District Judge Richard A. Jones

IN THE UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WASHINGTON

AT SEATTLE

STATE OF WASHINGTON, *et al*., Plaintiff, v. The UNITED STATES DEPARTMENT OF THE NAVY, *et al.,* Defendants,	No. 2:19-cv-01059-RAJ DECLARATION OF DAVID F. HARRIS, CAPTAIN U.S. NAVY

I, Captain David F. Harris, U.S. Navy, do hereby declare as follows:

1. I make this declaration in support of the Department of the Navy's (Navy) response to Plaintiffs' request for remand with vacatur in the above-referenced litigation. I am familiar with this Court's August 2, 2022 decision and Plaintiffs' briefs regarding remedy. (*See* Docket Nos. 119, 128, 129.) I am also familiar with the declarations of Vice Admiral Kenneth R. Whitesell and Captain Eric Hanks, which are being filed concurrently with my declaration.

2. I am a Naval officer with 24 years of commissioned service and experience. I graduated from the United States Naval Academy in 1998 with a Bachelor of Science degree in Political Science.

I was commissioned in 1998 and then earned my wings as a Naval Flight Officer (NFO) in 2000. Since then, I have served in operational and training EA-6B Prowler[1] and EA-18G Growler (Growler) squadrons. I served in two operational carrier squadrons, Electronic Attack Squadron ONE THREE TWO (VAQ-132) and Electronic Attack Squadron ONE THREE SEVEN (VAQ-137), and trained EA-6B Prowler aircrew as a tactics instructor at the Electronic Attack Weapons School. From 2007 to 2008, I was assigned to the staff of Carrier Air Wing[2] One, which was responsible for carrier-based strike warfare operations for eight squadrons assigned to USS ENTERPRISE (CVN 65). I deployed aboard the aircraft carriers USS ENTERPRISE (CVN 65), USS JOHN F. KENNEDY (CV 67) and USS GEORGE WASHINGTON (CVN 73) in support of Operations SOUTHERN WATCH, IRAQI FREEDOM, ALLIED FORCE, NEW DAWN, and ENDURING FREEDOM.

3. I also served as the Commanding Officer of VAQ-132, deploying from land-based airfields in the U.S. Indo-Pacific Command (INDOPACOM) area of responsibility as well as Incirlik Air Base, Turkey in support of Operation INHERENT RESOLVE. I served as the Commanding Officer of VAQ-129, the Growler Fleet Replacement Squadron, which is responsible for training aircrew on how to safely fly and tactically employ the Growler. I have logged over 2900 flight hours in the EA-18G, EA-6B, F/A-18F and various other aircraft, accumulating 450 arrested landings onboard aircraft carriers at sea. As a Naval Flight Officer and Wing Commander, I am an expert on the equipment, manpower, doctrine, and training necessary to prepare aircrews to deploy aboard aircraft carriers and from land-

[1] The EA-6B Prowler was the predecessor aircraft to the EA-18G Growler.

[2] A Carrier Air Wing consists of over 70 aircraft that, when embarked on board an aircraft carrier, provides most of the strike power and Electronic Warfare (EW) capability of the Carrier Strike Group (CSG). The CSG consists of an aircraft carrier, an embarked Carrier Air Wing, and various escort ships (guided missile cruisers, anti-aircraft warships, anti-submarine destroyers and frigates, and submarines.)

based expeditionary airfields to deter conflict and, if necessary, conduct combat airborne electronic attack operations in support of national strategic objectives.

4. In August of 2022, I assumed the duties of Commander of Electronic Attack Wing, U.S. Pacific Fleet (COMVAQWINGPAC). I am responsible for ensuring Growler aircrews are trained in safely flying Growler aircraft as combat-ready Airborne Electronic Attack (AEA) forces. AEA forces operate in support of national strategic-level combat and non-combat operations around the world. AEA forces provide Combatant Commanders[3] with more than just the technological capability of an aircraft and its weapons; AEA personnel must also be ready to succeed and win in battle. I have a duty to provide my squadrons with realistic and effective training that will enable them to deploy in support of military operations around the world.

5. AEA requirements are met in two ways – those Growler squadrons that are deployed on board an aircraft carrier (Growler carrier-based squadrons) and those that are not carrier-based (Growler expeditionary squadrons). The scope of my command responsibility is to properly man, train, and equip the eight Growler carrier-based squadrons, five Growler expeditionary squadrons, and one Fleet Replacement Squadron (FRS) which are home based at Naval Air Station Whidbey Island (NASWI).[4] I am also responsible for an additional Growler squadron that is forward deployed and based at Marine Corps Air Station Iwakuni, Japan. These fifteen squadrons consist of over 3,500 personnel. These Growler squadrons represent the only AEA assets in the Department of Defense's (DoD) inventory.

[3] Combatant Commanders maintain predetermined levels of combat capability as directed by the President of the United States or the Secretary of Defense as directed by the President. (10 U.S.C. § 164(b).) These Combatant Commanders' requirements determine the pace at which the Navy's units and assets train and deploy, and the types and numbers of assets needed to meet mission requirements. (10 U.S.C. § 164(c).) There are six geographic Combatant Commands: Africa Command, Central Command, European Command, Indo-Pacific Command, Northern Command, and Southern Command.

[4] I command fourteen Growler squadrons of a total of fifteen home based at NASWI. The fifteenth, VAQ-209, falls under the responsibility of the Navy Reserve Force's Tactical Support Wing.

