DOWNEY
AVIATION SERVICES

**Expert Report of David Downey**

This is my expert report. I anticipate providing a supplemental report prior to my deposition.

I am a consultant and trainer in the aviation and defense sectors. I have forty years of experience with the field of helicopters, including consideration of Sikorsky helicopters and their parts suppliers. I served for decades in the U.S. Army on helicopter maintenance operations and similar logistics matters, including as an experimental test pilot. I served a decade at the Federal Aviation Administration ("FAA") on regulatory matters, including oversight of Sikorsky, among other suppliers of helicopter and their parts. I spent almost five years as an executive at Bell Helicopter. I was Vice President for flight safety, civil certification and flight operations. My CV is attached hereto as Exhibit A. A list of prior instances in which I provided expert testimony is attached hereto as Exhibit B.

I have been retained by the American Small Business League, through its counsel, to provide expert consulting and, if needed, testimony in the matter styled *American Small Business League v. Dept. of Defense*, Case No. CV 14-2166 WHA (N.D. Cal.). I am to be compensated on an hourly basis for my services, at a general rate of $400/hour, and a rate of $650/hour for testimony.

I will opine as to two matters.

1. Bell Helicopter, and other participants in the field of helicopter manufacturing and supply, would already be aware of many, if not all, of Sikorsky's sources of parts and similar aspects related to the Black Hawk helicopter.

There are a host of indications that knowledge of Sikorsky's suppliers and subcontractors is widely spread around through many channels, government and non-government, leading to knowledge to competitors.



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These indications that I rely upon include press releases issued by Sikorsky and many of its subcontractors, and articles published in (defense and aviation) industry publications and other media.

Sikorsky hosts supplier conferences and would also invite prospective suppliers. By attending any person could gain insight into Sikorsky suppliers. This would be true for any aerospace manufacturer. The aerospace supply chain is highly regulated thus a constrained community.

Industry trade associations such as the Army Aviation Association of America (which publishes Army Aviation Magazine), American Helicopter Society International, Manufacturers & Repair Parts Association, Aviation Suppliers Association, and the Helicopter Association International (HAI) are other public sources of this information. Most of these trade associations have searchable databases for suppliers.

The International Aerospace Quality Group (IAQG) has an Online Aerospace Supplier Information System (OASIS) database that lists AS9100, AS9110, and AS9120 certified suppliers. Virtually every aerospace supplier is AS9100 certified.

All suppliers under U.S. Government procurement and acquisition guidelines must be registered with the Defense Logistics Agency (DLA). DLA will then assign a 5-digit *Commercial and Government Entity Program* registration. This is better known as a CAGE Code. The CAGE code database can be searched on publically accessible websites like *CAGE Search*. Many companies place their CAGE Codes on marketing and advertisements. With a CAGE code one can get the address of the supplier.

On the same *CAGE Search* website is a searchable database by U.S. Government National Stock (part) Number.

The North American Industry Classification System (NAICS) is maintained by the U.S. Census Bureau. Companies that conduct business with the U.S. Government provide the NAICS codes that "classify" that entity. The NAICS codes identify the company, services, etc., and can used to search the U.S. Government's General Services Administration website (FedBizOpps.gov).



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Another source of supplier data is the FAA, which has on its *Regulatory And Guidance Library* website all of the commercial design approvals. Among these design approval would be after-market parts (*Parts Manufacturing Approval*) and common parts (*Technical Standard Order Approval*) like altimeters. All the approvals would list the design owner, their address and the part numbers.

Companies that provide civil [aircraft] parts are very likely to be a source of U.S. Government parts. The civil market business fluctuations are often offset by the stability of the U.S. Government supplier contract opportunities.

The FAA also publishes in Advisory Circular 00-56 a list of "*Qualified Suppliers*." This Advisory Circular provides relevant company information and if provided the CAGE Code. This database would provide another cross-reference for determining aerospace suppliers.

To further support my awareness that other manufacturers would know Black Hawk sources of parts, extraterritorially, the U.S. Government sells Sikorsky aircraft (Black Hawk helicopters), through Department of Defense Foreign Military Sales. Additionally, Sikorsky has sold S-70 Black Hawks internationally through direct commercial sales. There are also commercial sales under licenses. Licenses have to be obtained through the International Traffic in Arms Regulations. For example, there are sales in Poland and Turkey. All this leads to widespread knowledge of Black Hawk helicopters, including their parts, abroad as well as at home.

