the best designed, best built, most dependable helicopter in the world. The lawyers had done their job, and the Sikorsky witnesses had defended their product. The plaintiff's settlement demand at the close of Sikorsky's case was so low as to merit some consideration despite the feeling by everyone involved that the jury would return a verdict for defendant.<sup>57</sup>

Jack Carson listened to the members of the trial team, including the trial attorneys, corporate attorney, accident investigator, and a representative from the insurance carrier, the day before the verdict as they discussed the plaintiff's low-ball demand. Jack, like everyone present, was

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<sup>53</sup> Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

<sup>54</sup> Tussing, *supra* note 8, at 5. "His window was still closed; the emergency release handle still shear-wired in place, untouched." *Id.*

<sup>55</sup> *Id.* Although Lt. Boyle received water egress training in flight school, he had not undergone such training in the CH-53. Lt. Boyle's new unit should have administered the training to him prior to flying over-water missions in this aircraft. Telephone interview with Jack Carson, *supra* note 21 (Jan. 18, 1994). There was also compelling evidence that Lt. Boyle purposely entered the helicopter's cargo area in order to check on the two Marines (Sgt. Tubbs and Corp. Trickett) in the back. Telephone interview with Ron Bowles, *supra* note 34 (Feb. 11, 1994).

<sup>56</sup> NATOPS FLIGHT MANUAL, *supra* note 15, at 1-4.

<sup>57</sup> Telephone interview with Jack Carson, *supra* note 21 (Aug. 6, 1993).

confident. This was a sure bet. The team had come this far and done its best, and there was no longer any rationale for a nuisance value settlement. An informal poll was taken. One by one, everyone on the Sikorsky team endorsed the rejection of the plaintiff's last demand.<sup>58</sup>

The sure bet went south. Jack Carson felt physically ill. Shock turned to disgust, disgust to anger. To him, the jury had just announced that Sikorsky killed Lt. Boyle. It was a victory of passion over reason.<sup>59</sup>

### C. A LONG SHOT NAMED DIXON

Although an affirmative defense called the "military contractor defense" had been recognized in various forms in a few courts, the defense strategy at the *Boyle* trial concentrated on the plaintiff's tenuous liability theory.<sup>60</sup> Hammering away at the weaknesses in the plaintiff's case and meeting the liability theories head-on seemed a more prudent course than hiding behind an affirmative defense. As an alternative ground for the jury to find for defendants, however, the defense team covered their bets and offered evidence in support of a military contractor defense.<sup>61</sup>

The prevalent understanding of the defense at the time of trial was that a military contractor would be immune from state tort liability for design defects if the contractor could prove that:

- (1) the United States is immune from liability; (2) the United States approved reasonably precise specifications for the equipment; (3) the equipment conformed to those specifications; and (4) the supplier warned the United

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<sup>58</sup> *Id.*

<sup>59</sup> *Id.* Jack Carson took the trial defeat personally and admitted to being "devastated." To this day he recalls the trial as a bitter and disappointing experience. *Id.*

<sup>60</sup> See, e.g., *McKay v. Rockwell Int'l Corp.*, 704 F.2d 444, 448-50 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984); *In re "Agent Orange" Prod. Liab. Litig.*, 534 F. Supp. 1046, 1053-54 (E.D.N.Y. 1982).

<sup>61</sup> Telephone interview with Tom Dixon, Director of Product Safety, Sikorsky Aircraft Division (Oct. 29, 1993).



States about dangers in the use of the equipment that were known to the supplier but not to the United States.<sup>62</sup>

In order to prove these elements, Sikorsky presented a single witness, a Sikorsky engineer named Thomas Dixon.<sup>63</sup>

Thomas Dixon was a knowledgeable company man. He had started with Sikorsky in 1951 as an engineer and later supervised much of the design work on the rotors and flight control systems for the CH-53 helicopter. He had been the Engineering Manager for the entire CH-53 program in the mid-seventies, and was Sikorsky's Director of Product Safety at the time of trial. Mr. Dixon was a general utility witness for the government contractor defense, having knowledge about many aspects of the government's involvement in the design and manufacture of the CH-53 helicopter.<sup>64</sup>

At trial Mr. Dixon described the back and forth discussions between Sikorsky and the Navy regarding the design of the CH-53 helicopter. He testified that the Navy was involved in every step of the complex process of developing a military helicopter from initial design conception to final aircraft production. He specifically testified about a mock-up of the cockpit built by Sikorsky that was reviewed and approved by the United States Navy. This mock-up revealed the exact design that the *Boyle* plaintiff complained was defective.<sup>65</sup> Tom Dixon was Sikorsky's proof that it had established as a matter of law the government contractor defense. His testimony was not the focus of the battle at the trial level, but it was Sikorsky's best hope on appeal.

The Fourth Circuit reviewed the trial record and made the long shot a winner. Regarding the testimony of Tom

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<sup>62</sup> *Boyle*, 792 F.2d at 414; see also *Koutsoubos v. Boeing Vertol*, 755 F.2d 352 (3d Cir.), cert. denied, 474 U.S. 821 (1985); *Schoenborn v. Boeing Co.*, 769 F.2d 115 (3d Cir. 1985), cert. denied, 474 U.S. 1082 (1986); *McKay v. Rockwell Int'l Corp.*, 704 F.2d 444 (9th Cir. 1983), cert. denied, 464 U.S. 1043 (1984).

<sup>63</sup> Telephone interview with Tom Dixon, *supra* note 61 (Oct. 29, 1993).

<sup>64</sup> *Id.*

<sup>65</sup> *Boyle*, 792 F.2d at 414.

Dixon, the court stated that it had "previously said that this type of exchange of information will normally suffice to establish government approval of the design in question."<sup>66</sup> The Fourth Circuit concluded that Sikorsky had satisfied the requirements of the military contractor defense and could not be held liable for any design defect alleged by the plaintiff.<sup>67</sup> Now it was the plaintiff's turn to appeal.

#### D. A JACKPOT FOR MR. BOWLES

At the time of the *Boyle* appeal, the government contractor defense was interpreted and applied in a hodgepodge fashion by several state and federal courts.<sup>68</sup> Because of different rationales advanced for the defense and different elements required to prove the defense, the United States Supreme Court found ample reason to clarify this essentially federal common law issue.<sup>69</sup> The *Boyle* case just happened to be the right case at the right time.

Ron Bowles<sup>70</sup> certainly believed that this was the right case and the right time. As in-house counsel for Sikorsky, he was highly cognizant of the possible benefits a government contractor defense recognized by the Supreme Court could provide by reducing litigation liability for his

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<sup>66</sup> *Id.*

<sup>67</sup> *Id.* at 415.

<sup>68</sup> See, e.g., *Shaw v. Grumman Aerospace Corp.*, 778 F.2d 736 (11th Cir. 1985), *cert. denied*, 487 U.S. 1233 (1988); *McKay v. Rockwell Int'l Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*, 464 U.S. 1043 (1984) (holding that the military contractor defense eliminates all liability under § 402A of the Second Restatement of Torts); *Littlehale v. E.I. du Pont de Nemours & Co.*, 268 F. Supp. 791 (S.D.N.Y. 1966), *aff'd*, 380 F.2d 274 (2d Cir. 1967); *Montgomery v. Goodyear Tire & Rubber Co.*, 231 F. Supp. 447 (S.D.N.Y. 1964); *Sanner v. Ford Motor Co.*, 364 A.2d 43 (N.J. Super. Ct. Law Div. 1976), *aff'd*, 381 A.2d 805 (N.J. Super. Ct. App. Div. 1977). For a history of the development of the government contractor defense, see Stewart, *supra* note 6, at 982-99; see also 1 KREINDLER, *supra* note 2, § 7.05.

<sup>69</sup> See TURLEY, *supra* note 3, at 75-79, which accurately predicted the Supreme Court review of the military contractor defense two years before the *Boyle* decision. "The issue appears ripe for Supreme Court review in the near future." *Id.* at 77.

<sup>70</sup> William R. Bowles, Deputy Counsel, Sikorsky Aircraft Division, J.D., St. Louis University, 1969; L.L.M. Aviation Law, Southern Methodist University, 1976.

company.<sup>71</sup> He had initiated the efforts to introduce evidence of government involvement in the design of the CH-53 into the *Boyle* trial and personally selected Tom Dixon for the task.<sup>72</sup>

While he too was surprised by the jury verdict, Mr. Bowles recognized that an appeal of this case to the Fourth Circuit might be the opportunity military contractors had waited for.<sup>73</sup> The only theory of recovery left available to the plaintiffs was a simple, straight forward design defect case relating to the emergency exits.<sup>74</sup> The issue before the Fourth Circuit (and later the Supreme Court) would be black and white. Would Sikorsky be held liable under state tort law for the government-mandated design features of a military combat helicopter or not?<sup>75</sup>

This was a risk worth taking. Mr. Bowles was dead set against settlement or compromise. He strongly advocated appeal to the Fourth Circuit.<sup>76</sup>

When the Fourth Circuit reversed the trial court, Mr. Bowles felt elated. Sikorsky had been vindicated. Then, to his surprise and delight, the plaintiff applied for writ to the Supreme Court. He relished the idea of presenting this case to the highest court. The case was tailor-made

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<sup>71</sup> Telephone interview with Ron Bowles, *supra* note 34 (Jan. 31, 1994). Mr. Bowles's interest in the military contractor defense began with a California state court case, *McLaughlin v. Sikorsky Aircraft*, 195 Cal. Rptr. 764 (1983).

<sup>72</sup> Telephone interview with Ron Bowles, *supra* note 34 (Jan. 31, 1994).

