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Washington, DC 20229



U.S. Customs and Border Protection

June 20, 2023

Henry J. Kerner
Special Counsel
Office of Special Counsel
1730 M Street, Suite 300
Washington, D.C. 20036-4505

Re: OSC File No. DI-22-000519

Dear Ms. Lerner:

The enclosed report is in response to your referral for investigation of a whistleblower disclosure that employees at the Department of Homeland Security (DHS), Customs and Border Protection (CBP), Air and Marine Operations (AMO) engaged in conduct that may constitute an abuse of authority and a substantial and specific danger to public safety. The Office of Special Counsel (OSC) received the allegations from a whistleblower who alleged that the majority of CBP's Light Enforcement Helicopter fleet lack required crashworthy fuel tanks, and that an employee in AMO Headquarters improperly attempted to remove critical information from an Aircraft Mishap Report concerning the crash and destruction of AMO Helicopter N841BP on May 12, 2021. I am the designated official responsible for providing your office with the Department's report pursuant to 5 U.S.C. § 1213.

On June 23, 2022, OSC referred the above allegations and a request for an investigation to DHS Secretary Alejandro Mayorkas. DHS requested the assistance of the CBP Office of Professional Responsibility (OPR) to investigate the allegations. The investigation was completed on May 18, 2023 and sustained the allegation that the CBP AMO helicopter fleet lacks Crash Resistant Fuel Tanks (CRFTs), and that Executive Director [REDACTED] directed information to be removed from the Aircraft Mishap Report. While OPR reports that the majority of the AMO AS350 helicopter fleet lack CRFTs, the Federal Aviation Administration (FAA) verified that the fleet is not in violation of FAA Airworthiness Standards, as the FAA requirement for CRFTs was not a retroactive requirement and did not apply to aircraft designed before 1994. Regarding the mishap report, the National Transportation Safety Board advised that Agency Mishap reports should contain "all relevant information pertaining to the mishap", and that the exclusion of such material by an Agency could result in having their delegated authority to investigate safety mishap reports removed.

The findings are included in the enclosed report. Although your referral pertained explicitly to the initial whistle blower disclosure, [REDACTED]



Sincerely,

A handwritten signature in black ink, appearing to read "Troy A. Miller".

Troy A. Miller
Senior Official Performing the Duties of the Commissioner

Enclosures

cc: Secretary, Department of Homeland Security
Deputy Secretary, Department of Homeland Security
Chief Human Capital Officer, Department of Homeland Security
General Counsel, Department of Homeland Security

1. “81 of the 97 AS350 helicopter in the AMO helicopter fleet do not have Crash Resistant Fuel Tanks (CRFT) installed, as required by a 2006 ORD for CBP LEH.”
2. “XD [REDACTED] repeatedly directed that critical information be removed from the Aircraft Mishap Report for AMO Helicopter N841BP because of the potential for a negative public response and increased legal liability. The allegations stated the information that was directed to be removed pertained to the CRFTs, AMO hiring practices, and the helmets worn by AMO pilots during the mishap.”
3. “Any additional, related allegations of wrongdoing discovered during the investigation of the foregoing allegations.”

Details of the investigation and review and analysis

Allegation: “81 of the 97 AS350 helicopter in the AMO helicopter fleet do not have CRFT installed, as required by a 2006 ORD for CBP LEH.”

Allegation Findings: Sustained. OPR’s review and analysis of documents related to the AMO helicopter fleet found there are approximately 81 AS350 helicopters in the CBP AMO helicopter fleet that do not have CRFT installed.

Allegation: “XD [REDACTED] repeatedly directed that critical information be removed from the Aircraft Mishap Report for AMO Helicopter N841BP because of the potential for a negative public response and increased legal liability. The allegations stated the information that was directed to be removed pertained to the CRFTs, AMO hiring practices, and the helmets worn by AMO pilots during the mishap.”

Allegation Findings: Sustained. OPR’s review and analysis of documents and interviews revealed on December 17, 2021, XD [REDACTED] directed critical information to be removed from Aircraft Mishap Report for AMO Helicopter N841BP.

Case # 202209182 contained additional investigative findings. The entire Report of Investigation can be made available upon request.

Allegation Analysis Result:

OPR reviewed the CBP AMO Aircraft Mishap Report for AMO Helicopter N841BP, dated, May 12, 2021, included with the letter submitted by OSC.

Review of the report provided that on May 12, 2021, a CBP AMO helicopter mishap occurred at the National Air Training Center (NATC), Oklahoma City, OK, after an Instructor Pilot (IP) Air Interdiction Agent (AIA) [REDACTED] [REDACTED] and Pilot Under Instruction (PUI) AIA [REDACTED] [REDACTED] reported for duty to fly two training flights. While conducting emergency quick stop maneuvers, the PUI had difficulty with a simulated tail rotor control maneuver. The IP joined the PUI on the aircraft controls but was unable to gain control of the aircraft. The IP advised the PUI to stop fighting for control of the aircraft. The IP instructed the PUI to turn the hydraulics on. The aircraft did not respond and entered into an uncommanded state and departed controlled flight and

impacted the ground. The aircraft immediately caught fire. Both pilots were able to egress from the aircraft without serious injury. The aircraft was destroyed due to the post-crash fire and estimated to be a total loss.

The CBP investigation team determined that the mishap IP inappropriately conducted the simulated tail rotor control procedures outside of the requirements of AMO's Standardization Manual for AS350 aircraft. Additionally, they determined the PUI incorrectly responded to the simulated tail rotor control failure by isolating the primary flight control hydraulics through the collective mounted hydraulic pressure push button.

During a post-mishap review, the investigators identified AMO Human Capital had assigned an AMO Supervisory Aviation Enforcement Agent (SAEA) to assess the flight certifications and qualifications of applicants, without possessing the requisite knowledge to perform the duties of that position.

Further review of the PUI's flight qualifications, determined the PUI lacked the appropriate flight certifications and ratings for a Flight Hour Waiver in order to qualify the PUI for a AMO Air Interdiction Agent position. At the time the PUI was assessed for the position, the PUI did not possess a Federal Aviation Administration (FAA) First-Class Medical Certificate needed to qualify for the position. The investigators determined the PUI did not have the requisite number of flight hours in order to qualify for the AIA position.

The investigation team determined the mishap crew members were wearing two different types of helmets. The helmets were sent to a certified helmet repair facility, and it was determined the helmets performed appropriately.

The investigation determined the helicopter did not have a CRFT. The mishap report contained in the OSC letter, showed that on December 17, 2021, AMO XD [REDACTED] directed the lead Safety Investigator, AIA [REDACTED] [REDACTED] to remove content and recommendations from the report related to the AMO hiring processes and the findings regarding the helmets.

The items are summarized below:

"Section 2.1 Pilot Under Instruction Hiring Process. The New Hire Flight Hour Waiver is based on five specific categories of flight experience, which will qualify an Air Interdiction Agent (AIA) new hire candidate to receive a waiver towards the total number of required flight hours for the AIA position (1,500 hours). The individual assigned to complete AMO New Hire Flight Hour Waivers for AMO was SAEA [REDACTED] [REDACTED]. Based on a review of this individual's qualifications, the individual did not have the aviation background, Federal Aviation Administration (FAA) certification experience, or requisite knowledge to qualify or adequately assess reductions in flight hour requirements based on specific Federal Aviation Records (FARs) for pilot certifications. FAA certifications, when possessed by AIA applicants, mitigate latent safety hazards from infiltrating AMO operations. An individual in the position to determine flight hour reductions needs appropriate formal training on FAA airmen certification requirements and a formal checklist process to compare waiver requests to AMO policy and safety considerations.

Without the knowledge of the requirements for FAA certifications according to FAA FARs SAEA [REDACTED] was placed in the position without the requisite knowledge to perform the duties required of that position.

The mishap pilot under instruction (PUI) subsequently received a 300-hour Flight Hour Waiver for Complex Aircraft Flight Instructor Experience and a 200-hour Flight Hour Waiver for Multi-Engine Aircraft Time. This allowed the mishap AIA [REDACTED] to continue with AMO's new hire assessment process because it afforded him a 500-hour Flight Hour Waiver, thus reducing the total flight hour requirement to 1,000 hours from a 1,500-hour hiring requirement. The accident investigation team determined that, in fact, the AIA [REDACTED] had neither a Certified Flight Instructor airman certificate nor a multi-engine rating on his airman certificate to qualify for such a Flight Hour Waiver.

Therefore, the New Hire Flight Hour Waiver used to qualify the AIA [REDACTED] for a reduction in the total number of required flight hours from 1,500 to 1,000 hours for the AIA, 1881 series position was invalid.

Section 2.2 Aircrew Flight Helmets. The investigation team determined the mishap crewmembers were wearing two different helmet types when the mishap occurred. The mishap instructor pilot (IP) AIA [REDACTED] [REDACTED] was wearing AMO's previously issued MSA LH250 Gallet helmet and was seated in the left-hand seat of the aircraft, while the mishap AIA [REDACTED] wore AMO's new Gentex HGU-56P helmet and was seated in the right-hand seat of the aircraft. Both helmets were sent to certified helmet repair facilities for inspection and post-mishap analysis. Post-accident analysis of both helmets was necessary to ensure AMO issued aviation life support equipment (ALSE) performed appropriately during this accident sequence. The primary concern is to identify, if any, shortcomings which would pose a safety risk to AMO aircrew members using this AMO-issued ALSE.

Section 2.3 Standard Aero Crashworthy Fuel Cells. An immediate post-crash fire ignited when the aircraft came to rest after impact. The aircraft had approximately 60 percent of fuel on board (based on the AIA Stuppiello's statement to conduct autorotational training) or 86 gallons of JET A fuel. By a stroke of luck, both aircrew members remained conscious throughout the crash sequence and were able to egress the helicopter before any smoke or fire caused serious life-threatening injuries.

The purpose of a CRFT design is to allow for a greater period of time to egress the helicopter prior to the initiation of a post-crash fire when post-crash injuries likely have occurred. An AMO Aircraft Configuration Change Request was submitted in November 2016 to outfit all AMO AS350 aircraft with Standard Aero's Crashworthy Fuel Cell. This Aircraft Configuration Change Request has yet to be funded at of the publication date of this mishap report."

The review revealed AMO, AIA [REDACTED] [REDACTED] disagreed with the XD [REDACTED] and refused to remove the information because the analysis was based on facts, sworn testimony and physical evidence.

OPR reviewed a memorandum submitted by TSS Deputy Director [REDACTED] [REDACTED] to

then CBP AMO (Acting) Executive Assistant Commissioner (EAC) [REDACTED] [REDACTED] on November 1, 2016, which proposed the procurement of CRFT for all CBP AMO Light Enforcement Helicopter (LEH). The proposal appears to have been cancelled without being funded in January 2021.

The CBP AMO ORD states, "the helicopter shall have a crashworthy fuel system with components and operational procedures that comply with the requirements of Flight Aviation Rules Part 27."