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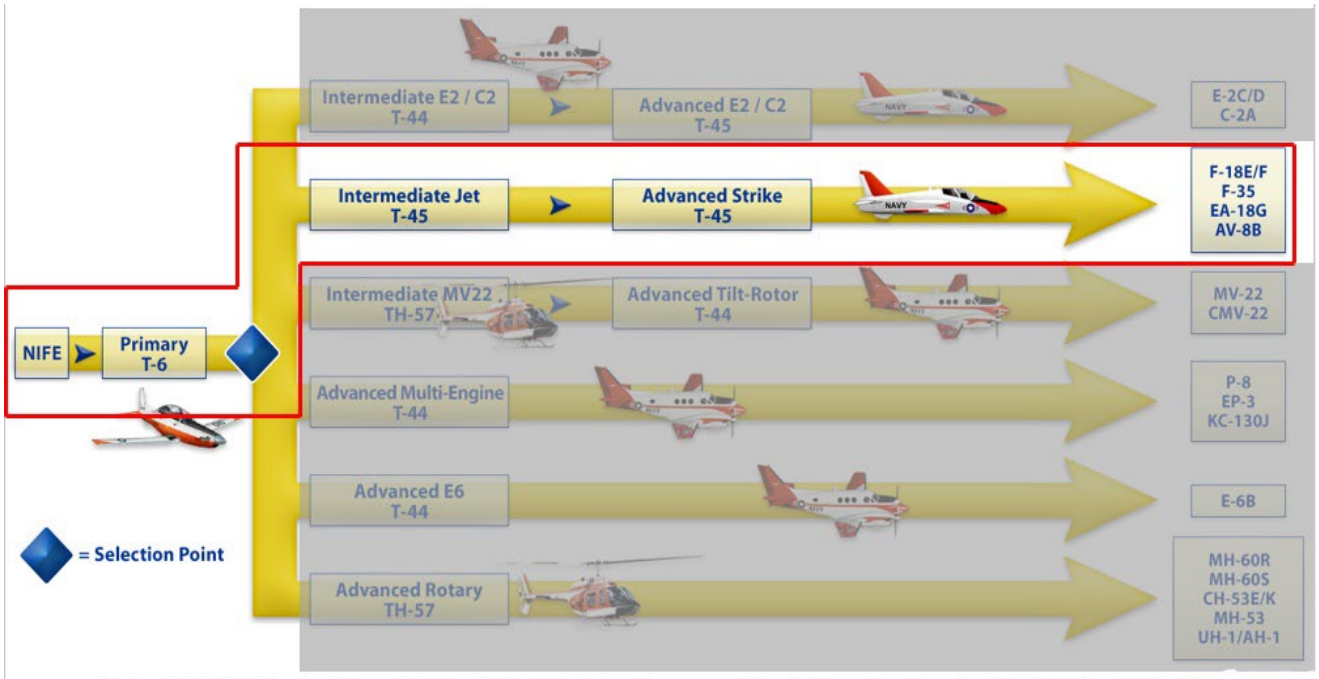
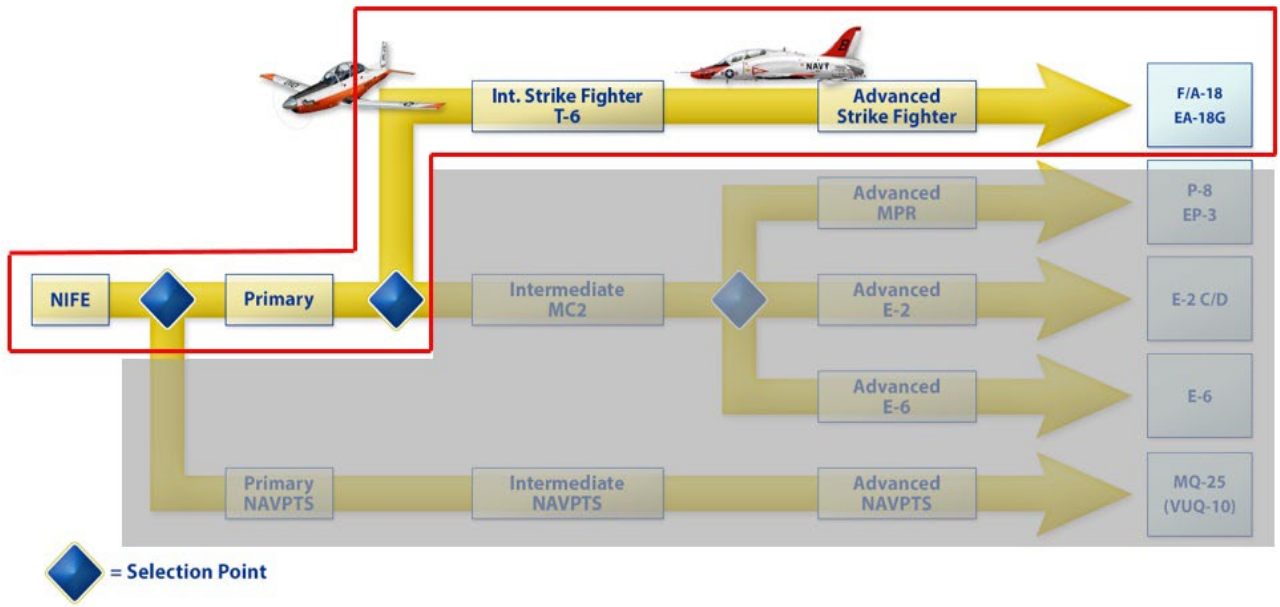
6. Carrier aviation is unlike any other type of military or commercial aviation. The ability to safely operate an aircraft from the flight deck of an aircraft carrier is the culmination of years of intense flight training in four broad phases: (1) ground school, (2) flight training in training jets, which includes initial carrier training, (3) specialized training in assigned aircraft at a Fleet Replacement Squadron (FRS), and, finally, (4) assignment to an operational squadron that deploys around the world in support of joint and naval operations. Chief, Naval Air Training (CNATRA) is responsible for the training of Naval Aviators and NFOs before they move on to the FRS. The below figures illustrate the CNATRA-managed training pipelines for Student Naval Aviators (SNAs) and Student Naval Flight Officers (SNFOs). Each step of this training pipeline is further explained in the following paragraphs.



Typical EA-18G Student Naval Aviator (Pilot) Training Command Production Pipeline, i.e. Flight School (Pilot)



Typical EA-18G Student Naval Flight Officer (NFO) Training Command Production Pipeline, i.e. Flight School (NFO)

7. SNAs and SNFOs spend their first formative months in Pensacola, Florida, learning basic aviation ground school topics and water survival training. Shortly thereafter, these young officers begin basic flight school instruction by gaining foundational skills operating the T-6 Texan II, a propeller aircraft designed for initial basic aviation training. The students who successfully complete this phase advance to the next intermediate phase of training to expand their skills and introduce the students to jet aircraft. During this phase, SNAs begin operating the T-45 Goshawk jet trainer while SNFOs are introduced to advanced navigation procedures and tactical problem sets, which teach them how to make decisions in combat. If a student succeeds in these areas, the student may be selected for tactical jet training. The student will then begin advanced jet training and will operate more advanced aircraft, continuing to hone his or her skills at faster speeds, higher altitudes, and with added capabilities.