<sup>73</sup> Telephone interview with Ron Bowles, *supra* note 34 (May 18, 1993). In fact, he was "shocked" by the jury's verdict, which he attributes to the impassioned testimony of Lt. Boyle's family. *Id.*

<sup>74</sup> Brief for Respondent at 8, *Boyle v. United Technologies Corp.*, 92 F.2d 413 (4th Cir. 1986). Although the plaintiff argued that the helicopter's automatic flight control system was defective, this issue was not submitted to the jury, and, therefore, was not at issue on appeal. *Id.*

<sup>75</sup> Sikorsky's position on appeal was supported by *amici curiae* briefs submitted by the United States, National Security Industrial Association, Aerospace Industry Association, American Gear Manufacturers Association, Electronic Industries Association, General Aviation Manufacturers Association, National Association of Manufacturers, Product Liability Advisory Council, Inc., Motor Vehicle Manufacturers Association, Chamber of Commerce of the United States, and numerous manufacturers. A brief in support of the *Boyle* petition was filed by the Association of Trial Lawyers of America.

<sup>76</sup> Telephone interview with Ron Bowles, *supra* note 34 (Jan. 31, 1994).

for a defense victory. In fact, if the Supreme Court upheld the Fourth Circuit, a huge victory would result for Sikorsky and military contractors.<sup>77</sup>

The *Boyle* plaintiff was granted *certiorari* by the United States Supreme Court where he contended that in the absence of legislation specifically immunizing government contractors from liability for design defects there was no basis for the judicial recognition of the government contractor defense.<sup>78</sup> The Supreme Court disagreed, and instead announced a three-part test, destined thereafter to be coined the "*Boyle* Test," providing:

Liability for design defects in military equipment cannot be imposed, pursuant to state law, when (1) the United States approved reasonably precise specifications; (2) the equipment conformed to those specifications; and (3) the supplier warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States.<sup>79</sup>

The Supreme Court adopted this test after concluding that to do otherwise would frustrate the "discretionary function" exercised by the United States government when balancing the many technical, military, and even social considerations involved in procuring military equipment. The Court noted that this discretionary function often involves a trade-off between greater safety and greater combat effectiveness.<sup>80</sup>

Since the recognition of the government contractor defense in *Boyle*, numerous government contractors have routinely been granted summary judgment upon a showing that the elements of the *Boyle* test were satisfied.<sup>81</sup>

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<sup>77</sup> Telephone interviews with Ron Bowles, *supra* note 34 (May 18, 1993, and Jan. 31, 1994).

<sup>78</sup> *Boyle*, 487 U.S. at 500, 503.

<sup>79</sup> *Id.* at 512.

<sup>80</sup> *Id.* at 510-12. The "discretionary function" rationale adopted by the Supreme Court replaced the rationale used by many lower courts that the defense was based on the *Feres-Stencel* doctrine, which prohibits servicemen or government contractor defendants from recovering tort damages from the United States government. See Stewart, *supra* note 6, at 984-92.

<sup>81</sup> See, e.g., *Monks v. General Elec. Co.*, 919 F.2d 1189 (6th Cir. 1990); *Skyline*

The government contractor defense has become a broadly applied shield of immunity, applicable to all liability of a military contractor for injury caused by a design defect.<sup>82</sup> The *Boyle* decision did not limit the defense to strict liability actions or any particular theory of recovery, but instead referred to "liability" under "state law."<sup>83</sup>

The application of the broad sweep of the *Boyle* test can be seen in the Fifth Circuit case of *Smith v. Xerox Corp.*<sup>84</sup> The Smith plaintiff was injured when an anti-tank weapon simulator misfired. The Fifth Circuit summarized the plaintiff's claims against the equipment manufacturer as follows:

His allegations against [defendant] included negligence in the design and/or manufacture of the weapon; strict liability for injuries caused by a weapon unreasonably dangerous for its normal use; failure to warn or instruct [plaintiff] regarding the possibility of the weapon's firing when armed, when [defendant] had knowledge that the weapon had malfunctioned in a similar manner previously; and breach of warranty of fitness for intended use.<sup>85</sup>

After addressing each of the above causes of action individually, the Fifth Circuit concluded that the defendant manufacturer was immune from liability on all of these grounds based on the government contractor defense.<sup>86</sup>

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*Air Serv., Inc. v. G. L. Capps Co.*, 916 F.2d 977 (5th Cir. 1990); *Maguire v. Hughes Aircraft Corp.*, 912 F.2d 67 (3d Cir. 1990); *Kleemann v. McDonnell Douglas Corp.*, 890 F.2d 698 (4th Cir. 1989), *cert. denied*, 495 U.S. 953 (1990); *Ramey v. Martin-Baker Aircraft Co.*, 874 F.2d 946 (4th Cir. 1989); *Smith v. Xerox Corp.*, 866 F.2d 135 (5th Cir. 1989); *In re Aircraft Crash Litigation*, Frederick, Maryland, May 6, 1981, 752 F. Supp. 1326 (S.D. Ohio 1990); *Niemann v. McDonnell Douglas Corp.*, 721 F. Supp. 1019 (S.D. Ill. 1989).

<sup>82</sup> *Boyle*, 487 U.S. at 512.

<sup>83</sup> *Id.*

<sup>84</sup> 866 F.2d 135 (5th Cir. 1989).

<sup>85</sup> *Id.* at 136.

<sup>86</sup> *Id.* at 137-40; *see also Ganer v. Santoro*, 865 F.2d 629 (5th Cir. 1989) (holding that failure to warn claims are precluded by *Boyle*); *Tozer v. LTV Corp.*, 792 F.2d 403, 405 (4th Cir. 1986), *cert. denied*, 487 U.S. 1233 (1988) (stating that the government contractor defense precludes recovery for negligence as well as strict liability); *Bynum v. FMC Corp.*, 770 F.2d 556, 574 n.24 (5th Cir. 1985) (holding that the government contractor defense applies equally to design defect and failure to warn); *McKay v. Rockwell Int'l Corp.*, 704 F.2d 444 (9th Cir. 1983), *cert. denied*,

Ron Bowles was right. The payout on this bet was huge.

### III. THE *BOYLE* TEST IN ACTION

The government contractor defense consists of three independent elements that the manufacturer must prove in order to avoid liability under state law. The first element requires proof that the United States approved reasonably precise specifications for the product in question. After clearing that hurdle, the manufacturer must show that the product conformed to those specifications. Finally, the contractor must prove that it warned the United States about any dangers in the use of the product that were known to the contractor but not to the United States.<sup>87</sup>

Although it sounds simple enough, courts have grappled with the application of the test to various allegations and circumstances. To truly understand how the *Boyle* defense works, one must analyze each of the three elements of the government contractor defense independently.

#### A. REASONABLY PRECISE SPECIFICATIONS

The first leg of the *Boyle* test requires that the United States government must have approved "reasonably precise" specifications for the design of the equipment at issue.<sup>88</sup> The case law regarding the proof that is required to satisfy this particular element is well established. The proof must show more than that the government merely "rubber-stamped" the contractor's design.<sup>89</sup> This element is satisfied, however, when there was much "back-and-forth" discussion between the government and the contractor, and the United States provided general speci-

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464 U.S. 1043 (1984) (holding that military contractor defense eliminates all liability under § 402A of the Second Restatement of Torts).

<sup>87</sup> *Boyle*, 487 U.S. at 512.

<sup>88</sup> *Id.*

<sup>89</sup> See *Trevino v. General Dynamics Corp.*, 865 F.2d 1474 (5th Cir.), cert. denied, 493 U.S. 935 (1989).

fications and approved various stages of development.<sup>90</sup>

In the Fourth Circuit *Boyle* opinion, the Court held that Sikorsky had adequately demonstrated Navy approval of reasonably precise specifications for the CH-53D: Sikorsky and the Navy worked together to prepare detail specifications; Sikorsky and the Navy engaged in back-and-forth discussions; Sikorsky built a mock-up of the helicopter; and the Navy reviewed the mock-up and approved the design.<sup>91</sup> Numerous federal courts have cited this factual analysis with approval when discussing the requirements necessary for a military contractor to prove the first leg of the *Boyle* defense.<sup>92</sup> For example, the Fifth Circuit used a similar factual analysis in *Skyline Air Service, Inc. v. G. L. Capps Co.*<sup>93</sup> when upholding a summary judgment for a helicopter manufacturer on the grounds of the government contractor defense. In discussing the proof provided by Bell Helicopter, the defendant in *Skyline*, the court stated that the affidavit testimony provided by Bell showed that "Bell was required to 'strictly adhere to previously established, Government-approved specifications'; to follow government specified procedures to assure compliance with those specifications; and to design and manufacture the helicopter precisely in accordance with the specifications — '[n]o deviations to the specifications or drawings were permitted without Government approval.'"<sup>94</sup>

The government's continued use of the product in question also establishes approval, particularly after the government is made aware of any alleged defect.<sup>95</sup> For

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<sup>90</sup> See, e.g., *Smith v. Xerox Corp.*, 866 F.2d 135, 138 (5th Cir. 1989); *Kleemann v. McDonnell Douglas Corp.*, 890 F.2d 698, 701-04 (4th Cir. 1989), *cert. denied*, 495 U.S. 953 (1990); *Harduvel v. General Dynamics Corp.*, 878 F.2d 1311 (11th Cir. 1989), *cert. denied*, 495 U.S. 942 (1990).

<sup>91</sup> *Boyle*, 792 F.2d at 414-15.

<sup>92</sup> See, e.g., *Smith v. Xerox*, 866 F.2d at 138.

<sup>93</sup> 916 F.2d 977 (5th Cir. 1990).

<sup>94</sup> *Id.* at 978. *Skyline* is significant in that the aircraft in question was a military surplus helicopter owned and operated by a civilian company. The Fifth Circuit found the *Boyle* defense applicable, nonetheless. *Id.* at 980.