The OPR review found the National Transportation Safety Board (NTSB) provided safety recommendations to the FAA and the European Aviation Safety Agency (EASA) regarding CRFT on March 23, 2016. The report stated:

"On October 3, 1994, the FAA revised the airworthiness standards for newly certificated rotorcraft to add "comprehensive crash resistant fuel system design and test criteria." The revisions included two new regulations, 14 CFR 27.952 and 29.952, "Fuel System Crash Resistance," which state, "to minimize the hazard of fuel fires to occupants following an otherwise survivable impact (crash landing), the fuel systems must incorporate design features of this section." However, the fuel systems on newly manufactured rotorcraft with type certificates approved before October 1994, such as the accident helicopters, are not subject to these regulations and, as a result, may pose a hazard to occupants if the systems are breached during a crash."

OPR reviewed an email from the FAA, Office of Accident Investigation, Senior Accident Investigator (SAI) [REDACTED] [REDACTED] received on September 26, 2022. SAI [REDACTED] provided the Type Certification Data Sheet (TCDS) for the AS350. The AS350 design was approved in 1977. SAI [REDACTED] wrote, CBP's AS350 helicopters without a CRFT were not in violation of regulations. For the October 3, 1994, FAA Airworthiness Standards for CRFT (14 CFR 27.952 and 29.952) to be applicable to the AS350, the FAA would have had to of made the rule a retroactive requirement.

OPR reviewed CBP AMO provided cost estimate of about \$3.1 million to retrofit the remaining AS350 fleet that lack a CRFT provided by CBP AMO. AMO advised retrofitting would take approximately eight years.

Investigative Narrative:

On August 3, 2022, CBP OPR SSAs [REDACTED] and [REDACTED] [REDACTED] conducted a sworn interview of CBP AMO TSS Dir. [REDACTED]. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by Authentication Code (AC): 01-ttbld-2slpd-xg9tq-ihl5i-xtxd4 (**Exhibit 2**; 1 hour 47 minutes).

Dir. [REDACTED] said the National Transportation Safety Board (NTSB) and CBP AMO established a general Memorandum of Understanding (MOU) that allows CBP to be a party during aviation crash investigations (commonly referred to as a mishap) that involve CBP aviation assets (**Exhibit 3**; Ex. 2, 16:28:30). He said, the MOU established that CBP AMO can investigate their own aircraft mishaps if CBP remains within compliance of NTSB expectations.

During the interview, Dir. ██████ provided the "Party Certification", that CBP entered with the NTSB regarding the May 12, 2021, N841BP mishap (**Exhibit 4**).

Dir. ██████ said, as the TSS Director, he was not allowed to have any input into a mishap investigation. Dir. ██████ said CBP AMO Executive Assistant Commissioner ██████ designated the safety investigators. He said when a mishap occurs, all materials of the investigation are owned by the NTSB. AMO then sent the investigative content to a team for grammatical and format editing. He said AMO did not edit content unless there was an outright error. He said if an error was identified, AMO would work with the assigned investigator to address the issue (Ex. 2, 16:30:00). Dir. ██████ said mishap reports are routed through AMO leadership for review so they can learn from the recommendations to prevent future mishaps. He said, "AMO leadership has felt they can insert themselves and edit the content" (Ex. 2, 16:31:28).

Dir. ██████ said what set this mishap report apart, was that it was pulled from routing, and XD ██████ wanted three items removed from the document. Dir. ██████ said the items pertained to the AMO hiring process (for new pilots), the CRFTs, and the helmets worn by the pilots. Dir. ██████ said all three items were noted by the investigator to be factual sworn statements that were given to be causal or involved in the crash (Ex. 2, 16:34:20).

Dir. ██████ then referenced an email, dated December 17, 2021, in which XD ██████ wrote, the "Safety Report need (sic) to be pulled from routing and re-worked. . .the current version is a litigation hazard" (Exhibit 5; Ex. 2, 16:37:35). Dir. ██████ stated the industry standard for safety reports is to determine causal factors and we do not care about liability or who is at fault.

The MOU between the NTSB and CBP was developed in March 2016 (see Ex. 3). The purpose of the "document provides NTSB investigators with guidance and procedures for the conduct of investigations of aircraft mishaps operated by CBP." The MOU states, "CBP shall advise the NTSB investigator-in-charge (IIC) of all proposed investigative activity (interviews, testing, etc.) and provide a copy of all collected materials, analysis, and any written reports to the IIC."

The NTSB-CBP Certification of Party Representative document is a statement of compliance with NTSB investigation procedures, rules, and restrictions. The NTSB and CBP entered into a Certification of Party Representative for Aircraft Mishap N841BP on May 14, 2021, (see Ex. 4).

The document specifies:

"No information pertaining to the accident, or in any manner relevant to the investigation, may be withheld from the NTSB by any party or party participant.

The party coordinator will take all reasonable steps to ensure that employees and participants of my organization comply with these requirements.

No party coordinator or representative may occupy a legal position or be a person who also represents claimants or insurers. A party coordinator is to assist the NTSB safety investigation

and not for the purposes of preparing for litigation. Persons occupying legal positions, pursuing litigation interest, or representing claimants or insurers are not permitted to be involved in an NTSB investigation.

NTSB safety recommendations are based on findings of the investigation and may address deficiencies that do not pertain directly to what is ultimately determined to be the probable cause of the accident. The NTSB may issue safety recommendations before the completion of a specific investigation and may designate some as urgent.

Each participating party will designate a party coordinator (spokesman) for its organization. The party coordinator will be the NTSB's direct and official point of contact for the party.

The Certification of Party Representative for the May 12, 2021, Aircraft Mishap Report N841BP, identified CBP AMO AIA [REDACTED] [REDACTED] as the CBP AMO Party Representative."

On September 8, 2022, SSA [REDACTED] spoke with NTSB Chief [REDACTED] [REDACTED] and memorialized the discussion in an Agent Affidavit (**Exhibit 6**). Chief [REDACTED] is NTSB's liaison to CBP. Chief [REDACTED] said Aircraft Mishap Reports should contain all relevant information pertaining to the mishap to include culture, hiring and training information. Chief [REDACTED] said an agency should not omit information. He said if an agency omitted information and the NTSB or FAA identified the information later, the investigative agency could have their delegated authority to investigate safety mishaps removed. Chief [REDACTED] also said Aircraft Mishap Reports should not be about determining litigation issues.

On September 23, 2022, SSA [REDACTED] spoke with NTSB Chief [REDACTED] [REDACTED] and memorialized the conversation in an Agent Affidavit (**Exhibit 7**). Chief [REDACTED] said when there are disagreements between an agency's leadership and the safety investigator an addendum to the Aircraft Mishap Report should be written and attached. The addendum should identify the differences and the proactive measures being taken to resolve the differences. Chief [REDACTED] stated he offered any support necessary to CBP to assist in resolving issues with this process.

On 1, CBP OPR SSAs [REDACTED] and [REDACTED] [REDACTED] conducted a sworn interview of CBP, AMO, AIA [REDACTED] Tucson, AZ. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-wagb8-nnfla-qdg84-u70ki-en992 (**Exhibit 8**; 2 hours 47 minutes).

AIA [REDACTED] was the lead AMO Safety Investigator assigned to AMO Helicopter N841BP on May 12, 2021. AIA [REDACTED] said in 2017, he applied to be a Safety Investigator with CBP AMO. He said there was a formal interview process in which he applied to the position and was selected. He was then designated by CBP AMO TSS Division as an Air Accident Investigator. He said his initial NTSB training took place in Ashburn, VA. He said the training consisted of a Cognitive Interview training. AIA [REDACTED] said he also completed the University of Southern California (USC), Viterbi School of Engineering, Aviation Safety and Security program. AIA [REDACTED] said he has completed numerous courses providing the foundational basis for his Safety Investigation training (Exhibit 8, 22:30:00). AIA [REDACTED] certifications are attached (**Exhibit 9**).

AIA [REDACTED] said he formally investigated 7 mishaps for AMO as a Safety Investigator. He said he investigated approximately 30 incidents as both a Safety Investigator and Safety Officer (Ex. 8, 22:31:30).

AIA [REDACTED] said accident investigations are used to determine the root cause (of the accident) to ensure that type of accident does not happen again. AIA [REDACTED] said the FAA, NTSB, and CBP all share the same vision and standard set of values when it comes to safety investigations (Ex. 8, 22:32:10).

AIA [REDACTED] said if safety investigations were conducted to determine liability, it would ruin the safety culture of an organization. It would also devalue the safety process. It would not produce the appropriate results to allow the flow of information into the process which would allow for lessons learned (Ex. 8, 22:36:40).

AIA [REDACTED] said the NTSB could remove CBP's authority to investigate. He said, if at any point the FAA or NTSB learned AMO was conducting investigations that were not consistent with the same standards, the authority could be removed. If CBP was attempting to falsify or hide information or if CBP refused to share information the privilege could also be revoked (Ex. 8, 22:37:30).

AIA [REDACTED] said on May 12, 2021, AIA [REDACTED] had fallen behind on his progression in the AMO training program and additional training was needed (Ex. 8, 22:43:00). AIA [REDACTED] said the primary cause of the mishap was that AIA [REDACTED] had inadvertently pressed the hydraulic cutoff button.

AIA [REDACTED] said there were contributing factors as well. He said the instructor pilot requested that AIA [REDACTED] conduct a simulated emergency procedure, which was not in accordance with the AMO aviation standardization manual. This action placed both pilots and the aircraft into a risky position. AIA [REDACTED] said another contributing factor that the AIA [REDACTED] remained on the flight controls after the aircraft began to lose control. AIA [REDACTED] also was unable to determine the position of the hydraulic switch. The design of the hydraulic switch in this aircraft prohibits individuals from visually looking at the switch (Ex. 8, 22:45:00).

AIA [REDACTED] said this information was revealed through standard investigative procedures of the safety investigation. He said all information obtained through this process was considered safety sensitive and could not be used for liability purposes or punitive disciplinary action. He said this process is specifically designed to allow people involved to be honest and truthful as possible so the mishap can be prevented from happening again (Ex. 8, 22:49:25).

AIA [REDACTED] said he was "grateful and happy those two individuals (the pilots) are alive today". He said due to the aircraft not having a CRFT and the post mishap fire, this (mishap) is something they should not have walked away from. AIA [REDACTED] said as an accident investigator, he always reviewed the backgrounds of all involved crewmembers; what their flight experience was, what kind of flight training they had and what their recent flight time looked like. He said this is industry standards he learned through the NTSB and the FAA (Ex. 8,

22:52:50).

AIA ██████ stated his original report was routed for approval in October 2021 (Ex. 8, 0:20:17). AIA ██████ read a portion of an email from XD ██████ XD ██████ directed the information about the helmets and hiring topics to be removed from the safety report (see Ex 1; Ex. 8, 0:21:29).

AIA ██████ said this was the first time he had been told by the TSS XD to remove information from his report (Ex. 8, 0:33:20).

AIA ██████ said people can disagree with the findings. He said this was TSS XD ██████ program and therefore he was responsible. AIA ██████ said it was within XD ██████ purview to follow AIA ██████ recommendations or not. AIA ██████ said it was his (AIA ██████ job to use experience and training to present facts and recommendations to the organization so it could learn and move the program forward in hopes that something like this (referencing the mishap) won't happen again. (Ex. 8, 0:34:00). He said, "by removing sections of my report it is unethical because now it is void of specifics lessons learned, analysis and fact information" (Ex. 8, 0:34:48).