8. Near the end of the advanced jet phase of training, SNAs train for an opportunity to earn their Initial Carrier Qualification by operating a T-45 Goshawk training jet from the deck of an aircraft carrier "solo," *i.e.*, without an Instructor Aircrew in the aircraft. SNAs are introduced to the carrier operating environment via a carefully managed syllabus, beginning with shore-based field training and traditionally culminating in at-sea training, operating on and around an active U.S. Navy aircraft carrier. The demands of this phase of training are so great that SNAs are prevented from engaging in any other type of training; carrier qualification is their singular focus. SNAs who complete advanced jet training receive their "Wings of Gold" and are assigned to an FRS for training in the specific fleet aircraft they have been assigned to fly.

9. Currently, the Naval Aviation Enterprise[5] (NAE) is conducting a pilot program to eliminate Initial Carrier Qualification (CQ) in the T-45 to reduce the time and cost to train SNAs, as well as to limit the amount of time aircraft carriers are underway. The most recent FRS CQ included students that did not CQ in T-45s. Based on the landing performance of the students in this pilot program, the NAE will likely be expanding the program and we expect to ultimately see no more CQ in the T-45 in the future. As the at-sea component of training is eliminated, there will be greater need for shore-based training that mimics carrier landings as closely as possible when SNAs are assigned to an FRS, so training operations at OLF Coupeville will be critical to fulfilling that training requirement.

[5] The NAE encompasses all of Naval Aviation and is led by Commander, Naval Air Force (Air Boss), the U.S. Marine Corps Deputy Commandant for Aviation and Commander, Naval Air Systems Command. Within the NAE there are approximately 3,800 sea-based and shore-based aircraft that perform strike/fighter, electronic attack, airborne early warning, maritime patrol and reconnaissance, anti-surface warfare, anti-submarine/sub-surface warfare, strategic communications relay, search and rescue (SAR), helicopter mine countermeasures, training, and logistical support missions.

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10. The Growler FRS trains all new electronic attack aviators before they join either an expeditionary squadron or a carrier air wing squadron.[6] At the FRS, Landing Signal Officers (LSO) train and indoctrinate aviators in all aspects of carrier aviation. LSOs are experienced Naval Aviators, selected for their exceptional knowledge of carrier aviation procedures and specially trained to provide instruction on the principles of carrier aviation. One of the most important training phases for which the FRS is responsible is the CQ phase. The primary tool available to LSOs to inculcate safe carrier procedures to the students is a dedicated shore-based flight training session known as a Field Carrier Landing Practice (FCLP). FCLP training consists of flight operations conducted at a land-based airfield or strip that mimics the conditions of an aircraft carrier as closely as possible; through these operations, aviators build the skills and decision-making necessary to safely land a jet aircraft onboard a moving aircraft carrier. FCLP training is a single-focus mission; no other training is conducted during these flights. This shore-based training evolution is traditionally followed by at-sea CQ training. However, under the NAE's pilot program to eliminate initial CQ in the T-45, it is now more important than ever for new and/or transitioning aircrew at the FRS to train ashore and complete a full FCLP syllabus prior to operating the Growler at sea to complete their CQ phase.

11. The Growler community is unique in that there is only one FRS for the EA-18G, VAQ-129, located at NASWI, along with eight Growler carrier-based squadrons also located at NASWI. Thus, for Growler carrier aircrew, the FRS and operational phases of training are accomplished at the same location. At the FRS, replacement aircrew learn to

[6] The FRS also trains aviators transitioning from other aircraft or returning from non-flying tours.

operate the Growler beginning with a basic familiarization phase and culminating in their ability to operate the aircraft to its fullest capabilities in combat; only then is the aircrew considered "fleet ready." The FRS is considered graduate-level training as the student moniker is dropped from the Naval Aviator and NFO titles and they are referred to as "replacement aircrew." Similar to the advanced jet training stage, the biggest hurdle in the FRS for replacement aircrew is CQ. For the Naval Aviators, who had previously carrier qualified in trainer jets, this is their second time experiencing CQs, albeit with a new aircraft. For the NFOs, this is their first exposure to the carrier environment. Additionally, for both Naval Aviators and NFOs, this will be the first time they are expected to operate safely around the aircraft carrier at night.

12. The replacement aircrew must successfully complete CQs in the Growler aircraft to graduate and move on to the Fleet. Akin to the advanced stage of jet training, the replacement aircrew are not permitted to focus on other mission types. This focused approach encompasses weeks of training: the aircrew receive additional ground education, train in day and night simulators, and perform FCLPs at Ault Field and OLF Coupeville, both day and night. This training process ensures replacement aircrew have mastered the requisite skills, demonstrated the required safety margins, and mastered the predictability and controllability necessary to earn an opportunity to qualify on a carrier. After successful completion of CQs and training at the FRS, the aircrew graduate to their operational Fleet squadron and continue to advance their tactical training and aeronautical skills for combat and carrier operations.

13. Once attached to an operational Fleet squadron, aircrew continue to develop mastery of carrier landings; what was once the province of training now becomes routine as aircrews are expected to safely, expeditiously, and successfully land onboard an aircraft carrier

each and every time they fly. Conducting FCLP operations builds the skills and decision-making necessary for aircrew to safely land a jet aircraft onboard a moving aircraft carrier. FCLP operations are the only tool available to LSOs that nearly replicates, though never replaces, the rigors of carrier-based operations.

14. The risks inherent in landing an aircraft on a carrier at sea cannot be overstated. It is one of the most difficult and dangerous tasks in the American military, and the complexity necessarily means it is an exceedingly perishable skill. Nighttime carrier landings are even more challenging than daytime landings. At night, aviators lack the visual cues they rely on during daytime landings. It is often impossible to discern the horizon or the ocean due to the complete lack of ambient lighting out at sea, and this inability to perceive relative motion can result in vertigo and confusion. Aviators must rely heavily on their flight instruments and training. FCLPs allow aircrew to prepare to execute this maneuver at a location on land where risks that could be encountered at sea can be mitigated to an acceptable level. Simply put, FCLPs on land mitigate the risk of death and loss of aircraft at sea.