<sup>95</sup> See *Ramey v. Martin-Baker Aircraft Co.*, 874 F.2d 946, 950 (4th Cir. 1986); *Lewis v. Babcock Indus., Inc.*, No. 88-C1120, 1992 U.S. Dist. LEXIS 8357 (S.D.N.Y. June 8, 1992).

example, the Fourth Circuit in *Dowd v. Textron, Inc.*<sup>96</sup> held that “[t]he length and breadth of the army’s experience with the [product] — and its decision to continue using it — amply establish governmental approval of the alleged design defects.”<sup>97</sup> In summary, the first leg of *Boyle* looks to government discretion, involvement, awareness, and control.

## B. PRODUCT CONFORMS TO SPECIFICATIONS

The second requirement of the *Boyle* test is that the product in question must have conformed to specifications provided by the United States government.<sup>98</sup> The government’s acceptance of the product has been held to satisfy this step of the *Boyle* test unless there is a showing that the product was defectively manufactured.<sup>99</sup> When a government-approved design has been reduced to detailed design drawings and the drawings themselves have been reviewed and approved by the government, compliance with the specifications contained in those drawings can also establish the second prong of the government contractor defense.<sup>100</sup> A product conforms to reasonably precise specifications if it satisfies an intended configuration even if it may produce unintended and unwanted results.<sup>101</sup>

In an opinion dedicated primarily to defining the second step of the *Boyle* test, the Fourth Circuit in *Kleeman v. McDonnell Douglas Corp.*<sup>102</sup> noted that much of the evidence of government involvement required as proof for the first leg of the *Boyle* test is also relevant to the second leg, showing conformity with government specifications.<sup>103</sup> In summarizing this viewpoint, the Fourth Circuit stated:

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<sup>96</sup> 792 F.2d 409 (4th Cir. 1986).

<sup>97</sup> *Id.*

<sup>98</sup> *Boyle*, 487 U.S. at 512.

<sup>99</sup> *Harduvel*, 878 F.2d at 1321.

<sup>100</sup> *Kleemann*, 890 F.2d at 698.

<sup>101</sup> *Id.* at 703.

<sup>102</sup> 890 F.2d 698 (4th Cir. 1989).

<sup>103</sup> *Boyle*, 487 U.S. at 698.



It is this salient fact of governmental participation in the various stages of the aircraft's development that establishes the military contractor defense. Indeed, active governmental oversight is relevant to all three elements of defendant's burden. Where, as here, the Navy was intimately involved at various stages of the design and development process, the required government approval of the alleged design defect is more likely to be made out. Similarly, the Navy's extensive participation, including reservation of the power to approve or disapprove design modifications, enhances the likelihood of final product conformity . . . . [E]xtensive governmental participation provides tangible evidence of the strong federal interest which justifies the creation of a federal common law defense for government contractors in the first place.<sup>104</sup>

Courts have been unwilling to second-guess the government's decision that a product conforms to contractual specifications and design requirements. For example, in *Ramey v. Martin-Baker Aircraft Co.*<sup>105</sup> the court held that "[n]othing in the record suggests to us that the Navy found the [product] not to conform to specifications. It is not our province, of course, to make such a finding in the Navy's behalf. We accordingly conclude that no issue exists as to the [product's] conformity to Navy specifications."<sup>106</sup> Where the government inspects and accepts the aircraft as produced, the second prong of the government contractor defense is satisfied.<sup>107</sup>

### C. WARNINGS

The final element of the *Boyle* test requires that the contractor warn the United States government about possible dangers in the use of the product that are known to the contractor but not to the government.<sup>108</sup> Stated from the

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<sup>104</sup> *Id.* at 701 (citation omitted).

<sup>105</sup> 874 F.2d 946 (4th Cir. 1989).

<sup>106</sup> *Id.* at 951 (citation omitted).

<sup>107</sup> *Niemann v. McDonnell Douglas Corp.*, 721 F. Supp. 1019, 1027 (S.D. Ill. 1989).

<sup>108</sup> *Boyle*, 487 U.S. at 512.

perspective of a plaintiff's proof, this leg of the *Boyle* test can be broken down into three separate elements. First, the contractor must have had knowledge of some danger resulting from use of the product. Second, the danger must be one that the government did not know about. Finally, the contractor must have failed to warn the government about this possible danger.<sup>109</sup>

These three elements comprising the third leg of the *Boyle* test are a significant departure from the government contractor defense enunciated by some courts prior to the *Boyle* test's adoption by the United States Supreme Court.<sup>110</sup> To the plaintiff's bar, the third leg is nothing short of "see no evil, hear no evil, speak no evil," and has been roundly criticized as an unnecessary departure from traditional tort law.<sup>111</sup> In adopting the third leg of the *Boyle* test, the United States Supreme Court clearly intended to lessen the burden of proof placed on government contractors to issue warnings to the United States government.<sup>112</sup> In justifying this change, the Supreme Court said that "it does not seem to us sound policy to penalize, and thus deter, active contractor participation in the design process, placing the contractor at risk unless it identifies all design defects."<sup>113</sup>

The language of the *Boyle* case indicates that this third element requires actual knowledge of the danger by the contractor.<sup>114</sup> Indeed, several courts have emphasized

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<sup>109</sup> *Id.* at 511; *Harduvel*, 878 F.2d at 1321.

<sup>110</sup> See *Shaw v. Grumman Aerospace Corp.*, 778 F.2d 736, 746 (11th Cir. 1985), *cert. denied*, 487 U.S. 1233 (1988) (requiring contractor to inform military of design alternatives "reasonably known" to the contractor).

<sup>111</sup> See 3 KREINDLER, *supra* note 6, §§ 31-32 (1993). "In essence, this presumption improperly shifts the burden to the plaintiff to prove that the manufacturer failed to warn." *Id.*

<sup>112</sup> The plain reading of the *Boyle* decision is clearly contrary to the assertion of one author that "the *Boyle* decision does not relieve the manufacturer of its liability and negligence for failing to point out a danger of which it should have been aware in the exercise of reasonable care." 1 KREINDLER, *supra* note 2, at 7-94.

<sup>113</sup> *Boyle*, 487 U.S. at 513.

<sup>114</sup> *Id.*

that it is actual knowledge that is required.<sup>115</sup> This actual knowledge requirement is inconsistent with speculation that there may be some continued duty to warn under *Boyle*.<sup>116</sup>

The Fourth Circuit has held that where there is evidence of pervasive government involvement in the procurement and design process, the third element of the *Boyle* test is more likely to be established.<sup>117</sup> Government acceptance tests have been held as probative of the government's knowledge of a product's dangers. The length of time a product is used by the government also shows government knowledge of any dangers inherent in a product.<sup>118</sup>

#### IV. THE FIRST WAVE

The *Boyle* defense is a relatively new affirmative defense which enjoyed tremendous success in the years immediately following its adoption. Government contractors, however, have always been fat targets in products liability litigation and the creative and energetic plaintiff's bar wasted little time in trying to find a breach in the *Boyle* defense. We are today nearing the end of the first wave of this assault.

In many ways, litigation is war. The courtroom is the battlefield and the attorneys are the generals. In the field of aviation litigation, the government contractor defense stands as a powerful citadel protecting the assets of manufacturers. Many zealous and talented litigation generals have attempted to breach the walls of this citadel. What

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<sup>115</sup> See, e.g., *Harduvel*, 878 F.2d at 1321; *Trevino*, 865 F.2d at 1487; *Niemann*, 721 F. Supp. at 1028.

<sup>116</sup> "Neither is there anything in the *Boyle* decision which requires insulating the contractor from his continuing duty to warn of design defects." 1 KREINDLER, *supra* note 2, at 7-94.

<sup>117</sup> *Kleemann*, 890 F.2d at 701.

<sup>118</sup> *Zinck v. ITT Corp.*, 690 F. Supp. 1331, 1337-38 (S.D.N.Y. 1988). See also *Lewis v. Babcock Indus., Inc.*, 985 F.2d 83, 89-90 (2d Cir.), *cert. denied*, 113 S. Ct. 3041 (1993) (*Boyle*'s third element proved by government's superior knowledge of product after several years of use).

follows is a discussion of their strategies and the opposition's response.

### A. THE DIRECT ASSAULT

The frontal assault should always be considered. The defendant digs in and throws up his earth works and barbed wire. This battlefield analogy is fitting, as any plaintiff's attorney who has dealt with lawsuits against government contractors knows. The success or failure of an entire lawsuit will eventually hinge on breaching the three-part *Boyle* test. The plaintiff is forced to take the literal reading of the *Boyle* test and defeat at least one leg of the government contractor defense or retreat.

#### 1. *Precise Specifications*

The first step in the *Boyle* defense involves showing that the United States approved reasonably precise specifications.<sup>119</sup> A literal attack on this leg of the *Boyle* defense splits the phrase in two. The specifications must be both "reasonably precise" and "approved" by the United States government.

##### a. Not Specific Enough

A common allegation in post-*Boyle* litigation is that the specifications proffered by the manufacturing defendant are not specific or "reasonably precise" as required by the *Boyle* test.<sup>120</sup> In response, government contractors typically produce the procurement contract of the product in question, a general design specification, blueprints, and perhaps some military design guides incorporated into the product's design specifications. Plaintiffs will in turn point to a narrow theory of liability in support of a claim that the specifications produced by the defendant are very general and broad.<sup>121</sup> For example, the plaintiff in the

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<sup>119</sup> *Boyle*, 487 U.S. at 503.

<sup>120</sup> See, e.g., *Stout v. Borg-Warner Corp.*, 933 F.2d 331, 334 (5th Cir.), cert. denied, 112 S. Ct. 584 (1991).