On October 20, 2022, SSAs ██████ and ██████ conducted a sworn interview of CBP AMO SAEA ██████ Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-83mh4-it0rn-zoye4-tp4h7-tpaaa (**Exhibit 10**, 1 hour 31 minutes).

SAEA ██████ said he was serving as the CBP AMO Supervisor of Safety and Risk Management (Ex. 10, 17:04:09). He oversaw the various AMO Safety programs. One of his roles was to assist in deployment of the investigation team when a mishap occurred, to oversee the team, and assist in briefing executive leadership on any issues regarding the mishap (Ex. 10, 17:06:50). SAEA ██████ said an aviation crash was referred to as a mishap if there was more than \$10,000 worth of damage (Ex. 10, 17:09:00). SAEA ██████ said he was assigned as the Supervisor of Safety and Risk Management in June of 2022. He said initially, his move into the position was held up by TSS XD ██████ (Ex. 10, 17:11:15).

SAEA ██████ said the information regarding lack of a CRFT in the aircraft involved in the May 12, 2021, mishap should have remained in the safety investigation report (Ex. 10, 17:14:38).

SAEA ██████ opined information regarding the helmets should have been included in the report. SAEA ██████ said he knew very little about flight waivers that applicants receive (Ex. 10, 17:17:30). SAEA ██████ said AIA ██████ hiring process and his lack of pilot experience should have been included in the safety investigation (Ex. 10, 17:21:00). SAEA ██████ said Safety Investigator, AIA ██████ was "directed by XD ██████ to remove the above items from the report (Ex. 10, 17:23:05). SAEA ██████ said at that time the information was directed to be removed, IP AIA ██████ who was involved in the mishap, was removed from federal service. SAEA ██████ said he thought AIA ██████ was in the middle of his appeals process to be reinstated during this time (Ex. 10, 17:24:00).

SAEA [REDACTED] said, CBP was a party to aircraft safety investigations because the NTSB trusted CBP. According to SAEA [REDACTED] excluding information from the safety report is an issue for CBP. He said, CBP is a law enforcement agency, and is supposed to abide by law, regulation, and policies. When CBP fails to do that, it corrodes and corrupts the agency. SAEA [REDACTED] said everything requires cooperative compliance. CBP is supposed to put forth the best good faith effort, to not only comply with the spirit of the law, regulation, and policy, but the letter of that. When its patent and on its face, an abuse of power or straight corruption to exclude facts that are demonstrably provable from a report, it's not how things are supposed to be done (Ex. 10, 17:26:10).

SAEA [REDACTED] was asked if it was possible for a safety investigation to remain intact and an addendum added to address any non-concur issues. SAEA [REDACTED] stated, if he submitted " something to leadership that they want to endorse, it will be implanted." But, if he were to take an issue to management that they did not want to hear, management would create obstacles until SAEA [REDACTED] stopped presenting the idea (Ex. 10, 18:08:10).

On January 6, 2022, SSA [REDACTED] and Special Agent (SA) [REDACTED] [REDACTED] conducted a sworn interview of CBP, AMO, TSS XD [REDACTED] Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC 01-fj765-buz7s-xc97x-3x711-ap3g7: (**Exhibit 11**, 2 hour 23 minutes).

XD [REDACTED] said as the XD over AMO TSS, he provided executive oversight; for new AMO agent training, both the National Marine Training Center (NMTC) and the NATC, and the safety programs within CBP AMO (Ex. 11, 16:41:05).

XD [REDACTED] said an aviation mishap safety investigation was something that fell within his oversight. He said when there was a mishap, it was his responsibility to facilitate the investigation, to draft the report, and to provide a brief of the incident to CBP AMO EAC [REDACTED] (Ex. 11, 16:42:30).

XD [REDACTED] said the safety investigation report writing process was not clear. He said AMO Deputy Executive Assistant Commissioner (DEAC) [REDACTED] ordered the process to be re-worked (Ex. 11, 18:51:00).

On January 12, 2023, SSAs [REDACTED] and [REDACTED] [REDACTED] conducted a sworn interview of CBP AMO (A) TSS XD [REDACTED] Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-xfe25-8p7yi-3170r-kwed6-ekb42 (**Exhibit 12**, 1 hour 29 minutes).

XD [REDACTED] said he met with TSS Dir. [REDACTED] and TSS SAEA [REDACTED] about the issues with the safety investigation report process. He said they were attempting to determine how they can work through issues that needed attention. XD [REDACTED] said removing information from a safety report did not mean the information could not become a topic of discussion. He said the causal and contributing factors were placed in a nice package. But senior leadership has an angst when information that does not have anything to do with the accident are inserted into the report. XD

██████████ said AMO DEAC ██████████ was working to improve the process (Ex. 12, 16:42:00).

XD ██████████ confirmed one of the points of contact he provided to OPR for the investigation, was the NTSB's liaison to CBP Chief ██████████ (Ex. 12, 16:44:00).

XD ██████████ confirmed that when executive leadership had issues with the safety report, an addendum or memorandum could be attached to the report outlining the issue and a course of action to mitigate the issue (Ex. 12, 16:44:25).

Regarding the Crewmember Evaluation Board (CEB) and the safety investigation report, XD ██████████ commented, "we have some process cleanup there is no question" (Ex. 12, 17:25:30).

XD ██████████ said that AMO was actively working on a process, at the DEAC level, which addresses discrepancies that arise in the safety investigation process (Ex. 12, 17:27:25). He said this process will help address the CRFT issue.

XD ██████████ said representatives from AMO spoke with the NTSB Liaison ██████████ who said the CRFT issue should be included in the report. XD ██████████ said he and DEAC ██████████ spoke with another NTSB representative who stated the safety report should contain the causal and contributing factors and packaged in a reasonable timeline (Ex. 12, 17:29:00). XD ██████████ said the NTSB MOU and the Party Certification would lead one to believe that everything the safety investigator touched, wrote, or had opinion on needs to be contained in the report. He said that was problematic. He said there was another paragraph that stated only factual information should be included. XD ██████████ said as far as the CRFT goes, there was no factual information that the helicopter caught fire and burned because it did not have a CRFT (Ex. 12, 17:30:50).

XD ██████████ was asked why the safety investigation was routed through headquarters for various divisions to review. He said he did not know why, and he was unsure if the process was set up correctly (Ex. 12, 17:34:00).

On February 27, 2023, SSA ██████████ and Assistant Special Agent in Charge (ASAC) ██████████ conducted a sworn interview of CBP AMO DEAC ██████████ Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-73kxh-fvwr2-4se91-kwxvo-zvvy (Exhibit 13, 1 hour 10 minutes).

DEAC ██████████ said he did not think he was involved with requesting the information to be removed from the safety report (Ex. 13, 11:16:50). DEAC ██████████ said he had never worked in TSS and did not know removing the information would be a trigger for anything.

DEAC ██████████ said TSS was tasked with keeping everyone safe and had an independent chain of command from the other two groups that report to him (Ex. 13, 11:18:20). He explained that there was a group of GS-13 and GS-14s within TSS that believed that a safety inspection was gospel. He said this was fundamentally strange in an organization. He said TSS was never designed that way. He said the group did not want to listen to anybody and then referred their complaints to OSC. He said by doing this they have walled themselves off and have essentially become the EAC because what they write now drives policy.

DEAC ██████ said he did not believe there was the issue with directing information to be removed from the report. He said the issue was with the process (Ex. 13, 11:21:00). DEAC ██████ said he believes information could be removed from a safety report (Ex. 13, 11:23:45).

DEAC ██████ stated he put together a group to assist with making recommendations to enhance the safety investigation process (Ex. 13, 11:38:40).

Crashworthy Fuel Tank System

During his interview, Dir. ██████ claimed CBP has 81 AS350 helicopters that do not contain CRFTs. He said the helicopter involved in the May 12, 2021; mishap did not have a CRFT. Dir. ██████ said the lack of a CRFT contributed to the fuel catching on fire. He said if the pilots had been unable to extricate themselves from the helicopter, they would have perished in the post-crash fire. He said the helicopter was totally consumed by the post-crash fire (Ex. 2, 16:16:03).

Dir. ██████ quoted an excerpt (page 12) from the "CBP AMO ORD for LEH," "the helicopter shall have a crashworthy fuel system with components and operational procedures that comply with the requirement of Flight Aviation Rules (FAR) Part 27" (**Exhibit 14**; Ex. 1, 16:18:30).

FAR Part 27 is now referenced as Title 14- Aeronautics and Space, Code of Federal Regulations (CFR) Part 27 Airworthiness Standards: Normal Category Rotorcraft (**Exhibit 15**).

Dir. ██████ said CBP AMO has considered retrofitting helicopters with CRFTs. But, since 2006, to date, not a single helicopter has been retrofitted to install CRFTs to mitigate the risk posed to AMO aircrews (Ex. 1, 16:22:00).

On November 1, 2016, then TSS Deputy Director ██████ ██████ submitted a memorandum to then CBP AMO (Acting) EAC ██████ ██████ and proposed the procurement of CRFT for all CBP AMO LEH (**Exhibit 16**). The proposal appears to have been cancelled without being funded in January 2021.

The CBP AMO ORD states, "the helicopter shall have a crashworthy fuel system with components and operational procedures that comply with the requirements of Flight Aviation Rules Part 27" (see Ex. 14).

On March 23, 2016, the NTSB provided safety recommendations to the FAA and the European Aviation Safety Agency (EASA) regarding CRFT (**Exhibit 17**). The report stated:

"On October 3, 1994, the FAA revised the airworthiness standards for newly certificated rotorcraft to add "comprehensive crash resistant fuel system design and test criteria." The revisions included two new regulations, 14 CFR 27.952 and 29.952, "Fuel System Crash Resistance," which state, " to minimize the hazard of fuel fires to occupants following an otherwise survivable impact (crash landing), the fuel systems must incorporate design features of this section." "However, the fuel systems on newly manufactured rotorcraft with type certificates

approved before October 1994, such as the accident helicopters, are not subject to these regulations and, as a result, may pose a hazard to occupants if the systems are breached during a crash."

In his January 6, 2023, interview, XD [REDACTED] said he was aware there was a push in 2016 to retrofit the CBP AMO AS350 helicopter fleet with CRFTs. He said the CRFTs were not approved. XD [REDACTED] said he believed funding was the reason (Ex. 11, 16:44:30).

XD [REDACTED] was asked if the lack of CRFTs was a safety risk. XD [REDACTED] replied, "Everything is a safety risk and it's cost versus benefit." He said he thought AMO had flown roughly 500,000 hours in the AS350 helicopters, and they have had two crashes that have resulted in fire (Ex. 11, 16:45:00). XD [REDACTED] said there was no post-crash analysis conducted on the AMO Helicopter N841BP-May 12, 2021, mishap, so no one knew if the fire was related to the fuel tank (Ex. 11, 16:46:10). XD [REDACTED] said after looking at the numbers (flight hours) there were no issues with the NTSB or the FAA and if there was there would be a "call back" (Ex. 11, 16:46:20). XD [REDACTED] said if there were significant issues with an aircraft the FAA would require companies to make modifications with the aircraft.