15. The at-sea environment is unforgiving and demands aircraft and aircrew adhere to a stringent set of altitude, airspeed, and flightpath restrictions to land on a moving aircraft carrier without crashing. During the final seconds of the landing, aviators make constant power corrections to achieve the exact angle of descent, alignment, and airspeed so the aircraft arresting hook touches down in a precise location on an aircraft carrier runway that is moving away from them as well as pitching up and down and rolling side to side. No matter the seniority or experience of the aircrew, FCLPs must be performed to qualify a pilot to deploy to an aircraft carrier. This requirement cannot be waived and is applicable to training squadrons and operational fleet squadrons alike (though the requirements differ somewhat between the

two organizations). FCLP training operations must be performed as close in time as possible before a squadron deploys to an aircraft carrier because the perishable skills needed to perform the maneuver must peak just as they are needed.

16. FCLP training is designed to mimic as near as possible the metrics and conditions the aircrew will be expected to meet at sea. An FCLP refines the pilot's skills needed during the last 15-18 seconds of flying prior to the aircraft touching down. The pilot must perform a precise landing approach and touchdown to the simulated aircraft carrier deck (landing field), precisely touch the aircraft's wheels on the correct spot of the runway, and then increase power and take off again without stopping.[7] However, prior to those last 15-18 seconds, the aircrew must have maneuvered the aircraft in such a manner to meet strict airspeed, altitude, and distance parameters. FCLP training enhances the aircrew's ability to maneuver the aircraft to meet these rigorous demands.

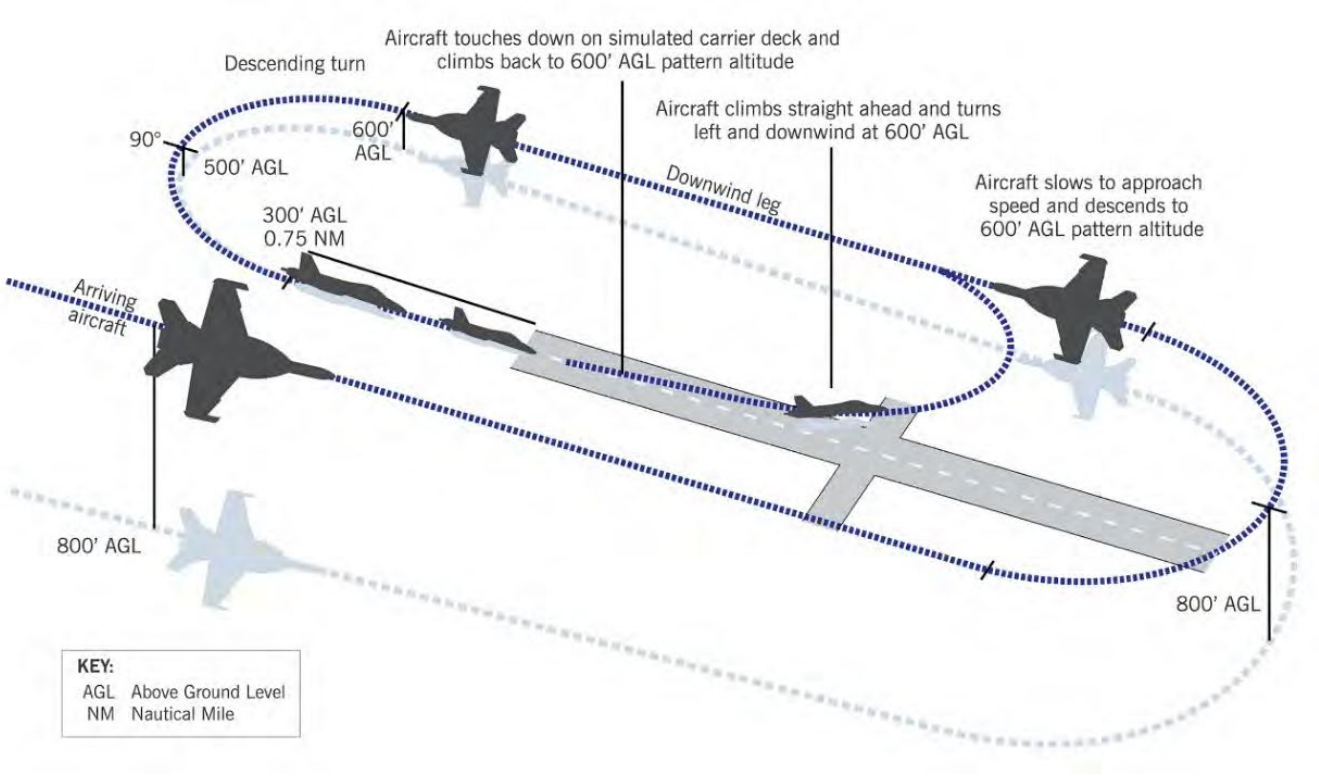
17. An FCLP pattern is dramatically different than any other landing pattern found in civilian or military flying because aircraft recovery at sea often involves a dozen or more aircraft attempting to land safely and expeditiously within a short time frame. Throughout the aircraft recovery process, the aircraft carrier itself must maintain a constant course and speed. This restriction on the aircraft carrier's maneuverability increases the aircraft carrier's vulnerability to attack and other hazards. Therefore, to meet the needs of the Fleet, aviators must land on the carrier in rapid succession to minimize the amount of time the carrier is restricted in maneuverability. The difficulty in safely and expeditiously landing is compounded by the high-performance nature of our aircraft. It is no small feat to transition an

[7] As discussed in Paragraph 24, a missed landing on an actual aircraft carrier requires the pilot to immediately take off from the carrier deck to re-attempt the landing; FCLPs train pilots in this necessary skill.

aircraft from 350 knots (approximately 400 miles per hour (mph)) to an approach speed of 135 knots (approximately 155 mph) and safely land aboard an aircraft carrier with a landing interval allowing for all other aircraft recovering to land on the first pass. This process is truly a team effort and all aircraft in the pattern must know what each other are doing or about to do. Thus, learning how to operate in a landing pattern with other aircraft is critical to the aircrew's training. Aircrew must learn how to control spacing between fellow aircraft in the pattern to avoid creating an airborne traffic jam. At sea, there may be no divert airfield; all the airborne planes must land on the carrier, and an airborne traffic jam can be deadly.