<sup>121</sup> This argument may have gained considerable support from the recent Fifth

*Boyle* case argued that the specifications for the CH-53D Emergency Escape System were very general in nature and did not specifically mandate the design complained of by the plaintiff.<sup>122</sup>

This argument can best be rebutted by looking to the Fifth Circuit's handling of this issue in *Smith v. Xerox*.<sup>123</sup> In that case the Fifth Circuit emphasized that the government contractor defense only requires the government to approve *reasonably* precise specifications, which is met where the contractor incorporated government performance specifications into a design that the government subsequently reviewed and approved.<sup>124</sup> The *Xerox* case involved an injury to a U.S. Army soldier when an explosive cartridge in a shoulder-mounted "VIPER" weapon simulator exploded prematurely. The soldier brought suit for his personal injuries against Xerox, the manufacturer of the weapon. The Fifth Circuit affirmed summary judgment for Xerox based on the government contractor defense.<sup>125</sup> In discussing the evidence presented by Xerox in support of its motion for summary judgment, the court stated the following:

Although Xerox failed to produce complete specifications for the original VIPERS it manufactured, Xerox did produce a listing of those specifications, as well as a copy of the original government performance criteria dictating the environmental specifications the government wanted the VIPER to meet in terms of temperature, humidity and salt resistance, and a production contract furnished by Xerox for a series of VIPERS containing specific references to government-approved specifications. Further, Lawrence Gallagher, an employee of Xerox from approximately

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Circuit decision in *Bailey v. McDonnell Douglas Corp.*, 989 F.2d 794 (5th Cir. 1993). The Fifth Circuit notes that "silence in the specifications may leave room for design discretion by the manufacturer, making possible the existence of a design defect in spite of conformity with the government specifications." *Id.* at 801.

<sup>122</sup> Brief for Petitioner at 17, *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988).

<sup>123</sup> 866 F.2d 135 (5th Cir. 1989).

<sup>124</sup> *Id.* at 138.

<sup>125</sup> *Id.* at 139-41.

1975 to 1983 who was involved with the development of the VIPER system, testified at his deposition that the Army reviewed and approved the drawings and specifications prepared by Xerox. The government contractor defense requires only that the government approve *reasonably* precise specifications. Because the government in this case supplied the relevant environmental specifications it wanted the VIPER to meet, which were incorporated into Xerox's production contract, and Gallagher's un rebutted deposition testimony was that the government reviewed and approved Xerox's final drawings and specifications for the VIPER, we find that Xerox has satisfied its burden of proof on this issue.<sup>126</sup>

#### b. Not Government-Approved

Another frequent attack on the first leg of the *Boyle* test is to argue that the specifications offered by the defendant are not government-approved. Many times the overall product design guide is written by the manufacturer. Certain design features may be controlled by specifications between the general contractor and a subcontractor. Quite frequently these specifications for subcontracted parts are not "approved" by government representatives in the strictest sense.

No plaintiff's brief written in response to a defendant's government contractor motion for summary judgment should leave out a discussion of the most pro-plaintiff, post-*Boyle* opinion issued by an appellate court, *Trevino v. General Dynamics Corp.*<sup>127</sup> The *Trevino* case will forever provide plaintiffs some legal legitimacy for arguments that have been clearly rejected by numerous other courts. The *Trevino* case involved the death of five Navy divers aboard a Navy submarine. The ventilation valve, which allowed air to enter the flooded diving chamber, was not fully opened. As the divers drained the water a vacuum formed in the chamber.

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<sup>126</sup> *Id.* at 138.

<sup>127</sup> 865 F.2d 1474 (5th Cir.), *cert. denied*, 493 U.S. 935 (1989).

The Navy had contracted with General Dynamics to design the diving hanger in question. General Dynamics was required to produce working drawings of the hanger, review its work product to assure compliance with Navy requirements, and inspect the final product before issuing it to the Navy. The design work was done on-site at the Mare Island Shipyard by General Dynamics employees. Seventy-one pages of detailed working drawings were submitted to the government for approval. Each of the drawings was signed by a government employee in a box marked "approved." Once the design work was completed, the Navy actually performed the manufacturing work on the hanger.

Despite that evidence, the trial court found insufficient proof of design approval by the military.<sup>128</sup> As a result, the trial court found that the government contractor defense did not apply and that General Dynamics was liable for a defective design in the hanger.<sup>129</sup> In upholding the trial court's decision, the *Trevino* Fifth Circuit panel noted that the Supreme Court had adopted a discretionary function rationale for the *Boyle* test.<sup>130</sup> The *Trevino* panel then went on to apply this discretionary function reasoning to each element of the *Boyle* test rather than strictly following the plain reading of the defense.<sup>131</sup> The *Trevino* panel proclaimed that "the government exercises its discretion over the design when it actually chooses a design feature. The government delegates the design discretion when it buys a product designed by private manufacturer; when it contracts for the design of the product or a feature of a product, leaving the critical design decisions to the private contractor; or when it contracts out the design of a concept generated by the government . . . ." <sup>132</sup>

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<sup>128</sup> *Trevino v. General Dynamics Corporation*, 876 F.2d 1154, 1155 (5th Cir. 1989). The court made this finding also despite "full awareness and acceptance of design, defect and all, for thirteen years" by the government. *Id.* at 1155.

<sup>129</sup> *Id.* at 1476.

<sup>130</sup> *Id.* at 1480.

<sup>131</sup> *Id.*

<sup>132</sup> *Id.*

The above interpretation of the government contractor defense would certainly limit *Boyle's* application. The *Trevino* case stands for the proposition that unless the government itself exercises discretion over a specific design feature, the *Boyle* defense is not applicable.<sup>133</sup> Acknowledging the feature, approving the feature, and even publishing government requirements that may make the feature necessary would not satisfy the strict requirements of the *Trevino* case.<sup>134</sup>

The *Trevino* case is difficult to reconcile with any other post-*Boyle* government contractor decision. In fact, *Smith v. Xerox*,<sup>135</sup> issued on the same day as *Trevino*, formulates an entirely different approach to the government contractor defense. The radical difference between *Trevino* and other Fifth Circuit government contractor cases prompted an attempt for a rehearing of *Trevino en banc*.<sup>136</sup> Although the petition for rehearing *en banc* was denied, the dissenting opinion written in opposition to this action provides clear and compelling arguments for ignoring the *Trevino* case.<sup>137</sup> Notwithstanding recommendations to the contrary,<sup>138</sup> the *Trevino* case has not been followed, unlike *Smith v. Xerox* which is routinely cited for the status of the government contractor defense in the Fifth Circuit.

## 2. Conformance

The second leg of the *Boyle* test requires a showing that the product conforms to government specifications.<sup>139</sup> As

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<sup>133</sup> *Id.*

<sup>134</sup> The *Trevino* opinion borrows heavily from Lee Kreindler's interpretation of the *Boyle* defense requirements. "It is very likely that a contractor may have a difficult time meeting his burden of proof that a government official actually approved the specifications and drawings for the [interior] 'design feature in question.' Rubber-stamping by the government will not constitute a sufficient defense under *Boyle*." 1 KREINDLER, *supra* note 2, at 7-94. Lee Kreindler is recognized as one of the most successful and prolific plaintiff's aviation litigators.

<sup>135</sup> 866 F.2d 135 (5th Cir. 1989).

<sup>136</sup> *Trevino v. General Dynamics Corp.*, 876 F.2d 1154 (5th Cir. 1989).

<sup>137</sup> *Id.* at 1155-57.

<sup>138</sup> See Stewart, *supra* note 6, at 1016.

<sup>139</sup> *Boyle*, 487 U.S. at 511.



one might expect, plaintiffs have generally alleged that the extent to which the government was involved in the design and manufacture of the product simply did not suffice to meet the requirements of this second leg. A more interesting strategy question, however, involves the definition of the "specifications" involved. If the specifications involved are general in nature, conformance to such specifications hardly seems to show the type of detailed involvement in the process that is the basis of the government contractor defense. Any recognition of conformance on behalf of the government in such a case would be nothing more than "rubber-stamping" the government's design, such as in *Trevino*.<sup>140</sup> On the other hand, specifications may be so extensive and detailed that no single government entity or officer could possibly have the requisite knowledge or experience to know if the product truly conformed to these specifications.

In attempting to create a genuine issue of material fact with regard to the second leg of the *Boyle* test, plaintiffs typically pose the following questions: What are the "specifications" involved? How do we know that any government official understands whether the product "conforms" to any specifications? Isn't this entire government procurement process nothing more than a big rubber stamp?

#### a. Pile on the Requirements

Rather than attacking the first leg of the *Boyle* defense by arguing that the specifications governing the product in question are general in nature, the plaintiff may focus on the second prong of *Boyle* and recognize the reality of the military product procurement system. Military procurement officers will tell you that a procurement project is not complete until the paperwork outweighs the product itself. Unfortunately, this statement is literal in the in-

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<sup>140</sup> See *infra* text accompanying notes 147-50 for a discussion of "rubber-stamping."

stance of procurement of complex aircraft and machinery. The procurement of an advanced weapon system involves the generation of massive quantities of draft specifications, general specifications, preliminary specifications, design drawings, performance specifications, materials specifications, and numerous other specifications too specific to mention. A properly staffed and supported government contractor defense team will review and become familiar with every specification provided to the opposing side during discovery. The chore can sometimes be enormous. In this regard, the plaintiff has the advantage.

The reality of the government procurement bureaucracy is that specifications for advanced systems are so complex and so encompassing that the final product inevitably deviates in many regards from beginning or intermediate design criteria or specifications. These deviations are generally documented at some stage in the process and are by no means failures to conform in fact to the requirements of the United States government. It is infinitely easier, however, for plaintiffs to find the deviations among the piles of specifications, design drawings, and correspondences than for defendants to anticipate this tactic and find the approval for the deviations.<sup>141</sup> When the plaintiff's attorney becomes more familiar with the regulations produced by the defense than his defense counterpart, he becomes a truly dangerous adversary.<sup>142</sup>

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<sup>141</sup> See, e.g., *Landgraf v. McDonnell Douglas Helicopter Co.*, 993 F.2d 558 (6th Cir.), cert. denied, 114 S. Ct. 553 (1993).