SSA [REDACTED] said CBP AMO does not appear to be in violation of any federal rules or regulations or laws to which, XD [REDACTED] replied "absolutely not" (Ex. 11, 16:48:30).

XD [REDACTED] said there was no danger for helicopters that lack CRFT (Ex. 11, 17:27). XD [REDACTED] said if there was a CBP policy requirement regarding CRFTs, the AMO EAC could waive the requirement.

On September 26, 2022, SSA [REDACTED] received an email from the FAA, Office of Accident Investigation, SAI [REDACTED] (Exhibit 18). SAI [REDACTED] provided the TCDS for the AS350. The AS350 design was approved in 1977. SAI [REDACTED] wrote, CBP's AS350 helicopters without a CRFT were not in violation of regulations. For the October 3, 1994, FAA Airworthiness Standards for CRFT (14 CFR 27.952 and 29.952) to be applicable to the AS350, the FAA would have had to of made the rule a retroactive requirement.

On September 27, 2022, SSA [REDACTED] and SAI [REDACTED] spoke telephonically. The conversation was documented using an Agent Affidavit (see Ex. 18). SAI [REDACTED] reiterated what he wrote in email. He also stated the safety investigation report should include whether the helicopter had a CRFT.

On December 12, 2022, CBP AMO provided a cost estimate of about \$3.1 million to retrofit the remaining AS350 fleet that lack a CRFT. AMO advised retrofitting would take approximately eight years (Exhibit 19).

CBP AMO Hiring Practices

During his interview on August 3, 2022, Dir. [REDACTED] said after the mishap AMO leadership directed a CEB for PUI AIA [REDACTED] (Ex. 2, 16:51:30). An email, dated May 26, 2021, included a recommendation for a CEB to be convened to determine the professional competency of AIA [REDACTED] because he failed the Army Flight School and the NATC initial assessment in

2013, but accrued flight time when he rose to his current position without an established syllabus and made statements that he "panicked" during the mishap (**Exhibit 20**).

Dir. [REDACTED] said AIA [REDACTED] was a failed US Army aviator. He said AIA [REDACTED] started as a Border Patrol Agent (BPA) and then became an AMO Aviation Enforcement Agent (AEA) operating the unmanned aircraft system (UAS) MQ-9 Predator B aircraft for CBP (Ex. 2, 17:01:30). He said AIA [REDACTED] obtained flight credentials with minimal hours. AIA [REDACTED] started accumulating flight hours while sitting in CBP AMO aircraft and logging flight time. He said eventually AIA [REDACTED] wanted to become an AMO pilot. Dir. [REDACTED] said SAEA [REDACTED] who was assigned to CBP AMO Human Capital at the time, filled out a waiver and falsified items pertaining to AIA [REDACTED]'s flight time, the number of hours in complex aircraft, and the number of hours in a multi-engine aircraft. Dir. [REDACTED] said the waivers allowed AIA [REDACTED] to get achieve the number of hours needed to become a AMO pilot (Ex. 2, 17:03:39).

Dir [REDACTED] said there were three independent reports into AIA [REDACTED] qualifications, the Safety Investigation (see Ex. 1), the CEB (**Exhibit 21**), and a memorandum outlining all his flight hours (**Exhibit 22**). The CEB contained the most in-depth review into AIA [REDACTED] qualification. Upon completion of the CEB specific recommendations were made, similar to a performance improvement plan, regarding AIA [REDACTED] flight status (see Ex. 21).

Dir [REDACTED] alleged AIA [REDACTED] skills were not commensurate with the number of hours he claimed on his resume and did not meet the standards to be hired. Dir. [REDACTED] said AIA [REDACTED] falsified his resume and the flight waivers he received. Dir. [REDACTED] said AIA [REDACTED] continued to fly in national airspace system with AMO knowing he did not meet the hiring standards and that he was listed as primary cause to the mishap (Ex. 2, 17:05:20).

Dir. [REDACTED] said the issues are systematic and not contained specifically to AIA [REDACTED]. He said AMO was short on pilots. Dir. [REDACTED] said AIA [REDACTED] identified this during the Safety Investigation. Dir. [REDACTED] said the information must be in the safety report because it was a real risk (Ex. 2, 17:10:30).

Dir. [REDACTED] alleged AIA [REDACTED] falsified his resume (**Exhibit 23**).

AIA [REDACTED] received a flight waiver for the following: 300 hours for Complex Aircraft Flight Instructor (CAFI) and 200 hours for Multi-Engine Aircraft Time (Exhibit 23). The evaluator for the flight wavier was AMO SAEA [REDACTED] [REDACTED].

The CEB was conducted by CBP AMO, McAllen Air and Marine Branch, Dir. [REDACTED] [REDACTED] and CBP AMO TSS, Aviation Standardization and Evaluations Section Supervisor [REDACTED] [REDACTED] (see Ex. 21). The CEB finalized their report in September 2021. The CEB identified several issues with AIA [REDACTED] hiring process.

- AMO allowed AIA [REDACTED] to count 406.7 hours flown in an AMO AS350 toward the 1500-hour requirement. During those hours he was serving as either Supplemental Aircrew Member (SAM) or AEA, he was not the Pilot in Control (PIC) of the aircraft, nor was he on the flight controls. In short, he was present in the left front seat of the aircraft where he had

access to the flight controls but was in no way responsible for aeronautical decision making or the overall safety of the aircraft.

- AIA [REDACTED] was granted a 200-hour waiver for multi-engine Aircraft experience that he accrued while attending the U.S. Army Apache AH-64 training program. AIA [REDACTED] failed out of the program due to his inability to pass an emergency procedure test. At the time he was dismissed from the program, AIA [REDACTED] had only accumulated 40 hours of flight time.
- CBP AMO granted AIA [REDACTED] a 300-hour waiver based on prior night vision goggles (NVG) experience he gained while attending U.S. Army Initial Entry Rotary-Wing (IERW) and flying in an AMO AS350 as a SAM and AEA. In both cases, he was never the PIC of the aircraft and there was either a highly experience U.S. Army or Department of the Army Civilian IP or AMO Pilot in Command (PIC) that was ultimately responsible for the flight.
- AIA [REDACTED] had less than 40 hours of flight time during which he was solely responsible for the aircraft and all aeronautical decisions made during the flight.
- When the AIA [REDACTED] was non-competitively re-assigned to the AIA position, he had approximately 626 actual flight hours, well short of the 1000 hours required.
- There was not a thorough and discriminating review of the pilot's logbook during the hiring process at NATC.
- The AEA to AIA Transition Program was a self-guided informal program during the time the employee was accumulating hours.

Review of AIA [REDACTED] resume and hiring records indicate:

- 1008 hours of rotor wing and 81 hours of fixed wing total time logged.
- Army Initial Entry Rotor Wing under Military Education.
- 75 hours of Night Vision Goggle (NGV) flying time and 96.3 hours as a FLIR (Forward Looking Infrared) operator aboard AMO aircraft.
- He did not receive a waiver based on NVG experience.
- AIA [REDACTED] received waivers for being a certified flight instructor and for multi-engine aircraft experience (see Ex. 23).

On September 23, 2022, during a discussion with NTSB Chief [REDACTED] SSA [REDACTED] explained how AMO leadership wanted to remove the information regarding AIA [REDACTED] hiring process. Chief [REDACTED] said the information regarding the hiring pitfalls should be included in the ROI. He said CBP needs to exercise due diligence when hiring pilots. He said the entire hiring process should probably be reviewed (see Ex. 7).

During his September 12, 2022, interview, AIA [REDACTED] said he reviewed AIA [REDACTED] background, to include his logbook, recency of flight time and current duties. He felt the mistakes AIA [REDACTED] made were elementary and normally occur with pilots who do not have a lot of flight time or experience. AIA [REDACTED] determined AIA [REDACTED] has been flying the UAS Predator drone. He said this was a different type of platform compared to the AS350 helicopter (Ex. 8, 23:01:30). AIA [REDACTED] said he determined AIA [REDACTED] had not received any flight training that had been accomplished prior to going to the initial qualification other than his commercial rotary wing certificate. The only hours AIA [REDACTED] had logged in an AS350 was what he had flown at the NATC. AIA [REDACTED] did not have any recent flight experience (Ex. 8, 23:02:50). AIA [REDACTED] said AIA [REDACTED] told him he flew sporadically in the left seat of the AS350 as a CBP AEA. AIA [REDACTED] said AIA [REDACTED] said due to having a helicopter license, he normally logged the flight time when sitting in the left-hand seat with another pilot. He said AIA [REDACTED] stated he claims these hours in accordance with FAA regulation 61.51. AIA [REDACTED] said from a technical standpoint, AIA [REDACTED] could claim hours in this manner. But this was not in accordance with CBP AMO policy (Ex. 8, 23:04:30).

AIA [REDACTED] said AIA [REDACTED] advised he was hired after participating in a 2019 job fair in El Paso, TX. After he was assessed and reviewed, he was assigned as an AIA. AIA [REDACTED] said AIA [REDACTED] told him he had been removed from the US Army Apache helicopter program prior to completion of the course (Ex. 8, 23:08:00). AIA [REDACTED] said AIA [REDACTED] told him he was removed from the program for cheating on an Emergency Procedures and Limitations test (Ex. 8, 23:10:52). AIA [REDACTED] said that was an immediate removal from the US Army program.

AIA [REDACTED] said prior to becoming an AEA, AIA [REDACTED] was a AMO SAM. During this time, he logged some of the time he claimed. AIA [REDACTED] said according to the FAA he can log the time. But AIA [REDACTED] stated, "it is not good time" (Ex. 8, 23:12:00). AIA [REDACTED] said at the time of AIA [REDACTED] hiring flight waivers were being provided to applicants. He said an applicant can reduce up to 20% of the total flight time reduction to meet the mandatory flight time. AIA [REDACTED] said AIA [REDACTED] received two waivers for 500 hours in which he had no experience (Ex. 8, 23:15:39). AIA [REDACTED] said this was a failure on the person who conducted the flight hour waiver process. He said AIA [REDACTED] received 300 flight hour waiver for being certified flight instructor. AIA [REDACTED] is not a certified flight instructor. He received another 200-hour waiver for multi-engine experience which AIA [REDACTED] does not have a certificate for. AIA [REDACTED] said he does not know how the person who granted the waiver determined the waiver criteria because AIA [REDACTED] FAA certificates do not reflect that type of experience to grant him those waivers (Ex. 8, 23:22:20).

AIA [REDACTED] referenced AIA [REDACTED] resume and said as an accident investigator he cannot confirm or deny if AIA [REDACTED] flight hours of 1089 were correct. AIA [REDACTED] called AIA [REDACTED] hiring process an organizational latent safety hazard. AIA [REDACTED] said one process used to identify an organizational latent safety hazard was to have a review of your flight logs and records during the 3-part hiring process. AIA [REDACTED] referenced documentation from AIA [REDACTED] "AMO New Hire Pilot Assessment" (see Ex. 23). The document indicated SAIA [REDACTED] reviewed AIA [REDACTED] logbook and checked the line indicating AIA [REDACTED] met the requirements. AIA [REDACTED] stated if the

entire hiring documentation had been reviewed properly, SAIA [REDACTED] should have noticed AIA [REDACTED] pilot's license did not indicate a Complex Aircraft Flight Instructor rating, or that he had multi-engine aircraft time. AIA [REDACTED] said [REDACTED] had the experience and training to make that determination for the organization (Ex. 8, 23:23:30).