18. The FCLP and aircraft landing pattern itself consist of a left-hand turning racetrack pattern oriented along a runway or ship's heading with one end of the oval being a descent to landing. For a visual aid, Figure 3.1-6 from the Final EIS provides a graphical representation of an FCLP and is included below. At sea, the altitude of the landing pattern is 600 feet; ashore, each outlying field has individual course rules and restrictions in place to mimic that profile as nearly as possible. The process begins when the aircraft enters the landing pattern by performing a maneuver called the "break" in which they arrive overhead the landing runway in use, flying upwind aligned with the runway's heading, traveling at 350 knots, and then turn 180 degrees. Aircrews take inventory of what other aircraft are in the pattern before executing their 180 degree "break turn" such that on completing the turn the aircraft is flying downwind at the appropriate distance behind the aircraft preceding them and at the appropriate distance directly to the side of the center of the runway, which they were just moments before directly above. The distance from runway center is known as "abeam distance" and is the first of many metrics aircrew work to refine throughout each FCLP pass. Depending on aircraft configuration, gross weight, and environmental factors such as cross-

wind components, the required abeam distance of the aircraft will change from pass to pass. The abeam distance can range from 0.8-1.0 nautical miles given changes in any one of the above factors. The abeam distance is vital to aircrew because their descending "approach turn" is anchored from that distance. The approach turn is precision flying that includes 180 degrees of change, precise control of aircraft bank angle, integrated throttle movements, critical control of the aircraft's energy state, and controlled descent rates.



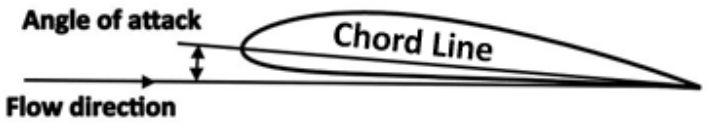
19. A properly executed approach turn will set an aircrew up for success in the last 15-18 seconds of flying before touching down. Due to the highly challenging and dynamic nature of the approach turn, we try to limit the number of variables that a pilot must control. For example, ideally the only variable in the approach turn equation should be the aircraft's abeam distance. All other aspects of the approach turn (bank angle, descent rate, aircraft

energy state, altitudes) should be more or less held constant throughout the turn. This process does not come naturally and requires frequent repetition to make it second nature.

20. In the last 15-18 seconds of flight, the aircrew are solely focused on three things: the "meatball," the line-up, and the Angle-of-Attack (AOA). The meatball is the orange point light source provided by the Improved Fresnel Lens Optical Landing System (IFLOLS). The orange point light source is referenced to a horizontal row of green lights known as the datums. The meatball is vertically oriented and shows the pilot real-time where the aircraft is in reference to the datums, above or below. These deviations directly correspond to where the aircraft is in relation to the ideal glideslope. Too high and the aircraft misses all the arresting wires and has to quickly take off and attempt another landing. Too low and the aircraft runs a very significant risk of flying into the back of the aircraft carrier — possibly killing the aircrew and personnel aboard the carrier.

21. During line-up, the pilot strives to maintain the aircraft on the centerline of the approach corridor and the intended point of landing. Line-up serves a few important purposes. First and foremost, a faulty line-up (left or right of centerline) results in the IFLOLS showing inaccurate information to the pilot. That is to say, the only time the IFLOLS is providing accurate glideslope data to the pilot is when the aircraft is on centerline. Second, unlike a traditional runway, the flight deck of an aircraft carrier is packed on both sides with parked aircraft. The landing area itself is only approximately 90 feet wide, while the wingspan of a Growler aircraft with wings spread in a flight position is approximately 44 feet. Travelling at 135 knots, this width leaves little room for error, so a correct line-up is critical for a safe landing.

22. Lastly, the pilot is concerned with AOA, which is a measure of the angle between the chord line (imaginary straight line running from the leading edge to trailing edge of any given airfoil) of a wing and the relative wind hitting it; it is the Navy's best representation of the energy state of the aircraft. An AOA and chord line graphic is included at the end of this paragraph to show a visual representation. Airspeed alone is not an accurate depiction of the energy state of the aircraft and does not sufficiently account for wing performance, but AOA does account for it. Because AOA is angular in nature, it reflects not only the aircraft's energy state but its attitude (nose high or nose low) as well. The AOA of the aircraft is critically important to manage because the aircraft should move neither too slowly nor too fast. From the perspective of energy management, if an aircraft is too slow it is underpowered, sluggish, and prone to settling ("falling" below ideal glideslope). If an aircraft is too fast or above ideal AOA, it tends to float and has a higher overall approach speed, which upon engaging an arresting gear wire, imparts a higher than designed or anticipated load on both the aircraft and the arresting gear system. AOA deviations are also critical in terms of the aircraft's attitude. An aircraft that is too slow (below ideal AOA) presents a high pitch profile (nose higher than optimal), which in turn lowers the arresting hook point underneath the aircraft. This attitude can lead to the hook engaging the very back of the aircraft carrier or an earlier than anticipated arresting gear wire. An aircraft that is too fast (above ideal AOA) presents a flatter (nose lower) attitude upon landing and can result in the arresting hook failing to contact any arresting gear wires and therefore failing to stop. Lastly, as with line-up, any deviation from ideal AOA presents inaccurate meatball information to the pilot as the light source is only programmed to provide accurate information to a pilot who is flying optimum AOA and lined up on centerline.



Angle of Attack and Chord Line

23. All of these factors must be visualized, processed, corrected for, and assessed within that last 15-18 seconds of flying before the aircraft touches down. Everything the aircrew does prior to this 15-18 seconds (the break maneuver, abeam distance management, approach turn mechanics, and aircraft spacing) is designed to get them to as good a start as possible for that last 15-18 seconds of high-intensity flying. During this time, the pilot is rapidly taking in "meatball, lineup, AOA" inputs and making appropriate adjustments to land safely.

24. One of the goals of FCLP training is to ingrain into the pilot's muscle memory the need to immediately select full power upon touchdown. In the Growler, full power can refer to either Military Rated Thrust, which equates to one hundred percent of the non-afterburning thrust the engines can produce, or Maximum Thrust, which equates to one hundred percent of the afterburning thrust the engines can produce. During FCLPs, the LSO and aircrew teams train to utilize both Military Rated Thrust and Maximum Thrust as knowing when to use which power setting is vitally important to safe aircraft operation. Immediately selecting full power upon touchdown is a crucial and lifesaving act that must become second nature. By immediately selecting full power upon touchdown, the aircrew can safely fly away from the carrier deck in the event the arresting hook fails to engage any wires (called a "bolter"), a LSO "waves-off" (when the LSO, who is standing on a catwalk next to the carrier

deck, aborts the landing), or there is catastrophic failure of the arresting hook or wires to safely "trap" the aircraft. Within that moment of a failed landing or touch-and-go landing the aircrew must learn to immediately transition to take-off and focus their attention on other aircraft in the pattern to re-establish themselves in the flow with a proper interval to attempt another landing. If the aircrew fails to immediately select full power upon touchdown, and the aircraft misses the arresting wire or the arresting wire fails, the aircraft will be unable to regain enough airspeed to fly, crashing into the sea or into the aircraft carrier. FCLP operations help aircrews to avoid such catastrophic consequences.