<sup>142</sup> A related tactic involves quoting portions of the government's procurement contract out of context and arguing that such clauses strip the government contractor of his *Boyle* defense. See *Wilson v. Boeing Co.*, 655 F. Supp. 766 (E.D. Pa. 1987). The *Wilson* plaintiff, represented by the same attorney that represented the *Boyle* plaintiffs, argued that a "Design Responsibility" clause in the procurement contract absolved the United States government of any responsibility for the design of the product, thereby abrogating the defendant's government contractor defense. The *Wilson* court stated that this "Design Responsibility" clause "cannot be construed to abrogate the government contractor defense. . . . [S]uch a provision does not affect the applicability of the government contractor defense." *Wilson*, 655 F. Supp. at 773.

## b. DD 250 or Other Government Documents

Government contractors and government procurement officers have their inevitable squabbles. The manufacturer produces a product for the client, the United States government. When a single person of responsibility in the massive government machine becomes dissatisfied with a specific characteristic of the product, this displeasure can be reflected in several ways that may be interpreted as showing lack of conformance of the product to specifications.

A Freedom of Information Act request<sup>143</sup> to various proponents in the government procurement process may produce correspondence discussing various shortfalls with the product in question. If the correspondence discusses any defect attributable to the plaintiff's case, the *Boyle* defense may be in trouble. The most damaging evidence of the lack of conformity is a document showing the withholding of government funds because the product fails to meet government requirements. The final evidence of government satisfaction with a product is a delivery document known as the DD 250.<sup>144</sup> This is the document to which both parties should look for evidence of conformity.

The DD 250 is more than a simple bill of sale. This document is the final evidence that the product conforms in all respects to the expectations of the United States government.<sup>145</sup> The DD 250 is the last document on the pile of government paperwork, and it sums up the entire process by declaring that the specific product conforms in all respects to the requirements of the United States government.

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<sup>143</sup> 5 U.S.C. § 552 (1988 and Supp. IV 1992).

<sup>144</sup> Form DD 250, Nov. 1, 1968 [hereinafter DD 250] (copy on file with the *Journal of Air Law and Commerce*).

<sup>145</sup> The form itself declares that "[a]cceptance of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents. . . . Signature of auth. govt. rep." *Id.* What more compelling evidence of conformance can there be?

Although the DD 250 may be used as *prima facie* evidence<sup>146</sup> of conformance by the defense, any withholding of government funds listed on the DD 250 can be used to great advantage by the plaintiff. The government contracting officer may at times withhold a dollar amount from the final payment on an otherwise accepted product for a specific shortcoming in the product. Typically, the manufacturer will correct the shortcoming or negotiate the problem with the government. If the shortcoming in question relates to the plaintiff's theory of liability, it is critical that the defense produce documentation that the disagreement with the contracting officer was resolved for the equipment in question prior to the incident complained of by the plaintiff.

### c. Rubber-Stamping

The *Trevino*<sup>147</sup> case coined the phrase "rubber-stamp" to describe a situation in which government involvement in a particular design is insufficient to constitute approval of the design.<sup>148</sup> "The mere signature of a government employee on the 'approval line' of a contractor's working drawings, without more, does not establish the government contractor defense."<sup>149</sup>

Plaintiffs typically argue that any evidence provided by defendant of written approval by government authorities, such as signatures on design drawings or DD 250 acceptance documents, amounts to nothing more than "rubber-stamping" by government bureaucrats who lack the requisite expertise to recognize whether the product actually conforms to government specifications. Fortunately, the *Trevino* case has largely been ignored by a large body of federal law to the contrary, including numerous Fifth Cir-

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<sup>146</sup> *Snell v. Bell Helicopter Textron*, No. 92-1596GT(M), slip op. at 9 (S.D. Cal. Nov. 16, 1993); *Hendrix v. Bell Helicopter Textron, Inc.*, 634 F. Supp. 1551, 1556-57 (N.D. Tex. 1986).

<sup>147</sup> See *supra* notes 127-38 and accompanying text.

<sup>148</sup> *Trevino*, 865 F.2d at 1481.

<sup>149</sup> *Id.* at 1480.

cuit decisions since the *Trevino* case.<sup>150</sup> A response to a *Trevino* "rubber-stamping" argument should include citations to numerous post-*Trevino* cases with analogies to the factual showings found sufficient to meet the requirements of the *Boyle* defense.

### 3. Warnings

The final leg of the *Boyle* defense requires a showing that the supplier warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States.<sup>151</sup> This formulation of the warning stage of the *Boyle* test makes a failure to warn case practically impossible.<sup>152</sup> In fact, it would seem that nothing short of deliberate fraud on behalf of the government contractor would be sufficient to defeat the *Boyle* test on a failure-to-warn case.

One of the few feasible and effective methods to attack the third leg of the *Boyle* test is to produce a "deep throat" with sufficient credentials to accuse the defendant of such fraudulent conduct. The employment of retired or fired government contractor employees as expert witnesses on behalf of plaintiffs is becoming more commonplace in government contractor litigation. The plaintiff's goal will be to find someone "in the know," for example a former accident investigator or design engineer, who would be willing to testify to his former employer's knowledge of a dangerous aspect of the product and the employer's efforts to suppress the information about which the government should have been informed.<sup>153</sup>

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<sup>150</sup> See, e.g., *Stout v. Borg-Warner Corp.*, 933 F.2d 331 (5th Cir.), cert. denied, 112 S. Ct. 584 (1991); *Skyline Air Serv., Inc. v. G.L. Capps Co.*, 916 F.2d 977 (5th Cir. 1990).

<sup>151</sup> *Boyle*, 487 U.S. at 511; see *Hendrix*, 624 F. Supp. at 1557.

<sup>152</sup> Even members of the plaintiffs' bar seem resigned to conceding the third element of the *Boyle* defense. See Arthur H. Rosenberg, *The Government Contractor Defense, A Military Contractor's Best Friend*, LPBA J. 10, 11 (Summer 1991).

<sup>153</sup> Whether such intrigue actually occurs outside of the fantasy of courtroom theater is subject to debate. The reality is that money talks.

## B. A LEGAL WAR OF ATTRITION

One theory that has recently emerged in various briefs and articles asserts that the *Boyle* test is in fact a four-part test. By placing an additional legal obstacle in front of manufacturers, plaintiffs hope to wear down defendants' *Boyle* defense efforts in a legal war of attrition.

Borrowing from the dicta used by the *Boyle* majority when articulating the rationale for the government contractor defense, plaintiff's attorneys claim that an identifiable significant conflict must exist between the manufacturer's government contract and state law *before* the *Boyle* three-part test is applicable.<sup>154</sup> Contrary to this assertion, an additional legal analysis prior to reaching the *Boyle* test is not a separate part of the government contractor defense. The three-part *Boyle* test defines the necessary scope of the displacement of state law. A "discretionary function" or "significant conflict" analysis in addition to the three-part test is not required.<sup>155</sup>

In justifying the preemption of state law with a shield from liability for government contractors, the Supreme Court noted that the preemption doctrine was applied frequently when the issues involved "uniquely federal interests." The Court holds that these uniquely federal interests apply "to the civil liabilities arising out of the performance of federal procurement contracts."<sup>156</sup> After reasoning that the existence of a significant conflict with federal policy justifies the displacement of state tort law, the *Boyle* Court defines the scope of this displacement (or what must be shown in order to demonstrate a significant conflict that justifies contractor immunity) as the *Boyle* three-part test itself.<sup>157</sup>

Neither the Supreme Court nor any federal circuit has

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<sup>154</sup> See, e.g., Rosenberg, *supra* note 152, at 10.

<sup>155</sup> Lewis v. Babcock Indus., Inc., 985 F.2d 83, 86-87 (2d Cir.), *cert. denied*, 113 S. Ct. 3041 (1993); *The Four-Part Boyle Test?*, 3 J & W FLYER, Apr. 1992, at 1.

<sup>156</sup> *Boyle*, 487 U.S. at 506.

<sup>157</sup> *Id.* at 512; see also Trevino, 865 F.2d at 1479 (stating "[t]he scope of the displacement of state law is defined by the elements of the [*Boyle*] defense").

held that an initial analysis of the significant conflict between state tort law and federal interest must be conducted before reaching the *Boyle* test. It is the *Boyle* test itself which defines a significant conflict between federal law and state-imposed tort liability.

Plaintiffs' attorneys have also suggested that the Court's language in *Boyle* narrowly restricts the application of the *Boyle* defense to very specific cases of conflicts between state tort law and federal interest.<sup>158</sup> Such a suggestion is contrary to numerous recent decisions affirming motions for summary judgment in favor of government contractors of military equipment.<sup>159</sup> These and other recent cases show that federal courts now grant summary judgment on the basis of the government contractor defense as a matter of course.

An example of the broad scope of the government contractor defense is the Fifth Circuit opinion in *Stout v. Borg-Warner Corp.*<sup>160</sup> The plaintiff was an air-conditioning repair technician who was injured while attempting to repair an air-conditioning unit purchased by the United States Army.<sup>161</sup> The plaintiff sued the manufacturer of the air-conditioning unit on the basis of defective design and failure to warn. Specifically, the plaintiff in *Stout* contended that safety devices that could have prevented his injuries were neither provided for nor prohibited by the military specifications. Rejecting this contention, the Fifth Circuit affirmed summary judgment for the manufacturer because the evidence established that the air-conditioning unit conformed to military specifications.<sup>162</sup>

Despite plaintiffs' attorneys' wishful annunciations to

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<sup>158</sup> David J. Stout, *The Government Contractor Defense*, Av. L. Rep. (CCH) 20049 (May 10, 1994); Rosenberg, *supra* note 152, at 11-12.