AIA [REDACTED] said the second latent safety hazard was AIA [REDACTED] FAA medical certificate. AIA [REDACTED] said to apply to become an AIA an applicant, must have a first-class FAA medical certificate during the initial application. AIA [REDACTED] said AIA [REDACTED] did not possess a first-class medical certificate during the 3-part assessment. AIA [REDACTED] did not receive a first-class medical certificate until 9 days later, on December 19, 2019 (see Ex. 23; Ex. 8, 23:28:30).

AIA [REDACTED] said AIA [REDACTED] had previously applied to AMO in January 2013 and was unsuccessful (see Ex. 23). AIA [REDACTED] said at the time of that evaluation, AIA [REDACTED] claimed 970 hours. From January 2013-December 2019, AIA [REDACTED] had only accrued a little over 100 hours of flight time. AIA [REDACTED] said this was not a lot of flight time (Ex. 8, 23:30:30).

AIA [REDACTED] said he reviewed the CBP policy for flight waivers. He said there was separate waiver for the 1881 job series position. AIA [REDACTED] said up to 25% of the flight time can be waived in order to meet the qualifications requirement. AIA [REDACTED] said 1125 hours of flight time was needed for this requirement. He said AIA [REDACTED] only had 1089 hours; therefore, AIA [REDACTED] did not meet the threshold of 1125 hours of flight time (Ex. 8, 23:33:00). AIA [REDACTED] opined AIA [REDACTED] was not qualified to be placed in the aircraft that day (May 12, 2021).

AIA [REDACTED] said that he cited and documented the information obtained during the investigation. He said the information was not his analysis but based on the physical evidence that was obtained. AIA [REDACTED] said he was told to remove the information from the report. He then stated he did not understand how this information was not important to the safety of the organization. AIA [REDACTED] said, "we have to hire people who are qualified, otherwise this is what can happen" (Ex. 8, 23:44:00).

AIA [REDACTED] said AMO had specific hiring requirements, so that latent safety hazards were not inserted into the organization operation process. He said one thing that can hurt CBP is hiring unqualified pilots (Ex. 8, 23:46:45).

AIA [REDACTED] said he requested AIA [REDACTED] to undergo a CEB because AIA [REDACTED] did not meet the requirements to be an AIA for AMO (Ex. 8, 23:49:35).

AIA [REDACTED] said as part of the safety investigation, he reviewed AIA [REDACTED] hiring "checklist" (see Ex. 23). He stated the 40 hours of multi-engine aircraft time cannot be applied to helicopters because helicopters are considered rotary aircraft (Ex. 8, 00:00:20).

AIA [REDACTED] showed a copy of AIA [REDACTED] pilot's license. AIA [REDACTED] said the license did not indicate that AIA [REDACTED] is a certified flight instructor. He said the license would

indicate if AIA [REDACTED] was a certified flight instructor (see Ex. 23, Ex. 8, 00:07:20).

On January 4, 2023, the NTSB published their final report for May 12, 2021, Aircraft Mishap Report N841B (**Exhibit 24**). The NTSB report was released to the public. The report included a paragraph that stated, "the US Customs and Border Protection Air and Marine Operations Division reported that the agency's selection process for the Air Interdiction Agent Program failed to properly identify that the pilot was not qualified for the program".

On September 13, 2022, SSA [REDACTED] and SSA [REDACTED] conducted a sworn interview of CBP, AMO, AIA [REDACTED] [REDACTED] Sierra Vista, AZ. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-6weav-fvs0s-k0aq6-lkzp6-m6wnb (**Exhibit 25**, 1 hour 44 minutes).

AIA [REDACTED] provided a brief overview of his aviation experience. He started working in aviation at Utah Valley State University (1999) and earned his fixed wing private pilot certification in 2000 to 2001. In 2005, AIA [REDACTED] was accepted into the US Army National Guard Warrant Officer training program as an Apache helicopter pilot. AIA [REDACTED] said in January 2006, he failed out of the program (Ex. 25, 18:54:22).

AIA [REDACTED] said in July 2006, he continued to pursue his college education in aviation. He said he completed the program in November 2007. AIA [REDACTED] said he entered on duty with the U.S. Border Patrol (USBP) in December 2007. AIA [REDACTED] said he initially applied to the AMO AEA program in 2013. AIA [REDACTED] said he did not complete the application process because he failed his "check ride." He stated during the check ride, he failed to perform certain maneuvers in the helicopter (Ex. 25 19:08:02). AIA [REDACTED] said in 2017, he was assigned as an AMO AEA (Ex. 25, 19:04:15). AIA [REDACTED] said in 2019, he applied and ultimately became an AIA (Ex. 25, 19:11:00).

AIA [REDACTED] described how he obtained flight time (Ex. 25, 19:14:39). He said when there were assigned missions, he would coordinate with the pilot and ask if he could ride along. He said he could only claim hours that were considered PIC hours. He said PIC hours are when he was the sole manipulator of the aircraft (Ex. 25, 19:15:30). AIA [REDACTED] said in 2013, he logged hours as Second In Command (SIC). However, once he learned how the hours can be claimed by a SIC, he modified the time in his flight logbook to reflect his time more accurately (Ex. 25, 19:16:00).

SSA [REDACTED] discussed AIA [REDACTED] Self Certification Worksheet that was submitted as part of his hiring process (Ex. 25, 19:19:10). AIA [REDACTED] stated he had not ever taken a flight instructor certification (Ex. 25, 19:19:30). He said the flight instructor rating would be indicated on his pilot's certificate. AIA [REDACTED] stated he had 40 hours of time in multi-engine aircraft. AIA [REDACTED] said the Apache helicopter is considered a multi-engine aircraft. He said he was allowed to claim these hours even though he did not complete the US Army Apache program (Ex. 25, 19:20:50).

SSA [REDACTED] presented AIA [REDACTED] with his Self-Certification worksheet for review. SSA [REDACTED] presented AIA [REDACTED] with his resume that was used for the application process (Ex.

25, 19:23:25). AIA ██████ confirmed the resume was his. SSA ██████ asked AIA ██████ why there was a discrepancy between the number of NVG hours on his resume, compared to his Self-Certification worksheet. AIA ██████ responded that he believed the CBP AMO application process only required 75 hours of NVG time. AIA ██████ said he believed the 75 hours are from when he flew as PIC of the aircraft, and the 350 hours was accumulated from the total time in the aircraft using NVG (Ex. 25, 19:25:00). AIA ██████ said he could claim 350 hours in total because he was a commercially rated pilot (Ex. 25, 19:29:20).

AIA ██████ said when he applied to become an AIA in 2019, the last three pages of his flight logbook were reviewed as part of the hiring process (Ex. 25, 19:31:40). AIA ██████ said the last three pages show a running total of the hours in the logbook. Then AIA ██████ corrected his earlier testimony in which he stated the logbook was modified in 2013. AIA ██████ said the logbook was modified in 2019, because the FAA did not allow an individual to claim SIC hours in that manner. AIA ██████ said the AMO application process only asked for total time in the aircraft and PIC time (Ex. 25, 19:37:20).

AIA ██████ said he only had a Class 2 medical certificate during his hiring process. He said during his interview, Supervisory Air Interdiction Agent (SAIA) ██████ told him they could hold off on his application process until he obtained his Class 1 medical certificate (Ex. 25, 19:40:20). In December of 2019, AIA ██████ obtained his Class 1 medical certificate (see Ex. 23).

AIA ██████ said he did not realize he received a 200-hour waiver for multi-engine aircraft time (Ex. 25, 19:43:50). SSA ██████ presented AIA ██████ with a copy of his flight hour waiver (Ex. 25, 19:44:45) (see Ex. 23). He responded that he could not explain the waiver that he received for being a Certified Flight Instructor (CFI). He said he never gave any indication to anyone that he was a CFI. AIA ██████ said he never reviewed or saw the flight waiver (Ex. 25, 19:45:30).

AIA ██████ stated he accumulated his flight time over a period of 20 years. He said most of his time was accumulated in 2012 and 2013. He said in the previous 12 months prior to the start of his AMO helicopter training, he only had 12 hours of flight time in the AS350 helicopter. He said his skills were rusty (Ex. 25, 19:58:50). AIA ██████ said from the time he was hired as an AIA and started his training, he had very minimal flight time.

AIA ██████ said he did not know much about the CEB that convened to review his flight qualifications because he did not receive much feedback regarding the results (Ex. 25, 20:02:30).

AIA ██████ said he "cannot say whether or not other AIAs were assessed properly," but there are other AIAs who obtained the majority of their flight time in the same manner that he did (Ex. 25, 20:13:45).

AIA ██████ said he "did not falsify his resume in any way shape or form." AIA ██████ said the waiver he received regarding hours did not contain accurate information.

On October 25, 2022, SSA ██████ and SSA ██████ conducted a sworn interview of CBP, AMO,

SAEA [REDACTED] [REDACTED] Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-xnas2-rfeg8-3siza-1jeg9-imhx9 (Exhibit 26, 41 minutes).

SAEA [REDACTED] said he started his career as a BPA in 2008. From 2012 to 2014, he was assigned to CBP AMO SAM. In 2014, SAEA [REDACTED] resigned from CBP and worked as a Department of Defense (DoD) contractor. In 2015, he returned to CBP as an AEA, and was promoted to SAEA in 2019. SAEA [REDACTED] said most of his work since 2018, had been staff level work at AMO Headquarters (Ex. 26, 11:39:00). SAEA [REDACTED] said his aviation experience is limited and most of his experience comes from his time as a SAM. SAEA [REDACTED] is not a certified pilot.

SSA [REDACTED] asked SAEA [REDACTED] about his level of awareness regarding AIA [REDACTED] hiring. SAEA [REDACTED] said at the time, AIA [REDACTED] was serving in an AEA capacity and wanted to convert to an AIA, commonly referred to as a pilot, with AMO. SAEA [REDACTED] said he was employed as an Air Operations Personnel Liaison at AMO headquarters when AIA [REDACTED] was hired (Ex. 26, 11:42:00).

SAEA [REDACTED] said he was heavily involved in the recruiting of AMO pilots and handled the application paperwork and supporting documentation such as the job resume and Self Certification checklist for AIA [REDACTED] (Ex. 26, 11:42:45). SAEA [REDACTED] said being a pilot was a highly technical position, and CBP Hiring Center experts did not have the experience to assess pilots. He said AMO and the Hiring Center created the Self Certification Checklist form that allowed an applicant to outline their experience. He said the checklist allowed AMO to streamline the selection process to ensure qualified candidates were not overlooked.

SAEA [REDACTED] said he provided AIA [REDACTED] with his flight hour waiver. He said there was a minimum number of flight hours required to be hired. AMO's flight hour waiver process was based off the Self Certification Checklist and on the applicant's relevant experience. If the applicant answers, "yes" to certain questions, they could qualify for a flight hour waiver (Ex. 26, 11:43:30).