Again, to further support my awareness that other manufacturers would know Black Hawk sources of parts, the FAA recently granted an exemption to GE to sell new parts for Black Hawk Helicopters engines. There are approximately 70-100 "military-surplus" UH-60 Black Hawks with US domestic operators. All these operators and their FAA-approved 14 CFR § 145 repair stations would have access to UH-60 parts description and nomenclature. All this leads to widespread knowledge of Black Hawk helicopters, including their parts, abroad as well as domestically.

An additional reason to believe that other manufacturers would know of sources of Black Hawk parts is that Sikorsky has, for decades, used Black Hawk derived technology on the commercial



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S-92 helicopter. Manufacturers habitually use the same suppliers to reduce overhead, keep audits to minimum and rely heavily on satisfactory past performance. This would also be true of the Sikorsky S-61 and (V)H-3 series helicopters.

Additionally, there are many dual-sourced parts (parts that may be used on both military and commercial models) for the Black Hawk, including some based on industry/commercial standards. Examples would include but not be limited to raw material, bearings, adhesives, oil, lubricants, and FAA-accepted standard parts. Standard parts would include parts that conform to standards such as: National Aerospace Standard (NAS), Army-Navy Aeronautical Standard (AN), Society of Automotive Engineers (SAE), SAE Sematec, Joint Electron Device Engineering Council, Joint Electron Tube Engineering Council, and American National Standards Institute (ANSI).

My opinion is also informed by my experience at the FAA, where I was an official for years. Oversight of Sikorsky was within the scope of my responsibilities. The FAA scrutinized quality control systems, including Sikorsky's helicopters and their supply chain.

Again, to further support my awareness that other manufacturers and suppliers would know Black Hawk sources of parts, the U.S. Government buys parts through FedBizOpps.gov, a government-maintained portal where government contract proposals are presented. The proposals sometimes reference the identities of present and/or prior subcontractors. And, there would be other sources such as the Defense Logistics Agency or U.S. Government Black Hawk operators such as Customs and Border Protection. A company like Bell, Boeing, or Sikorsky, responds if the government puts out a source solicitation and will even bid to supply parts/services to the U.S. Government a for a competitor's aircraft.

There are publically available aerospace notices provided by both the FAA and DoD. These notices are published when there is serviceability or problems with a part. The FAA will provide notice via the Federal Register and will refer to the supplier's service bulletin. A diligent service bulleting search would yield part numbers, aircraft models, reference maintenance and other technical data.



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To further support my awareness that other manufacturers would know Black Hawk sources of parts, the Defense Contract Management Agency (DCMA) closely monitors, and must approve of that a prime contractor can, in fact, meet the project's specifications, and do so efficiently, in line with what a project "should cost." This includes analysis of whether the "make or purchase" decision (the decision made by the prime contractor whether it should "make" a part, or "purchase" the part from a subcontractor) is advantageous to the U.S. Government for the various components.

The prime contractor (Sikorsky) has to substantiate that it provides a compliant aircraft and that its subcontractors comply as well. This involves many on-site (and other) inspections, including Sikorsky Quality Control, AS 9100 certification, Defense Contract Audit Administration and DCMA audits. DCMA prepares a procedural manual just for the prime contractor (which may become subsumed under Sikorsky's acquirer, Lockheed). I am aware of the effect of this process on Sikorsky because, at Bell, we collaborated with the Small Business Administration to identify SBA-eligible suppliers.

2. Even if the identity of a subcontractor to Sikorsky on a particular prime contract were not previously publicly known, its revelation would not have proprietary value.

First, Sikorsky, effectively has no competition for U.S. Government contracts which relate to the various variants of the Black Hawk helicopter. The U.S. Government prime contracts for Black Hawk variants are principally "sole source" contracts for which there is no competitive bidding. All the U.S. Government procured Black Hawk variants are part of the US Army's multi-year aircraft (H-60) procurement contract, and have been part of such multi-year procurement contracts for decades. Once a prime contractor is in place with a multi-year procurement contract, there are significant barriers to entry that would prohibit potential competitors from competing. There are a substantial commitments made to training within the military, and to establishing a supply chain. There is no year-to-year competition with the Black Hawk, there is no serious threat to the continued purchase by the U.S. Government of Black Hawks, and the only question is how many units will be purchased and at what price. It is not likely that the Black Hawk would be replaced for at least 10-15 years.



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Second, as noted above, the universe of qualified subcontractors is well known to those in the industry. Also as noted above, the supply chain is heavily regulated, and suppliers are subject to various certification requirements.

Thus, even if the precise identity of Sikorsky's subcontractors on a particular project were not previously publicly identified, the revelation of this information would not enhance another vendor's chances of competing for this business.

I declare under oath the foregoing is true and correct.

David A Downey

Digitally signed by David A Downey
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September 12, 2017



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