<sup>159</sup> See, e.g., *Skyline Air Serv., Inc. v. G.L. Capps Co.*, 916 F.2d 977 (5th Cir. 1990); *Maguire v. Hughes Aircraft Corp.*, 912 F.2d 67 (3d Cir. 1990); *Monks v. General Elec. Co.*, 919 F.2d 1189 (6th Cir. 1990); *Kleemann v. McDonnell Douglas Corp.*, 890 F.2d 698 (4th Cir. 1989); *Ramey v. Martin-Baker Aircraft Co.*, 874 F.2d 946 (4th Cir. 1989); *Smith v. Xerox Corp.*, 866 F.2d 135 (5th Cir. 1989).

<sup>160</sup> 933 F.2d 331 (5th Cir. 1991).

<sup>161</sup> *Id.* at 332.

<sup>162</sup> *Id.* at 333-34, 337.

the contrary,<sup>163</sup> six years after the *Boyle* decision the government contractor defense is now broadly applied by federal courts and readily available to government contractors at the summary judgment stage.<sup>164</sup> Plaintiffs may continue to try to find a loophole in this bar to recovery, but the argument that the *Boyle* test requires a fourth element<sup>165</sup> has not yet found favor in federal courts.

### C. DIVIDE AND CONQUER

When faced with a coalition of allied enemies, military strategists recommend focusing on the weakest of opponents. By focusing on the lowest common denominator of the product in question, this same strategy can be employed by plaintiffs in government contractor defense litigation. Plaintiffs generally pursue as a "primary target" the general or prime contractor.<sup>166</sup> In light of the government contractor defense, a strong argument can be made that the exact opposite approach should be taken. General contractors have the most direct contact with the United States government and deal with government representatives on a day-to-day basis.<sup>167</sup> General contractors use subcontractors who can produce specialty parts that the general contractor may not be in a position to pro-

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<sup>163</sup> See, e.g., 1 KREINDLER, *supra* note 2. "Properly construed, the defense is a narrow one; it applies only in design defect cases and only when there is proof that the government considered the 'design feature in question' and the contractor complied with the contract specifications." *Id.* at 7-96. "[F]ederal courts themselves can no longer cavalierly determine the merits of the defense on summary judgment motions. Instead, the manufacturer must *prove* his defense before a jury. Thankfully for plaintiffs, the *Boyle* decision indicates that this burden will not be easily satisfied." *Id.* at 7-92. "[P]erhaps the greatest advantage of all, is that all these considerations must be determined by the jury. The contractor has the burden of proving the elements of his defense to a jury." *Id.* at 7-95.

<sup>164</sup> See *supra* note 159.

<sup>165</sup> See *Lewis*, 985 F.2d at 86-87.

<sup>166</sup> For example, airplane manufacturers such as General Dynamics, Sikorsky, Bell Helicopter, etc., as opposed to smaller subcontractors making specific components such as Simmonds Precision Motion Controls, Hartzell Propellers, Duncan Electronics, et al.

<sup>167</sup> In fact, larger contractors such as Sikorsky and General Dynamics have large contingents of government engineers and contracting agents physically officed in the contractor's plant.



duce. In fact, the more politicized weapons systems draw heavily on subcontractors for the production of major components.<sup>168</sup> Often a subcontractor's involvement with the government procurement process is indirect at best. In fact, some smaller components originate from subcontractors to subcontractors, making the smaller subcontractors even farther removed from the process.<sup>169</sup> In addition, many subcontracted components are actually "off-the-shelf" parts common to ordinary, non-government applications. Given the fact that many subcontractors are well-insured, prosperous corporations, there seems to be little reason to directly challenge the general contractor on government contractor issues. A better course of action is to pursue the subcontractor, a defendant ill-equipped to show government involvement with the design and manufacture of the smaller subcomponent.

A response to such a tactic is that the "*Boyle* test . . . requires that the government approve the reasonably precise specifications for *the aircraft*, and not . . . for each individual component of the aircraft."<sup>170</sup> In other words, proof that the major component itself met government specifications and was accepted by the military should be sufficient to piggy-back all the components made by

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<sup>168</sup> This is particularly true of subcontractors located in the congressional districts of influential politicians.

<sup>169</sup> For example, a general contractor may order an airplane's landing gear system from a subcontractor. The subcontractor may in turn order the landing gear's extension mechanism from a second company. This second generation subcontractor may order a servo mechanism in the extension component from a third subcontractor. The manufacturer of the servo may in turn order electronic sensing devices from a fourth subcontractor. If the electronic sensing device was the failed component in an accident, the theory of attacking the smallest common denominator would dictate pursuing the subcontractor closest to the product in question. There is very little chance that this fourth or fifth generation subcontractor will have had any involvement with the government procurement process. The component may be an off-the-shelf product utilized in non-military applications. If the subcontractor is the sole defendant, the *Boyle* defense may become a side issue in litigation, giving way to traditional products liability issues.

<sup>170</sup> *Niemann v. McDonnell Douglas Corp.*, 721 F. Supp. 1019, 1027 (S.D. Ill. 1989) (court's emphasis); see also *Wilson v. Boeing Co.*, 655 F. Supp. 766, 773 (E.D. Pa. 1987); *Maguire v. Hughes Aircraft Corp.*, 912 F.2d 67 (3d Cir. 1990).

subcontractors.<sup>171</sup>

#### D. A DEFECT BY ANY OTHER NAME — MANUFACTURING DEFECT

By its very terms, the *Boyle* defense does not apply to some manufacturing defects. If a product is manufactured defectively, how can it be argued that the product “conforms” to the manufacturing specifications?<sup>172</sup> Not unexpectedly, plaintiffs typically attempt to categorize any defect producing an injury in a government contractor defense case as a defect in manufacturing.<sup>173</sup> For example, in *Mitchell v. Lone Star Ammunition, Inc.*<sup>174</sup> the Fifth Circuit held that voids found in mortar casings were manufacturing defects rather than design defects. Deciding that such defects were a result of the manufacturing process, the Fifth Circuit concluded that the government contractor defense did not apply.<sup>175</sup>

The most thorough discussion of the factors used to determine if a defect is a manufacturing defect can be found in *Harduvel v. General Dynamics Corp.*<sup>176</sup> *Harduvel*, the subject of a 1992 made-for-television movie, involved allegations that wire-chafing in a F-16 caused the aircraft to become uncontrollable and to crash.<sup>177</sup> The *Harduvel* plaintiff claimed that such wire-chafing was a manufacturing defect and, therefore, the government contractor defense did not apply. The Eleventh Circuit disagreed, holding that a manufacturing defect consists only of “aberrational defects and not those that occur throughout an

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<sup>171</sup> Barring, of course, specific notification by the military that a component of the equipment failed to conform to specifications or requirements.

<sup>172</sup> *Harduvel v. General Dynamics Corp.*, 878 F.2d 1311, 1317 (11th Cir. 1989).

<sup>173</sup> See, e.g., *Skyline Air Serv., Inc. v. G.L. Capps Co.*, 916 F.2d 977, 980 (5th Cir. 1990). Merely alleging that a supposed defect is a “manufacturing” defect is insufficient to defeat the government contractor defense immunity. *Id.*

<sup>174</sup> 913 F.2d 242 (5th Cir. 1990).

<sup>175</sup> *Id.* at 246. The *Mitchell* defendant argued, unsuccessfully, that the *Boyle* test was applicable to the manufacturing process that allowed such defects to occur. *Id.* at 245.

<sup>176</sup> 878 F.2d 1311 (11th Cir. 1989).

<sup>177</sup> *Id.* at 1314-15.

entire line of products.”<sup>178</sup> The Eleventh Circuit noted that an unintended or unwanted result was not a manufacturing defect so long as the end configuration was intended.<sup>179</sup> More importantly, the *Harduvel* decision stands for the proposition that while a jury may determine if a defect exists, it is federal law that determines if a specific defect is considered one of manufacture or design.<sup>180</sup>

A recent Fifth Circuit decision, *Bailey v. McDonnell Douglas Corp.*,<sup>181</sup> suggests that discussions of “manufacturing” defects versus “design” defects are irrelevant under the *Boyle* defense. The Fifth Circuit had previously held that “military contractor immunity does not apply in cases of defective manufacture.”<sup>182</sup> This broad statement creates problems when one considers that

it is possible to have an allegedly defective feature about which the government specifications are silent. For example, if the government specifications regarding the [product] did not specify the type or quality of metal to be used, a metallurgic defect in the [product] would not be inconsistent with the finding that the [product] conformed to specifications.<sup>183</sup>

The *Bailey* opinion attempts to clear up the confusion by explaining that the “seeming inconsistencies stem from the use of the term ‘manufacturing defect,’ instead of *nonconformity with government specifications*, and the term ‘design defect,’ instead of *a defect in the government specifications*.”<sup>184</sup> The court explains that, although there will usually be no significant difference between the above terms and their intended meanings, such will not always be the case. For example:

a manufacturing defect is not necessarily equivalent to non-conformity with government specifications, because

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<sup>178</sup> *Id.* at 1317.

<sup>179</sup> *Id.*

<sup>180</sup> *Id.* at 1316.

<sup>181</sup> 989 F.2d 794 (5th Cir. 1993).

<sup>182</sup> *McGonigal v. Gearheart Indus., Inc.*, 851 F.2d 774, 777 (5th Cir. 1988).

<sup>183</sup> *Bailey*, 989 F.2d at 799.