SAEA [REDACTED] said he made a mistake on AIA [REDACTED] initial waiver. SAEA [REDACTED] said the mistake was "more of a typo" than a substantive mistake (Ex. 26, 11:44:28). SAEA [REDACTED] said AIA [REDACTED] requested waivers for 40 hours of multi-engine aircraft time and 350 hours of NVG time. SAEA [REDACTED] said the waiver would have totaled 500 hours. However, SAEA [REDACTED] said he gave AIA [REDACTED] 300 hours for being an aircraft instructor and 200 hours for multi-engine aircraft time. SAEA [REDACTED] said AIA [REDACTED] never claimed to be an aircraft instructor (Ex. 26, 11:45:40). SAEA [REDACTED] said AIA [REDACTED] would have been granted a waiver for the full amount (350 hours) of NVG time. SAEA [REDACTED] said his mistake did not change any of the waivers AIA [REDACTED] would have received. SAEA [REDACTED] said there was a discrepancy on the number of NVG hours claimed on AIA [REDACTED] resume compared to the Self Certification Checklist (Ex. 26, 11:46:15).

SAEA [REDACTED] said he was unaware AIA [REDACTED] had failed out of the Army Apache helicopter

program (Ex. 26, 11:49:30). SAEA [REDACTED] explained how AIA [REDACTED] received a 200-hour waiver when he only completed 40 hours of multi-engine time (Ex. 26, 11:50:25). SAEA [REDACTED] said it was explained to him, if an applicant qualified for a waiver, they qualified for the full amount. He said one hour (of time) was as good as 100 hours (Ex. 26, 11:50:40). SAEA [REDACTED] said AMO was initially conducting two flight logbook reviews during the hiring process. He recalled one of the reviews was time consuming. One review was conducted during the initial hiring phase, and one was conducted in Oklahoma City by NATC staff (Ex. 26, 11:53:20). SAEA [REDACTED] said AIA [REDACTED] flight logbook was not checked prior to being hired as an AIA (Ex. 26, 11:54:30).

SAEA [REDACTED] said he never received any formal training on how to process flight waivers for applicants (Ex. 26, 11:55:00). SAEA [REDACTED] said after he completed a hiring packet, he sent it to the CBP Hiring Center (Ex. 26, 11:56:00). He said he was the "last stamp" on a packet prior to the CBP Hiring Center qualifying an applicant and placing them in the hiring process (Ex. 26, 11:57:00).

SAEA [REDACTED] said he believed the waiver process is effective; however, the problem was that AMO did not conduct applicant background investigations (reference the pilot's experience) until something such as a crash happens (Ex. 26, 12:02:30). SAEA [REDACTED] said "the issue is that we potentially allowed someone to get into an aircraft without checking their experience." SAEA [REDACTED] said a logbook and credential review was essential (Ex. 26, 12:05:00).

When asked if he was adequately trained in the waiver process, SAEA [REDACTED] responded, "if the CBP Hiring Center is going to conduct a review of the logbook, and waiver review, then yes." He said if there was no logbook or waiver review conducted before an applicant gets into an aircraft for their initial flight assessment, "then no, there is not enough training" (Ex. 26, 12:08:30). SAEA [REDACTED] said if the logbook and credentials were thoroughly reviewed, and he still "made it through," then that would bring into question the entire hiring process (Ex. 26, 12:12:05).

On February 2, 2022, SSA [REDACTED] and SA [REDACTED] [REDACTED] conducted a sworn interview of AEA [REDACTED] [REDACTED] Washington, D.C. The interview was video recorded using StarWitness equipment. The recording is uniquely identified by AC: 01-lln02-7f130-4ziqi-yetxq-ce7i5 (Exhibit 27, 1 hour 26 minutes).

AEA [REDACTED] said she was currently the AMO Operations to AMO Human Capital liaison. She assisted in managing the table of organization, recruiting, internal reassignments, competitive promotion opportunities, and supports leadership with staffing issues (Ex. 27, 17:46).

AEA [REDACTED] said the AEA position was placed on hold after AIA [REDACTED] mishap. In 2022, the position was then reinvigorated under current AMO EAC [REDACTED] (Ex. 27, 17:48:20).

AEA [REDACTED] said AMO exploited any grey areas regarding hiring of pilots (Ex. 27, 17:58:30). The AEA to AIA flight time waiver process was greatly exploited. AEA [REDACTED] said when the flight time waiver process was turned over to the current liaison, AEA [REDACTED] questioned how someone could obtain 500 hours in waivers with just one hour of flight time. AEA [REDACTED]

said this did not sound equitable and inquired about it. AEA [REDACTED] said they were advised this was how things had always been done and AMO would continue this process. AEA [REDACTED] said there was no clear process outlining how waivers were to be granted (Ex. 27, 18:02:00).

AEA [REDACTED] said there were still AEAs in the field claiming time in the same manner as AIA [REDACTED] did, and requesting to be converted to the AIA position (Ex. 27, 18:09:00). AEA [REDACTED] said there were AEAs who are not acting in accordance with the CBP AMO Aviation Operations Handbook (AOH). AEA [REDACTED] said AEAs were precluded from piloting the aircraft unless formally inducted into the AIA transition program.

AEA [REDACTED] said the AOH clearly delineated two categories of individuals who can pilot AMO aircraft. One category was individuals who have a commercial aircraft rating. These AEAs could operate the controls of the aircraft under certain conditions. AEA [REDACTED] said AEAs who had private licenses were claiming time as operating the controls of the aircraft even when they were not the PIC. AEA [REDACTED] said claiming time in this manner violated the spirit of the AOH and the FAR (Ex. 27, 18:15:00).

AEA [REDACTED] said the FAA, Office of Chief Counsel (OCC) had been consulted regarding CBP employees improperly logging time in this manner (Ex. 27, 18:16:30). AEA [REDACTED] said the FAA OCC advised logging time in the manner that had been described (also known as bootleg time) in public use aircraft was not in accordance with the CFRs. AEA [REDACTED] also said the FAA OCC advised that the employees claiming time in this manner needed to be reported to the local Flight Standards District office to have their logbooks formally reviewed by the FAA (Ex. 27, 18:16:45). At the completion of the interview, AEA [REDACTED] provided the names of individuals to OPR.

[AGENT NOTE: Aircraft used by government agencies such as CBP are considered public use aircraft.]

AEA [REDACTED] said when individuals converted to the AIA position, it was difficult to know what their legitimate starting flight time was because so much of the time had been illegitimately claimed (Ex. 27, 18:18:45).

When asked if AIA [REDACTED] was a good example of someone in a bad situation who was able to claim bootleg time that should not have been credited, AEA [REDACTED] responded, "yes" (Ex. 27, 18:19:30). AEA [REDACTED] was asked if the only reason AIA [REDACTED] hiring issues surfaced was because of the mishap. AEA [REDACTED] stated other issues had surfaced and there was an extreme financial incentive for the EAC and other senior leaders to allow these AEA to AIA conversions to go through (Ex. 27, 18:20:30). AEA [REDACTED] said the AEA to AIA Transition Program was a top performance goal for Fiscal Year (FY) 2022. She said the expansion of the program to all CBP was another goal for FY 2023.

AEA [REDACTED] said there were ways in which an AEA could claim SIC time under certain circumstances. AEA [REDACTED] said SIC time would need to be a separate designation and would be recorded in the Tasking, Operations, and Management Information System (TOMIS). AEA

██████████ said this was not being done (Ex. 27, 18:25:10). AEA ██████████ said when AEAs show up for their flight assessment at the NATC in Oklahoma City, OK, the individuals flight logbook often did not match the TOMIS records.

TOMIS was the web-based application that served as the unified data processing environment and system of record for AMO. It was essentially the official record keeping system for missions, operations, flight hours and taskings.

AEA ██████████ said some AEAs had been assessed for the AIA program and their records were input into a system called "Workflow." AEA ██████████ said there had been irregularities (regarding flight time records) between the TOMIS and Workflow logbooks (Ex. 27, 18:30:00). AEA ██████████ said there was a concerted effort to shield or make leadership ignorant of the issues that were going on.

During his interview, XD ██████████ said the problem with AIA ██████████ was he underwent a full NATC review where they checked off his qualifications and he passed a check ride. He said the way flight hours were claimed was a problem program wide that AMO was attempting to address (see Ex. 11, 17:50:50).

On January 26, 2023, XD ██████████ provided an email in which he described a check-ride is the practical evaluation used to determine a pilot's knowledge and proficiency in the aircraft they pilot. The evaluation would consist of oral knowledge about a particular aircraft, its limitations, performance, and emergency procedures. This will generally be followed by a flight (check ride) demonstrating proficiency in specified maneuvers in an aircraft that are required for its safe operation (**Exhibit 28**).

On April 6, 2023, XD ██████████ provided reference documents outlining why CBP AMO aircraft meet the definition of "public use" aircraft. XD ██████████ provided a US Department of Transportation Advisory Circulatory that defined Title 49 USC 40102 (a) (41) and the public use aircraft requirements in which CBP operated under (**Exhibit 29**).

Disposition

This report is being sent to the U.S. Office of Special Counsel for review and any actions deemed appropriate.

Exhibits

1. Source Documents
2. Dir. [REDACTED] Audio Interview
3. NTSB-CBP Accident Investigation MOU March 2016
4. NTSB-CBP Party Certification May 14, 2021
5. XD [REDACTED] December 17, 2021, email regarding litigation
6. September 8, 2022, NTSB Chief [REDACTED] Affidavit
7. September 23, 2022, NTSB Chief [REDACTED] Affidavit
8. AIA [REDACTED] Audio Interview
9. AIA [REDACTED] Safety Training Certifications
10. SAEA [REDACTED] Audio Interview
11. XD [REDACTED] Audio Interview
12. XD [REDACTED] Audio Interview
13. DEAC [REDACTED] Audio Interview
14. CBP AMO ORD LEH Directive 2006
15. 14 CFR Part 27
16. CBP AMO Headquarters CRFT Memorandum November 2016
17. 2016 NTSB Safety Recommendation CRFT on AS Helicopters
18. FAA [REDACTED] Email and Agent Affidavit September 27, 2022
19. Email Cost Estimate for retrofitting AMO fleet December 12, 2022
20. Email recommending CEB May 2021
21. AIA [REDACTED] CEB September 2021
22. Memorandum of flight time AIA [REDACTED]
23. AIA [REDACTED] hiring documents
24. NTSB Final Mishap Report for AMO Helicopter N841BP January 4, 2023
25. AIA [REDACTED] Audio Interview
26. SAEA [REDACTED] Audio Interview
27. AEA [REDACTED] Audio Interview
28. XD [REDACTED] Check-ride email
29. XD [REDACTED] Public Use Aircraft Email

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 1

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 1
Source Documents



U.S. OFFICE OF SPECIAL COUNSEL
1730 M Street, N.W., Suite 300
Washington, D.C. 20036-4505

The Special Counsel

June 23, 2022

The Honorable Alejandro Mayorkas
Secretary
U.S. Department of Homeland Security
2707 Martin Luther King, Jr., Ave., SW
Washington, D.C. 20593

Re: OSC File No. DI-22-000519
Referral for Investigation—5 U.S.C. §1213(c)

Dear Secretary Mayorkas:

I am referring to you for investigation a whistleblower disclosure that employees at the Department of Homeland Security (DHS), Customs and Border Protection (CBP), Air and Marine Operations (AMO), engaged in conduct that may constitute an abuse of authority and a substantial and specific danger to public safety. A report of your investigation in response to the allegations and any related matters is due to the Office of Special Counsel (OSC) on August 22, 2022.