25. Successfully accomplishing a properly flown pass results in the aircraft's arresting hook engaging one of three or four arresting gear wires strung across the landing area. These wires are spaced roughly fifty feet apart, held approximately four inches above the flight deck by leaf spring devices, and designed to bring a 48,000 pound aircraft travelling 135 knots to full stop within roughly 2.5 seconds and less than 200 feet.

26. The purpose behind FCLP training is made wholly evident by watching video recordings of actual carrier landings available at https://www.youtube.com/watch?v=Sz7dluAFXb0 and at https://www.youtube.com/watch?v=aV2A8cCG19E. The first link shows a carrier landing by an F/A-18 Hornet, which is similar to a Growler, at real speed. The second link shows the same aircraft conducting a carrier landing at night. These videos are similar to my experience as a NFO conducting day and night carrier landings in a Growler aircraft, which shares the same fuselage and engines as the F/A-18E and F Super Hornet. The recordings fairly and accurately demonstrate the complexity of safely landing on an aircraft carrier.

27. FCLPs are conducted day and night in almost every weather condition and can occur several times over a 24-hour period. Aircrew will typically spend approximately 45 minutes in the landing pattern during the course of an FCLP session,[8] flying an average of 8-10 passes (each pass being one complete trip around the pattern culminating in the last 15-18 seconds of "meatball, line-up, AOA" flying before taking off again to execute the next pass). During these sessions, muscle memory and fine motor skills are practiced and instilled in our aviators. LSOs also use FCLPs as opportunities to test an aircrew's responsiveness to their directions. Critical information pertaining to line-up, energy state, and wave-offs are transmitted to the aircraft via radio and non-radio signals, which aircrew must obey. LSOs are continually assessing aircrew for their controllability, predictability, and safety in flying passes. For their hard work, each individual aircrew receives a highly personalized and detailed debrief on the FCLP session as a whole and on each of the passes flown. In an average FCLP session where five aircraft each fly ten passes, my LSOs debrief fifty passes to aircrew. This process identifies aircrew trends, weaknesses, and strengths, and aircrew receive tailored training plans and individualized feedback. Personal and professional relationships are also forged with the LSO, whose voice is implanted in an aircrew's memory and will be the only voice the aircrew hears when landing on an aircraft carrier. The LSO's voice is what the aircrew will certainly want to hear if they are struggling to bring their aircraft aboard.

28. The ability to land on a carrier is a perishable skill that must be developed and sustained, and one that is essential to the United States' global military operations. Simulators, while useful and used extensively to train aircrews, are no substitute for aircrew conducting

[8] A "session" is a scheduled period of FCLP training typically lasting for about 45 minutes, with three to five aircraft participating, which may occur several times during a 24-hour period.

actual FCLPs. Simulators cannot replace the feel and physiological conditions experienced during FCLPs. In fact, the Navy has determined the risk associated with using simulators alone to certify aircrews for carrier landings is unacceptable; simulator training alone would put the lives of aircrew and carrier personnel in significant danger. Training for carrier landings in the aircraft itself is critical and required. Each aircrew must complete FCLPs to gain certification to conduct an actual carrier landing in order to mitigate the inherent dangers of these difficult operations. Additionally, to prepare Growler aircrews for carrier operations, each aircrew must complete the requisite FCLP training process close in time to a deployment to an aircraft carrier, regardless of seniority or past experience. The timing of the training is crucial because each component of the aviator's skill set must come together at the correct moment. As explained above, the Navy's aviator training pipeline is a long and arduous path, progressing from developing general military aviation skills to specialized platform-specific tactics and procedures. For a specialized aircraft such as the Growler, training can take up to three years or more before aircrew are assigned to an operational squadron.

29. To meet the increasing battlefield demand for AEA capabilities, the Navy increased the number of aircraft in Growler carrier-based squadrons from five to seven aircraft per-squadron, and established one new squadron: VAQ-144. These increases have created greater throughput need for training the aircrews who will fill Joint Force combat needs. Therefore, the Navy also increased the Growler FRS from 17 to 26 aircraft, so aircrews can more quickly develop the skills necessary to graduate the FRS and fill operational Growler squadrons.

30. FCLPs are a crucial component of DoD's demand for increased AEA capacity and capabilities because Growlers are the only offensive tactical airborne electronic attack

aircraft in the United States' inventory. Without the necessary skill sets created by repeated FCLPs, the Growler AEA aircrews needed by Combatant Commanders will not be able to deploy to aircraft carriers in support of those missions. The highly refined and technical work that occurs at OLF Coupeville and Ault Field is therefore critical life-saving work that is necessary to fulfill mission requirements.

31. The Navy's 2019 Record of Decision (2019 ROD) provides that the Navy will require up to 29,600 FCLPs annually (utilizing both Ault Field and OLF Coupeville) to provide the aircrew assigned to the Growler carrier-based squadrons and the FRS with the requisite skills for deployment. As detailed in the ROD, the Navy previously planned for 17,400 FCLPs annually. The 2019 increase of 12,200 FCLPs accommodates the training required by adding 18 aircraft to the Growler carrier-based squadrons along with associated aircrew. These operational numbers are not determined just by the number of aircraft but rather by the number of aircrews flying out of the NASWI complex and their training requirements for skill maintenance and certification prior to deployment. The number of FCLPs completed in any given year is variable and depends on many factors, including aircraft carrier deployment schedules, real-world events, SNA throughput rates to the FRS, and airfield maintenance requirements. In 2020, the Navy met the projected 29,600 FCLPs in the ROD. In 2021, however, the Navy conducted 17,554 FCLPs. This decrease in FCLPs was a direct result of the impact of the COVID-19 pandemic. In response to the COVID-19 pandemic, the Navy extended a number of aircraft carrier deployments, which impacted the Growler carrier-based squadrons' training schedule. As an example, in 2021 no east coast-based aircraft carrier started deployment, whereas typically at least one or two of these aircraft carriers deploy in a calendar year with fully qualified Growler carrier-based squadrons. The Navy is projected to

complete approximately 20,300 FCLPs in 2022. The 29,600 FCLPs in the 2019 ROD provide maximum flexibility to address future threats and mission requirements as they arise.