<sup>184</sup> *Id.* at 801 (emphasis added).

those specifications may be silent about some features, making possible the existence of a manufacturing defect in spite of conformity with the specifications. Likewise, such silence in the specifications may leave room for design discretion by the manufacturer, making possible the existence of a design defect in spite of conformity with the government specifications.<sup>185</sup>

The *Bailey* court builds on the *Harduvel* opinion by noting that whether the *Boyle* defense applies cannot be determined by whether a specific label of manufacturing or design defect is attached to the claim. The Fifth Circuit goes one step further, however, by announcing that "adherence to the three *Boyle* conditions specifically tailored for the purpose will ensure that the defense is limited to appropriate claims. In evaluating an assertion of the defense, therefore, the state law label on the claims sought to be dismissed is irrelevant."<sup>186</sup> The *Bailey* court concludes by stating that the "government contractor defense does not necessarily apply only to claims labeled 'design defect.' Whether it will apply to a particular claim depends *only* upon whether *Boyle's* three conditions are met with respect to the *particular product feature* upon which the claim is based."<sup>187</sup> This conclusion is made despite the dicta found in the Supreme Court's opinion prefacing the three-part *Boyle* test that "[l]iability for *design defects* in military equipment cannot be imposed, pursuant to state law, when" the three-part *Boyle* test is met.<sup>188</sup> Nonetheless, at least in the Fifth Circuit, distinctions between manufacturing and design defects no longer have any application in government contractor defense cases.

## V. SHORING UP THE DEFENSES

In light of recent increased activity in government contractor litigation, all manufacturers of government-pro-

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<sup>185</sup> *Id.*

<sup>186</sup> *Id.*

<sup>187</sup> *Id.* at 801-02 (emphasis added).

<sup>188</sup> *Boyle*, 487 U.S. at 512.

cured equipment would do well to spend the time and effort needed to protect themselves from unnecessary litigation. The following are a few simple recommendations that may assist a government contractor in retaining *Boyle* immunity well into the future.<sup>189</sup>

#### A. TAKE THE SURE WINNERS UP

To date, manufacturing defendants have been fairly successful in defending the legal framework of the *Boyle* defense on appeal. Common business sense dictates that an evaluation of every case be made before attempting the appeal process. If a plaintiff has succeeded in breaching the *Boyle* defense at the trial level, dangerous collateral estoppel exposure may be present.

Every military product is arguably inherently dangerous. Decisions are made by designers and military procurement officials who make trade-offs between the system's safety and its combat effectiveness, thus, the rationale behind the *Boyle* defense. Manufacturers often face the formidable task of defending a tort suit involving emotional damage facts against a talented plaintiff's counsel in his own backyard venue. If this hostile environment produces factual findings defeating the *Boyle* defense, the manufacturer's burden on appeal changes from a "preponderance of the evidence" standard to a "no reasonable jury" standard. If it appears that the plaintiff may successfully breach the *Boyle* defense with regard to a specific product, the defendant should seriously consider settling the case in order to avoid future collateral estoppel consequences.<sup>190</sup>

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<sup>189</sup> It is common knowledge that military hardware designed several decades ago to be used for only a few years continues to be pressed into service today. It is not uncommon today for pilots to fly aircraft that were built before the pilots were born. The *Boyle* case itself involved a helicopter designed in the 1950s and manufactured in the 1960s that crashed in the 1980s. The aircraft was built to support the Vietnam war effort and was intended for a service life of only a decade. Planning for future litigation could pay tremendous dividends in the long run for any manufacturer that intends to continue as a viable and insurable company into the 21st century.

<sup>190</sup> As an example, a plaintiff may find a venue and fact pattern that makes the

## B. PRE-LOAD THE CANNONS

Modern conventional wisdom allows that the best way to keep the peace is to prepare for war. The *Boyle* defense is an affirmative defense. The defense lawyer must be provided with the proof required to meet all three legs of the *Boyle* test.<sup>191</sup> Given the extended life of many military aircraft in service today (far beyond that intended by the original designers) and document retention programs instituted by manufacturers, the compilation of evidence to support the government contractor defense is often time-consuming and sometimes too little too late. Prior planning by a manufacturer's in-house legal staff<sup>192</sup> could significantly decrease the amount of effort expended at the outset of every lawsuit and greatly increase the chances of success as to the government contractor defense.

Every major product sold to the United States government should have an accompanying government contractor defense package prepared and ready for use.<sup>193</sup> This package should contain all of the pertinent information that defense counsel may need in drafting a motion for summary judgment on the government contractor defense with the exception of the final DD 250<sup>194</sup> for the

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*Boyle* case indefensible at the trial level. From a strictly business standpoint, it makes sense to settle this case as opposed to allowing it to proceed to trial. There is always the real possibility that a factual determination that the *Boyle* case does not apply to a given product will be upheld on appeal. Such possibility could spawn numerous lawsuits regarding the same product and severely damage the manufacturer's ability to apply the government contractor defense successfully in the future. For a summary discussion of the offensive use of collateral estoppel, see JOSEPH W. GLANNON, *CIVIL PROCEDURE* 295-309 (1987).

<sup>191</sup> See David J. Adams & C. Kevin McCabe, *Defending Manufacturers Under the Government Contractor Defense*, presented at the *Journal of Air Law & Commerce* Air Law Symposium 12-15 (Feb. 27, 1992) (summarizing the proof required by defense counsel when establishing the *Boyle* defense).

<sup>192</sup> Or an outside legal specialist hired for the purpose.

<sup>193</sup> Subcontractors who do not sell directly to the government should insist on such a package from the prime contractor in advance of litigation.

<sup>194</sup> The DD 250 is such compelling evidence of conformance under the second leg of the *Boyle* defense that it is recommended that a copy be maintained indefinitely on every product sold under contract with the military. See *supra* notes 144-46 and accompanying text.

specific product in question.<sup>195</sup> These packages could be put together with relative ease for new products.<sup>196</sup> Some

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<sup>195</sup> For example, the package may contain the procurement contract, initial design specifications, master design drawings showing government approval, the final design specifications, government evaluation reports, and a list of all important government and manufacturing witnesses involved in various stages of the process.

<sup>196</sup> The following checklist may provide helpful guidelines for manufacturers when assembling government contractor defense packages for a specific product.

1) United States approved reasonably precise specifications.

Helpful Evidence —

- Proof of government oversight
- Specific government-required design specifications
- Government approval of any design or product selection
- Exchange of information between contractor and government
- Government review of design drawings or blueprints
- Documents submitted to government for review
- Production of prototype for government testing
- Proof of government's right to suggest design changes
- Government engineers assigned to project development
- Independent government analysis of product or component in question
- Proof of continuous "back-and-forth" communication between supplier and government
- Visits to supplier's facilities by government engineers and inspectors
- Final review of product by government before purchase
- Any authority either granted contractually or actually exercised by government over design and manufacturing
- Government employees assigned as plant resident representatives
- Signatures by government procurement officials
- Detail specifications

2) Equipment conformed to government specifications.

Helpful Evidence —

- Government testing of product and component parts
- Ultimate government acceptance of product or component as designed
- Cooperation with government on any subsequent design changes
- DD 250 or other acceptance documentation

3) Supplier warned the United States about the dangers in the use of the equipment that were known to the supplier but not to the United States.

Helpful Evidence —

- Any evidence of government's knowledge of dangers related to product or component
- Communication between government and supplier regarding dangerous conditions

research may be required for older products. Contractors could make the packages ready for shipment to defense counsel within days of the filing of a lawsuit involving the product in question.<sup>197</sup> A motion for summary judgment on *Boyle* grounds could be filed within weeks of an appearance by a prepared Defendant.<sup>198</sup>

### C. BUILDING STRONGER FACTUAL BARRIERS

Contractors should consider the *Boyle* defense as early as the bidding stage for government contracts. The manufacturer should attempt to negotiate the *Boyle* language into the final procurement contract. Many government contracts make it clear that the government has accepted a product upon the issuance of a DD 250. The contractor could negotiate to make this portion of the contract specifically address the language of the *Boyle* test. Subcontractors should negotiate some form of government review or acceptance into contracts with general contractors. Subcontractors might also consider indemnity agreements or contractual obligations to defend whenever government contractor defense issues are litigated.

Throughout the design and testing phase, the contractor should make every effort to secure and memorialize government participation, input, and approval. Every manufacturer should take pride in their successes with a particular product, but even marketing material might include some reference to the cooperative effort of govern-

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- Supplier's internal communications regarding safety of product in question
  - Evidence of public or industry awareness of safety problems related to component
  - Usage history by government

<sup>197</sup> New disclosure requirements adopted for use in federal courts provide additional incentive for such immediate response to defense counsel. See Barbara K. Salyers, *New Federal Rules Take Effect*, 5 J & W FLYER, April 1994, at 2; John S. DeGroote, *Northern District Adopts New Expense and Delay Reduction Plan*, 4 J & W FLYER, July 1993, at 3; John S. DeGroote, "Fast Track" Litigation in the Eastern District of Texas, 3 J & W FLYER, Nov. 1992, at 2.

<sup>198</sup> From a strategy standpoint, however, the defendant may want to wait until the completion of substantial discovery in order to lock the plaintiff into a theory of recovery easily defeated by the *Boyle* test.



ment engineers, planners, and coordinators.<sup>199</sup>

## VI. REINFORCEMENTS ON THE WAY?

The *Boyle* defense is unquestionably federal common law, and, as such, has no statutory basis and, arguably, no basis in the United States Constitution. As long as there exists governmental immunity from tort lawsuits, either under the *Feres* Doctrine or the Discretionary Function Theory, the *Boyle* defense is also an absolute necessity to national defense and is correctly reasoned law. There is no justice in the proposition that a military contractor should be held liable under state tort law for injuries incurred by the use of equipment that is designed under the strict dictates of military planners and government procurement officials for use in combat.<sup>200</sup>

As federal common law, however, the *Boyle* defense will

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<sup>199</sup> By contrast, a prime contractor's recent claim that the purchase by the military of a certain aircraft "marks the first time the [government] has purchased 'off-the-shelf' [aircraft]" found in promotional materials could be damaging evidence in future government contractor defense litigation. Citation withheld.