The whistleblower, Director of Training Safety Standards [REDACTED] [REDACTED] who consented to the release of his name, alleged that the majority of the AMO Light Helicopter fleet lack required crashworthy fuel tanks in violation of a 2006 operational requirements document (ORD) for the CBP Light Enforcement Helicopter. Mr. [REDACTED] also alleged that AMO Executive Director of Training Safety Standards [REDACTED] [REDACTED] improperly attempted to remove critical information from an Aircraft Mishap Report concerning the crash and destruction of AMO Helicopter N841BP on May 12, 2021. The specific allegations to be investigated include:

- 81 out of the 97 AS350 helicopters in the AMO helicopter fleet do not have crashworthy fuel cells installed, as required by a 2006 ORD for the CBP Light Enforcement Helicopter;
- Mr. [REDACTED] repeatedly attempted to remove critical information from the Aircraft Mishap Report for AMO Helicopter N841BP because of the potential for a negative public response and increased legal liability; and
- Any additional, related allegations of wrongdoing discovered during the investigation of the foregoing allegations.

Mr. ██████ explained that crashworthy fuel cells were designed to reduce the likelihood of a fire developing following a helicopter crash. Despite this requirement, currently only 16 of 97 AMO helicopters contain a crashworthy fuel cell. Mr. ██████ stated that in November 2016, an AMO Aircraft Configuration Change Request was submitted to retrofit all AMO AS350 aircraft with a crashworthy fuel cell, but the request has yet to be funded. Therefore, 81 AMO helicopters lack this critical safety feature and are not in compliance with the 2006 ORD. Mr. ██████ also reported that of AMO's most recent light helicopter mishaps, the only aircraft to sustain damage from a post-crash fire was a helicopter that did not have a crashworthy fuel cell.

Mr. ██████ also alleged that Mr. ██████ attempted to remove significant portions of the Aircraft Mishap Report for AMO Helicopter 841BP to reduce the potential for negative press coverage and the agency's exposure to legal liability. Under a memorandum of understanding with the National Transportation Safety Board (NTSB), CBP conducts an independent investigation into crashes of CBP aircraft and sends the report to NTSB. Mr. ██████ explained that following the crash of AMO Helicopter N841BP, Air Interdiction Agent ██████ was assigned to investigate the accident and produced a draft mishap report in September 2021.

According to Mr. ██████ the draft report included discussion of several factors that Mr. ██████ identified as contributing to the mishap, including errors in AMO's hiring practices allowing the pilot deemed to be most responsible for the crash to receive several unearned flight-hour waivers, and the use of non-crashworthy fuel cells. Since the submission of the initial draft, Mr. ██████ has ordered the removal of this discussion from the mishap report. In annotations on the draft, Mr. ██████ wrote, "This does not need to be part of the safety report. Reports shall be factual concerning the crash without external analysis."¹ However, in private conversations, Mr. ██████ stated that including such discussions in the report would open AMO up to excessive scrutiny and legal liability.

Pursuant to my authority under 5 U.S.C. § 1213(c), I have concluded that there is a substantial likelihood that the information provided to OSC discloses an abuse of authority and a substantial and specific danger to public safety. Please note that specific allegations and references to specific violations of law, rule or regulation are not intended to be exclusive. If, in the course of your investigation, you discover additional violations, please include your findings on these additional matters in the report to OSC. As previously noted, your agency must conduct an investigation of these matters and produce a report, which must be reviewed and signed by you. Per statutory requirements, I will review the report for sufficiency and reasonableness before sending copies of the agency report along with the whistleblower's comments and any comments or recommendations I may have, to the President and congressional oversight committees and making these documents publicly available.

¹See Enclosure 1

The Honorable Alejandro Mayorkas

June 23, 2022

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Additional important requirements and guidance on the agency report are included in the attached Appendix, which can also be accessed at <https://osc.gov/Pages/DOW.aspx>. If your investigators have questions regarding the statutory process or the report required under section 1213, please contact [REDACTED], Chief, Disclosure Unit, at ([REDACTED]) or [REDACTED]. I am also available for any questions you may have.

Respectfully,

A handwritten signature in black ink, appearing to read "Henry J. Kerner". The signature is fluid and cursive, with a prominent initial "H" and "K".

Henry J. Kerner
Special Counsel

cc: The Honorable [REDACTED] [REDACTED], Inspector General

Enclosures

APPENDIX

AGENCY REPORTS UNDER 5 U.S.C. § 1213

GUIDANCE ON 1213 REPORT

- OSC requires that your investigators interview the whistleblower at the beginning of the agency investigation when the whistleblower consents to the disclosure of his or her name.
- Should the agency head delegate the authority to review and sign the report, the delegation must be specifically stated and include the authority to take the actions necessary under 5 U.S.C. § 1213(d)(5).
- OSC will consider extension requests in 60-day increments when an agency evidences that it is conducting a good faith investigation that will require more time to complete.
- Identify agency employees by position title in the report and attach a key identifying the employees by both name and position. The key identifying employees will be used by OSC in its review and evaluation of the report. OSC will place the report without the employee identification key in its public file.
- Do not include in the report personally identifiable information, such as social security numbers, home addresses and telephone numbers, personal e-mails, dates and places of birth, and personal financial information.
- Include information about actual or projected financial savings as a result of the investigation as well as any policy changes related to the financial savings.
- Reports previously provided to OSC may be reviewed through OSC's public file, which is available here: <https://osc.gov/PublicFiles>. Please refer to our file number in any correspondence on this matter.

RETALIATION AGAINST WHISTLEBLOWERS

In some cases, whistleblowers who have made disclosures to OSC that are referred for investigation pursuant to 5 U.S.C. § 1213 also allege retaliation for whistleblowing once the agency is on notice of their allegations. The Special Counsel strongly recommends the agency take all appropriate measures to protect individuals from retaliation and other prohibited personnel practices.

EXCEPTIONS TO PUBLIC FILE REQUIREMENT

OSC will place a copy of the agency report in its public file unless it is classified or prohibited from release by law or by Executive Order requiring that information be kept secret in the interest of national defense or the conduct of foreign affairs. 5 U.S.C. § 1219(a).

EVIDENCE OF CRIMINAL CONDUCT

If the agency discovers evidence of a criminal violation during the course of its investigation and refers the evidence to the Attorney General, the agency must notify the Office of Personnel Management and the Office of Management and Budget. 5 U.S.C. § 1213(f). In such cases, the agency must still submit its report to OSC, but OSC must not share the report with the whistleblower or make it publicly available. See 5 U.S.C. §§ 1213(f), 1219(a)(1).

ENCLOSURE 1



U.S. Customs and Border Protection Air and Marine Operations

Aircraft Mishap Report

Class A Mishap

NTSB Classification: Accident

Date of Mishap: May 12, 2021

Asset: AS350 B2

Asset Number: N841BP

**Location of Mishap: Clarence E. Page Municipal
Airport, Oklahoma City, Oklahoma**

Branch Name: National Air Training Center

Mishap Report: SR20210299

Publication Date: -----



U.S. Customs and
Border Protection

SAFETY SENSITIVE INFORMATION

Aircraft Mishap Report
National Air Training Center

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1 Factual Information

1.1 History of Incident

On Wednesday, May 12, 2021, at approximately 1200L, the mishap Instructor Pilot (IP)/Pilot-in-Command (mishap IP) and the mishap pilot under instruction (mishap PUI) reported for duty to fly the first of two scheduled local-area training flights. The first flight was flight number six towards the AS350 syllabus for the mishap PUI's initial qualification. The mishap IP provided a 1-hour long classroom brief to the mishap PUI regarding the conduct and training items to be accomplished for both flights. Following the pre-flight inspection, the mishap IP completed a risk assessment form and held a pre-mission brief with the Command Duty Officer (CDO) and Clearance Authority (CA) for the training mission. The mishap IP discussed with the CDO that the mishap PUI had a lack of progression based on his performance thus far, and the two flights would help get the mishap PUI on track. The plan was to conduct simulated emergency procedures and non-standard maneuvers. The mishap IP also wanted to focus on touchdown autorotation training for the mishap PUI due to the mishap PUI's lack of exposure to this emergency procedure. At 1415L, the assigned aircraft, an AS350 B2 helicopter, tail number N841BP, was pre-flighted by the mishap IP and mishap PUI. The mishap IP conducted a checklist-guided, pre-mission crew brief in the aircraft, and at approximately 1430L, the mishap PUI, under instruction from the mishap IP, completed engine start and run-up. A departure from the Will Rogers World Airport (KOKC) was completed, and the aircrew began the 12.3 nautical mile flight to the Clarence E. Page Municipal Airport (KRCE).

Upon arrival, the aircrew initially entered the area northeast of the runways on the airport property to conduct offsite airport landing training. After this initial training portion, the aircraft began approaches to a simulated pinnacle training structure, where the mishap IP critiqued the mishap PUI's overuse of out-of-ground-effect power. Subsequently, the mishap IP instructed the mishap PUI to enter left-hand traffic for runway 35L at Clarence E. Page Municipal Airport. The mishap IP gave the mishap PUI a simulated tail rotor control failure at a high-power setting during an altitude over airspeed takeoff from the simulated pinnacle training structure. The mishap PUI recovered from the simulated emergency within normal standards and conducted the appropriate emergency procedures in accordance with (IAW) the checklist. For the next maneuver, the mishap IP simulated a main rotor control servo slide valve seizure. Again, the mishap PUI accomplished the appropriate emergency procedure by isolating the primary flight control hydraulics IAW the checklist procedures and conducted a successful landing on runway 35L. On the ground, the mishap IP reconfigured the aircraft back to normal operating conditions by restoring hydraulic pressure to the primary flight control system. As part of the recovery procedure from this simulation, the mishap IP noticed that the aircraft took longer than usual to re-pressurize. The red HYD pressure warning light on the Caution Warning Panel (CWP) remained illuminated, and the controls remained unpressurized for seven seconds (three to five seconds is considered a normal re-pressurization period). When the

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light extinguished, the mishap IP stated that they *“would not accomplish any more hydraulic off simulated emergency procedures.”*

The next series of training iterations began with several quick stop maneuvers, which the mishap PUI completed by bringing the aircraft back to a hover from an aborted takeoff profile to evaluate the mishap PUI's ability to maintain heading control during the bottom portion of an autorotation. The mishap IP critiqued each quick stop with the mishap PUI upon completion of the maneuver while the aircraft remained in a hover. The mishap IP emphasized to the mishap PUI the need for forward airspeed to help with directional control in the event of a tail rotor control failure during takeoff. On the final quick stop iteration, the mishap IP gave the mishap PUI a simulated tail rotor control failure during the deceleration at a low-power setting. The mishap IP immediately recognized that the mishap PUI was having difficulty with this simulated failure and, therefore, joined the mishap PUI on the controls. The controls, however, did not respond as expected, so the mishap IP terminated the simulated emergency. The aircraft's nose continued to yaw left, as the flight controls reportedly did not respond as normal. The mishap IP announced to the mishap PUI, *“Stop fighting me on the controls; I have the aircraft!”* The mishap IP then glanced at the CWP and observed the red HYD pressure warning light was illuminated. The mishap IP instructed the mishap PUI to *“turn the hydraulics back on!”* The light, however, remained illuminated, and the aircraft continued in its uncommanded left yaw. The mishap IP reported that he *“felt the controls were not responding to his input.”* The aircraft entered an undesired aircraft state and departed controlled flight, initially moving over the ground at approximately 30 feet above ground level and at 25 knots indicated airspeed (KIAS). The mishap IP reported that the aircraft made three revolutions counterclockwise, and that, just prior to impact, the aircraft's nose tucked to the left and the fuselage slid to the right. The aircraft impacted the ground in a nose-low attitude with a right-lateral movement. The tail rotor contacted the ground, and the aircraft continued to spiral counterclockwise until it came to rest on its right side. The impact immediately ignited a post-crash fire, which began to consume the aircraft.