32. Vacatur of the 2019 ROD would eliminate this operational flexibility and create significant risk that my Growler carrier-based squadrons will be unable to deploy safely trained aircrews to provide the AEA capability needed by Combatant Commanders for world-wide operational tasking. Furthermore, restricting or inhibiting the ability of aircrews to conduct FCLPs at the right point in the training cycle of a squadron preparing for a carrier deployment will disrupt the years-long pipeline of naval aviation training. Without flexibility to complete the required number of annual FCLPs, my naval aircrews cannot perfect the skills needed to perform the most difficult maneuver in all of aviation at the very moment in their training cycle when those skills are needed most. As a result, aircrew deployment would be impacted, with significant deleterious effects to national security.

33. With fewer SNA arriving at the FRS having completed at-sea CQs, there is a greater need for FCLP training ashore to mirror, as closely as possible, actual carrier landings. The single best representative model we have of the aircraft carrier operating environment at our disposal in the Pacific Northwest is OLF Coupeville. To present the most realistic training possible, a training field must meet five criteria. OLF Coupeville is the only airfield in the region that can meet all five criteria; as a result, the use of an alternative airfield would be unsatisfactory to meet the critical mission of training aviators for carrier landings.

34. First, the landing field must be at or near absolute sea level to mimic aircraft performance at normal carrier operating altitudes. To effectively train for carrier operations, aircrew must fly below 1000 feet Mean Sea Level (MSL); the carrier landing traffic pattern for both day and night landings includes maneuvers at or below 600 feet MSL. Most non-outlying

airfields direct jet engine traffic patterns at and above 1000 feet Above Ground Level (AGL), ranging anywhere from a 1000-2500+ feet range. It is important to note these traffic pattern altitudes are in feet AGL not feet MSL. These distinctions mean a given airport could have a 1500 foot AGL traffic pattern for jet aircraft, but that airport could reside 2000 feet or more above MSL. As a result, this altitude delta means that the aircraft and aircrew experience aerodynamic performance of an aircraft at 3500 feet. This is a significant departure from aircraft performance experienced at nominal aircraft carrier operating altitudes. The actual decrease in aircraft performance will depend on pressure, humidity, and temperature. But specifically for altitude, the higher the altitude, the less atmospheric pressure, so FCLP fields must be as close to sea level as possible to best mimic the atmospheric pressure encountered while landing on an aircraft carrier. If there is less atmospheric pressure, then the aircraft motors have to work harder to give the same performance. This change results in higher throttle positions and slower engine response times, so any corrections develop much slower at higher altitudes than at sea level. Ultimately these differences result in poor training and negative habit transfers once the aircrew have the opportunity to operate in the aircraft carrier environment.

35. Second, the landing field must mirror aircraft carrier environmental factors as closely as possible because the aircraft carrier operating environment is unique. As a floating airport in the middle of the ocean, it is mobile in all axes, typically unencumbered by the influence of outside air traffic controlling agencies with associated airspace restrictions, operates only with aircraft organic to aircraft carrier operations, is subject to fast moving weather systems, and at night operates in near pitch black environments without reference to cultural lighting, natural horizons, moonlight, starlight, or other light sources, and due to operational security concerns often operates under a covert lighting schema. In many cases, the only visual reference

an aircrew will experience during a night time arrestment at the aircraft carrier is during the last 7-10 seconds of flight prior to touchdown on the carrier deck when the aircraft carrier visual aids are acquired by the aircrew and provide enough safety of flight fidelity to reference during flight. To most effectively mirror these conditions, an outlying field must be far removed from cultural lighting, be separate from general and commercial aviation participants, be under the control of military air traffic controllers and LSOs, and possess the unique military visual landing aids and precision / non-precision landing instrumentation systems relied upon during aircraft carrier recoveries. OLF Coupeville was designed with these requirements in mind, with the ultimate goal of managing training and operational risk to aircrew to the lowest acceptable level while providing the most realistic training possible.

36. There are occasions in which FCLP sessions are conducted at Ault Field onboard NASWI as opposed to OLF Coupeville for various reasons, which include airfield repairs and other maintenance-related activities. But in nearly every session, the LSOs, aircrew, and air traffic controllers have to contend with, and operate around, other aircraft types which are either non-participants in the ongoing FCLP session or which do not participate in FCLPs at all, *e.g.*, P-3 Orion, P-8 Poseidon, H-60 Seahawk helicopters, various other large wing cargo type aircraft. FCLP aircraft take priority over almost all other aircraft operations, save emergency aircraft, operational P-3/P-8, and search and rescue (SAR) operations. Every time an FCLP participant extends or alters their traffic pattern for aircraft avoidance or accommodation, negative training value occurs. By design, OLF Coupeville is used predominantly for Growler FCLP operations. As a result, there is no impact from or to other airfield operations at Ault Field. This design allows for laser-focused and unimpeded FCLP sessions maximizing aircrew training and safety.

37. Third, the landing field must match aircraft carrier traffic patterns. As previously discussed, a landing field must nearly match mean sea level as close as possible. In addition to the vertical component of aircraft performance and modeling of the aircraft carrier environment, FCLP operations must also mirror the horizontal traffic pattern as closely as possible. Aircrew will get limited training benefit if the field traffic pattern they fly is at or near absolute MSL but is horizontally inconsistent with what is expected in the aircraft carrier environment. Day and night traffic patterns must be representative of the overall aircraft carrier environment. The traffic patterns at OLF Coupeville have been honed over time to replicate, as nearly as we can without degradation to safety of flight and aircrew training, an acceptable model of the aircraft carrier environment.