<sup>200</sup> This author takes issue with the conclusions reached by several other authors when discussing the government contractor defense. For example, in a student comment published two years ago in this journal, the following arguments were raised as rationale for severely limiting the *Boyle* defense:

First, civilians lack protection provided to military personnel under the Veteran's Benefit Act. This leaves an injured civilian without a remedy if state tort law is displaced. Second, military personnel do have reasonable expectations that their equipment will not fail due to a design defect. Third, faulty products can cause several problems, such as, (1) an increase in public criticism of the public procurement process, (2) personnel's lack of faith in their weapons, and even (3) risks to national security if a product fails in war due to a design flaw. Fourth, the current defense does not deter either the government or the contractor from producing poorly designed products. . . . Imposing liability on the contractor for defective products would make the contractor's bids less competitive because it would have to pay the higher costs of accidents and injuries caused by that product. This would lead to improved designs. . . . Fifth, not all decisions involving the design of military equipment involve military judgments. Some performance requirements are completely independent of whether a product is to be used by the military or civilians. . . . [Sixth,] the government lacks the technical ability to actively oversee the development of many types of highly technical products. Thus, it is arguable whether they truly exercise discretion in selecting a design.

be forever at the whim and mercy of the United States Supreme Court. A radical change in the Court's make-up that might lead to overturning the *Boyle* defense is not an-

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Stewart, *supra* note 6, at 1013.

The above unsupported conclusions demonstrate a lack of understanding of the *Boyle* decision and its practical application. First, to complain that civilians lack protection provided to military personnel under the Veterans Benefit Act ignores the fact that the same is true any time a civilian is precluded from recovery under the Federal Tort Claims Act.

Second, while military personnel do expect that their equipment will not fail due to a "design defect," this argument rings hollow when the upper echelon of the military procurement activity either dictated, accepted, or is aware of the "design defect." Every branch of the armed services appoints a senior military officer to oversee a vast and expansive procurement effort for each specific piece of military equipment. In addition, it is common for branches of the military to modify equipment continually once it is purchased. Many times these modifications are made with little or no input from the original contractor. Unlike the individual consumer of an automobile, the military is not "stuck" with what is later discovered to be a defect.

Third, to suggest that state tort law could have any effect on the "public criticism of the federal procurement process" or "personnel's lack of faith in their weapons" or "risks to national security" involves a blind faith in products liability law not supported in even the civilian world. Besides, military procurement officers simply do not care about the results of civilian products liability lawsuits. Their concern, and rightfully so, is to field the most effective combat equipment in the interest of the United States military.

Fourth, the idea that "liability on the contractor for defective products would make contractor's bids less competitive" thereby creating safer products during the bidding process also ignores the reality of the government procurement system. The development of military hardware is performance-driven and always on the leading edge of technology. The government puts out for bid specifications on an aircraft that goes faster, flies farther, and provides more combat power than anything previously thought possible.

Fifth, the argument that the *Boyle* defense should be limited to military equipment again ignores the Federal Tort Claims Act. This is the theoretical foundation for the entire *Boyle* defense. It is immaterial which government agency dictates the design criteria, the Department of the Navy or the Department of the Interior.

Finally, the argument that the *Boyle* defense should be limited because the government lacks the technical ability to oversee the development of the product again demonstrates a lack of understanding for the procurement process. The United States government is not an ignorant consumer buying a technical product about which it has no understanding. For example, the United States government has vast expertise in overhauling, updating, and operating the CH-53 helicopters it operates around the world. After the initial procurement process, the contractor's exposure and experience with the product is quickly outstripped by the consumer, the military. In summary, a plaintiff's attorney should not be allowed to dictate to the United States military and its contractors the design of military hardware. The extensive decision-making process of government and civilian engineers should not be usurped by jurors.

anticipated in the near future. The possibility remains, however, in the long run.

In addition, there is always the possibility that the United States Congress may enact products liability legislation that affects the *Boyle* defense. The latest trend in this area, however, would suggest that the *Boyle* defense is safe from any congressional tampering. Most product liability legislation introduced in the last ten years seeks to expand the protection of manufacturers as opposed to providing new avenues of recovery for tort victims.<sup>201</sup>

Most encouraging for manufacturers is the possibility that the *Boyle* defense may be expanded to cover a larger variety of products. To bolster its arguments on appeal, Sikorsky was very careful in its briefings before the court of appeals and the Supreme Court to refer to the defense as a "military contractor defense."<sup>202</sup> The argument that the *Boyle* test is available for military contractors designing and building military equipment seems more palatable than allowing the *Boyle* defense for any item procured by the United States government. It should be noted, however, that the Supreme Court opinion refers to the *Boyle* defense as the "government contractor defense."<sup>203</sup> There is no indication from Judge Scalia's opinion that the *Boyle* defense should be strictly limited to military equipment. In fact, since *Boyle*, products that might otherwise be considered non-military have enjoyed the immunity of the *Boyle* defense.<sup>204</sup> There appears to be no reason why any equipment purchased by any entity of the

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<sup>201</sup> See, e.g., S. 67, 103d Cong., 1st Sess. (1993); S. 1458, 103d Cong., 1st Sess. (1993); see also Frederick P. Alimonti, *New General Aviation Bill Has Broad Support*, AVIATION LITIG. NEWS, Dec. 1993, at 3, 25.

<sup>202</sup> Brief for Respondent and Supplemental Brief for Respondent, *Boyle v. United Technologies Corp.*, 487 U.S. 500 (1988). *Boyle*, 487 U.S. at 500. Telephone interview with Ron Bowles, *supra* note 34 (May 18, 1993).

<sup>203</sup> *Boyle*, 487 U.S. at 500.

<sup>204</sup> See *Carley v. Wheeled Coach*, 991 F.2d 1117 (3d Cir. 1993); *Garner v. Sanctoro*, 865 F.2d 629 (5th Cir. 1989); *Johnson v. Grumman Corp.*, 806 F. Supp. 212 (W.D. Wis. 1992) (holding government contractor defense applicable to postal service vehicles); *In re Chateaugay Corp.*, 132 B.R. 818 (Bankr. S.D.N.Y. 1991). But see *Nielsen v. George Diamond Vogal Paint Co.*, 892 F.2d 1450 (9th Cir. 1992); *In re Hawaii Fed. Asbestos Cases*, 960 F.2d 806 (9th Cir. 1992).

United States government could not be covered by the *Boyle* immunity if the three elements of the *Boyle* test are shown.

Two additional expansions on the *Boyle* defense have recently surfaced. A federal judge in California has promulgated a "high-tech preemption doctrine" in a suit stemming from a friendly fire incident during Operation Desert Storm.<sup>205</sup> The high-tech preemption doctrine extends the *Boyle* defense into the manufacturing defect arena. The court concluded that "[t]he federal interest in procuring sophisticated combat weaponry . . . is impinged upon by state tort manufacturing defect suits . . . This is due primarily to the strong government interest in protecting against the disclosure of the design and capabilities of such weaponry."<sup>206</sup> The California district court ruled that any state product liability suit involving military products that have no civilian counterpart must be dismissed as a matter of law based on this high-tech preemption doctrine.<sup>207</sup>

The Court emphasized its point by stating that "[e]xposing government contractors to tort liability, even for manufacturing defects, would place undue pressure on manufacturers to act too cautiously, even when the national interest would be better served by expedient production rather than defect-free weapons."<sup>208</sup>

Further strengthening that may come from courts in the future includes additional opinions clearly holding that the production of a DD 250 on a military product is *prima facie* evidence that the government contractor defense has been met and that attacks on the individual components

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<sup>205</sup> *Bentzlin v. Hughes Aircraft Co.*, 833 F. Supp. 1486, 1489 (C.D. Cal. 1993).

<sup>206</sup> *Id.* at 1490.

<sup>207</sup> *Id.* at 1492. As an alternative ground, the court set forth a "combat preemption doctrine," which would preclude suits against the United States and contractors arising out of combat-related activities of the U.S. military. *Id.* The court relied on the combatant activities exception to the Federal Tort Claims Act, 28 U.S.C. § 2860(j) (1988) and the Ninth Circuit opinion of *Koohi v. United States*, 976 F.2d 1328 (9th Cir. 1992). *Bentzlin*, 833 F. Supp. at 1492.

<sup>208</sup> *Bentzlin*, 833 F. Supp. at 1493.

of the product are insufficient to derail proof that the overall product itself met the *Boyle* test.

### VIII. CONCLUSION

Although the *Boyle* defense may seem harsh in operation to those unfamiliar with the government procurement system, the rationale articulated by Justice Scalia is sound, correct, and pragmatic. As Justice Powell, who was then sitting on the Eleventh Circuit, stated so elegantly:

Young servicemen . . . represent the very best of our Nation's citizens. Americans take pride in their bravery and skill, and mourn when their lives are tragically lost. The pilots and crews of military aircraft willingly embrace the risks that they assume by volunteering to serve our country. They are not the "military doubles of civilian motorists," (citation omitted), or ordinary purchasers of consumer products. The Supreme Court's adoption of the government contractor defense recognizes that one of these risks is the operation of the equipment in which safety concerns have been balanced against cost and performance. With respect to consumer goods, state tort law may hold manufacturers liable where such a balance is found unreasonable. In the sensitive area of federal military procurement, however, the balance is not one for state tort law to strike. Although the defense may sometimes seem harsh in its operation, it is a necessary consequence of the incompatibility of modern products liability law and the exigencies of national defense.<sup>209</sup>

While *Boyle* may be under siege, the citadel walls are stronger today than ever.

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<sup>209</sup> *Harduvel v. General Dynamics Corp.*, 878 F.2d 1311, 1322 (11th Cir. 1989).