38. Fourth, the landing field must maximize training efficiency. The relative closeness of OLF Coupeville to NASWI, only 10.2 nautical miles, allows aircrew to maximize their training efficiencies per training sortie and fuel load. It is a short and direct flight between OLF Coupeville and Ault Field for dedicated FCLP periods. Additionally, OLF Coupeville's proximity to NASWI allows aircrew to incorporate FCLPs with other, non-FCLP specific flights, once other training objectives have been completed in any of our surrounding working areas. For example, a training sortie may conduct a training readiness generating event in the Olympic Military Operating Area (MOA)[9] and subsequently conduct a FCLP session at OLF Coupeville prior to returning to Ault Field. This opportunity is afforded to Growler units due solely to the location of OLF Coupeville relative to NASWI, maximizing training for aircrew per

[9] The Olympic MOA is a Special Use Airspace located over the Olympic Peninsula in Washington State. Special Use Airspace is FAA-designated airspace restricted for specific uses, like military training. The Navy's EW Range is located on land within the Olympic Peninsula and underneath the Olympic MOA.

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single fuel load events. For dedicated FCLP sorties, aircrews must practice 8-10 passes per FCLP session. Any outlying field located further away from NASWI than OLF Coupeville necessitates a longer transit time, which translates into increased fuel burn, leaving less fuel for training and ultimately aircrew receiving fewer than optimal FCLP passes per FCLP session. Additionally, aircrew must plan for and abide by emergency fuel requirements for all flights. The close proximity of OLF Coupeville to NASWI permits aircrew to plan for and accept lower emergency fuel states as opposed to other locations. For example, the emergency fuel required for a divert airfield located approximately one hundred miles away for a given outlying field ranges from 3,200 to 8,100 pounds of fuel dependent upon aircraft configuration, load out, type of emergency, and headwind component during emergency transit. Therefore, operating an outlying field farther away from an emergency divert field than OLF Coupeville is to NASWI results in less available fuel for training and ultimately decreases the amount of FCLP passes per given sortie.

39. Fifth and finally, the landing field must provide adequate safety equipment and manning for Tactical Air (TACAIR) FCLP and aircrew. The unique nature of aircraft carrier operations and associated aircraft demand tailored safety equipment and adequately trained personnel be available and on-hand during FCLP operations. The incredibly violent and dynamic nature of an Growler aircraft ejection almost always results in injuries to aircrew and requires skilled medical training on the part of first responders to ensure no further harm comes to aircrew during rescue/recovery/transport operations. This is also true in the event of aircraft damage that exposes the aircrew to health hazards. It is critical that first responders have specialized understanding and training to respond to aircraft emergencies. OLF Coupeville is manned by active duty Sailors and/or Federal Fire Service firefighters and paramedics specially

trained in crash and salvage operations to maximize safety and medical care for responders, aircrew, and the environment alike. Lastly, the proximity of OLF Coupeville to NASWI allows for near immediate response by the NASWI SAR squadron. This squadron is manned, trained, and equipped to respond to aircraft emergencies and provide rescue, recovery, and en route medical treatment to injured aircrew to minimize loss of life and limb. An outlying field located any further away from the safety assets and organizations provided by NASWI than OLF Coupeville represents a significant risk to safe aircraft operations and is unacceptably detrimental to possible medical treatment.

40. As discussed, the training process at NASWI is a finely tuned, synergistic, and multi-factorial one that reflects years of investment in the local area. The co-located nature of COMVAQWINGPAC, FRS, simulators, training ranges, OLF Coupeville, operational squadrons, Military Operating Airspaces, low level training routes, Pacific Northwest Electronic Warfare training range, organic and specially trained SAR squadron, the P-3/P-8 Wing, neighboring military bases, rapport and long-standing relationships with Federal Aviation Administration airspace managers, combine to create a training and operational environment unlike and unmatched by any other location in the country. A wholesale uprooting of the Growler community from the Pacific Northwest to another location would have disastrous effects on national security and our ability to train and operate the aircraft safely. Sending aviators, instructors and maintenance personnel elsewhere to obtain FCLP training would disrupt the finely-calibrated process of training naval aviators. The specialized Electronic Warfare skills EA-18G aircrew and aircraft provide to Combatant Commanders in support of national tasking around the world are in the highest levels of demand I have seen in my career. Any interruption to EA-18G training and operations, as would be experienced by re-locating the community

elsewhere, would provide our adversaries an uninhibited strategic and tactical advantage which cannot be permitted to happen.

41. While less of a concern, in an era of limited resources, travel to and from other locations is a significant strain on our budget. Travel reduces the service life of the aircraft, accelerating required maintenance. Travel also adds stressors to the personnel at NASWI, including FRS instructors, LSOs, and maintainers, because it increases their time away from home station as they must travel to support the training. This also results in their unavailability to support ongoing training and maintenance demands for the Growler community at NASWI. This situation would interrupt the training of the students who remain behind in the FRS and negatively impact the maintenance cycle for the overall Growler fleet. While cost is not the primary concern, the negative impacts of constant travel on the mental health and stability of our personnel in these demanding positions is something that has the potential to negatively impact the mission. Our personnel are our most valuable resource, as shown by the years and the investment needed to adequately train them.

42. FCLPs are a crucial component of EA-18G Growler training, and without them, the Navy cannot provide our nation's Combatant Commanders with the AEA capabilities they need to succeed in combat. Each FCLP teaches naval aviators to land on an aircraft carrier in a relatively safe environment, so that each aviator is fully prepared to perform a carrier landing under the most dangerous and demanding circumstances possible. Without the ability to conduct up to 29,600 annual FCLPs at NASWI, the Navy's Electronic Attack Wing will be unable to meet our nation's demand for combat-ready AEA forces, imperiling our military forces and the achievement of their objectives around the globe.

43. Vacatur of the 2019 ROD will also have an impact on the Growler expeditionary squadrons based at NASWI. These squadrons qualify for deployment by conducting operations at Ault Field, including touch and go landings. The 2019 ROD projected an increase in total annual flight operations for the Growler expeditionary squadrons from 4,825 to 8,129 based on the addition of two Growler expeditionary squadrons and their associated aircrews. A decrease in flight operations below those provided in the 2019 ROD creates significant risk that my Growler expeditionary squadrons will be unable to deploy safely trained aircrews to provide the AEA capability needed by Combatant Commanders for world-wide operational tasking.

I hereby swear under penalty of perjury pursuant to 28 U.S.C. § 1746 that the foregoing information is true and correct to the best of my knowledge.

Dated this day, the 22nd day of November, 2022.

David F. Harris
Captain, United States Navy

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