The mishap IP and mishap PUI reported that they remained conscious throughout the crash sequence. The mishap IP reported that he *“smelled smoke and unbuckled his seat belt.”* The mishap IP then told the mishap PUI that *“we are on fire and need to egress the aircraft immediately! Egress, egress, egress!”* The mishap PUI accomplished an emergency engine shutdown using the aircraft fuel flow control and emergency fuel cutoff handle. The mishap IP climbed out of the aircraft through the left crew door, which was facing skyward, and ensured the mishap PUI followed him. The mishap IP recovered his cellular phone and iPad outside of the wreckage near the tail boom, which was already on fire. The mishap IP called for assistance at approximately 1530L with his personal cellular phone. The mishap IP called the Operations Duty Officer (ODO), his supervisor, 911 emergency services, and his spouse, in that order.

A crew from the Fixed Base Operator assisted the aircrew. Local fire rescue arrived on scene approximately 30 minutes after the mishap. The ODO began executing the National Air Training Center (NATC) mishap plan and notification processes. The

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National Air Training Center

aircrew was briefly hospitalized at the University of Oklahoma Medical Center and released that evening.

Figure 1 – Mishap Location 1

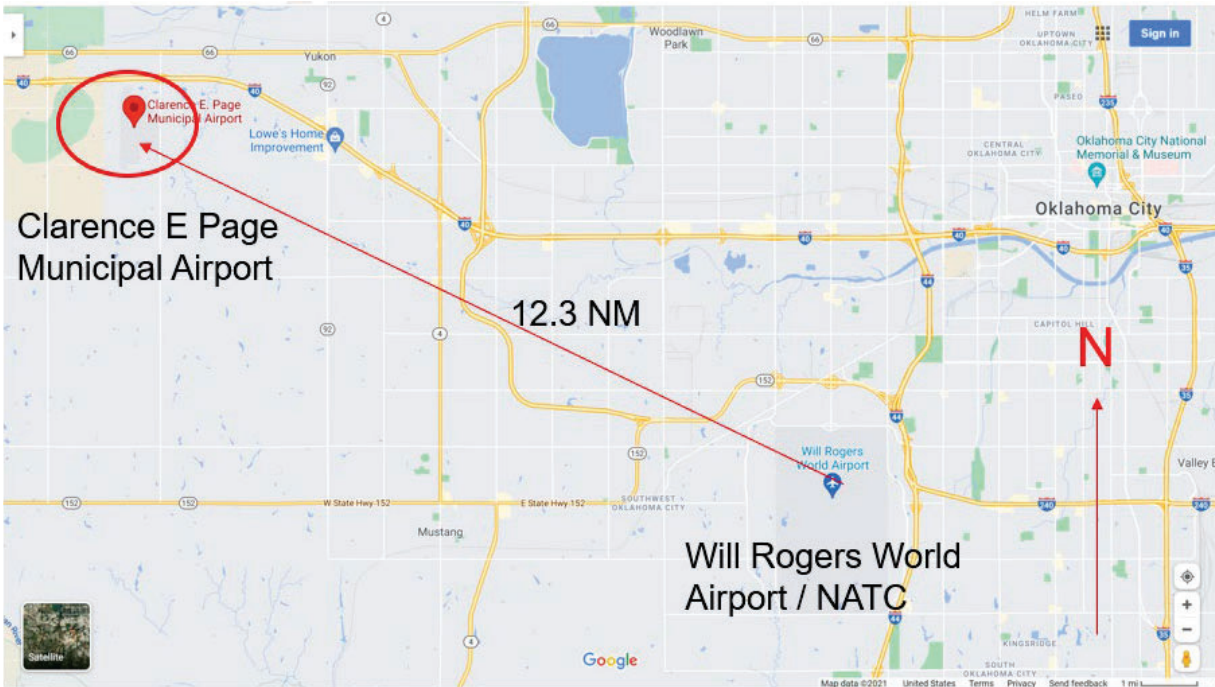


Figure 2 – Mishap Location 2



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National Air Training Center

Figure 3 – Mishap Scene 1 (Drone)



Figure 4 – Mishap Scene 2 (Drone)



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1.2 Injuries to Persons

The mishap IP and mishap PUI both reported minor injuries, including minor bumps, bruises, and abrasions, and that they were not seriously injured. Both crewmembers were briefly hospitalized, however, and released that evening. No injuries were reported to any personnel on the ground as a result of this incident.

1.3 Damage to Asset

The aircraft was destroyed due to a post-crash fire, which ignited immediately when the aircraft came to rest on its right-hand side.

Figure 5 – Aircraft Exterior 1

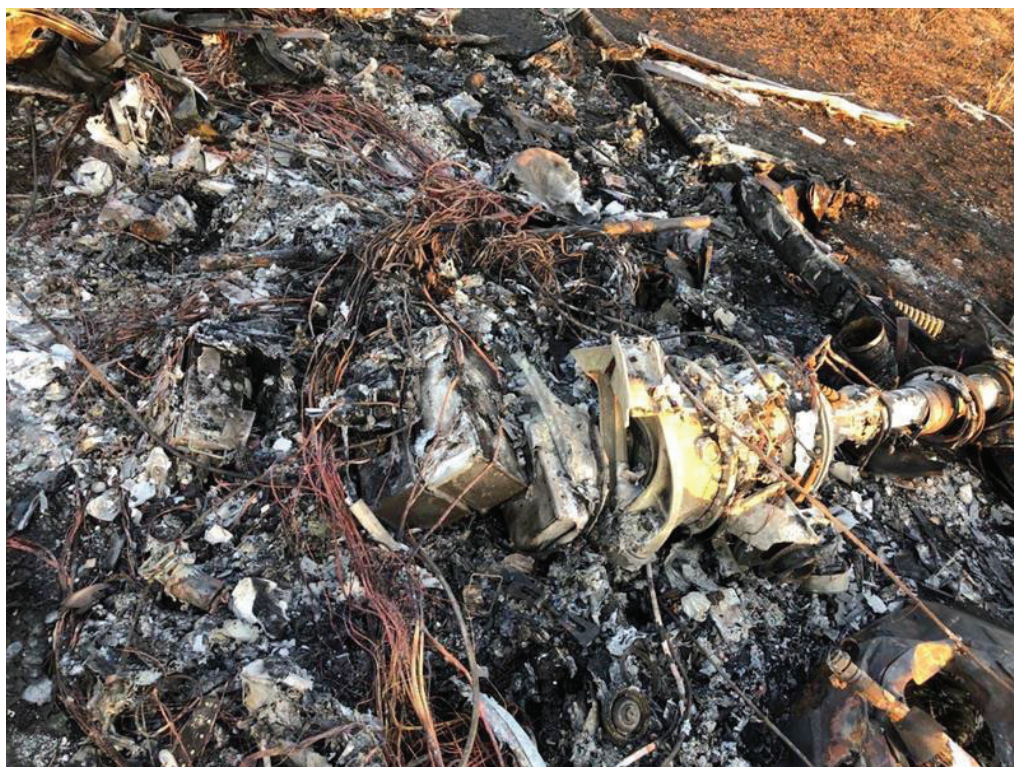


Figure 6 – Aircraft Exterior 2

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Figure 7 – Main Gear Box



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Figure 8 – Tail Section



Figure 9 – Instrument Panel



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Figure 10 – Free Power Turbine Disc Wheel (MO4)



Figure 11 – Accessory Drive Gear (MO1)



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1.3.1 Maintenance History

The aircraft was based in Oklahoma City, Oklahoma, and operated by NATC, located at the Will Rogers World Airport. The aircraft was maintained IAW Federal Aviation Administration (FAA) regulations and U. S. Customs and Border Protection (CBP) policy. A subsequent review of the aircraft logbook records indicated no significant maintenance findings related to the incident.

1.3.2 Recent Maintenance and Inspection History

The most recent scheduled aircraft maintenance was an extensive 600-hour phase inspection that was completed on May 7, 2021. Review of the aircraft logbook and discrepancy history revealed open discrepancies for non-flight critical components and post 600-hour routine inspections with no other noted deficiencies. The closed discrepancies were associated with the 600-hour inspection and other scheduled inspections. The accident investigation team discovered no maintenance-related causal factors associated with the incident. The aircraft was released through email authorization from the accident investigation team back to NATC on May 30, 2021.

1.4 Personnel Information

1.4.1 Instructor Pilot

The mishap IP, age 40, holds a commercial rotorcraft rating with instrument rating and a certified flight instructor rating in rotorcraft. He had a second-class medical certificate, dated September 29, 2020.

The mishap IP was hired by Air and Marine Operations (AMO) and stationed at the Tucson Air Branch as an Air Interdiction Agent (AIA) from August 17, 2008, until he transferred to NATC on July 7, 2019, and designated as an instructor in the AS350 B2 on July 18, 2019. He completed AS350 recurrent training at NATC on April 12, 2021.

He completed his most recent Annual Proficiency Evaluation with his recurrent training on April 12, 2021.

The mishap IP reports having approximately 6,000 hours total flight time in rotary-wing aircraft, including time in the UH-60 and the UH-72. The mishap IP had flown 1,862 hours with AMO in the AS350 as Pilot-in-Command (PIC), 514 hours as pilot monitoring, 473 hours as a crewmember, and 346 hours as an IP

The mishap IP's recent flight experience (30/60/90 days) is depicted in the matrix below:

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Mishap IP's Flight Experience	Past 30 Days	Past 60 Days	Past 90 Days
AS350 (PIC)	22.6	55.0	68.4
AS350 (Crew)	0	0	0
Total Flight Time	22.6	55.0	68.4

1.4.2 Pilot Under Instruction

The mishap PUI, age 45, was assigned as an AIA to the National Air Security Operations Center–Sierra Vista (NASOC–SV) on April 15, 2020. The mishap PUI was previously an Aviation Enforcement Agent (AEA) for 3.5 years at NASOC–SV and, prior to that, a U.S. Border Patrol Agent for 10.5 years. The mishap PUI was previously assigned to Tucson Air Branch as a Supplemental Aircrew Member for three years prior to his entrance on duty as an AEA and flew in AMO aircraft during his tenure in the U.S. Border Patrol.

Mishap PUI's Flight Experience	Past 30 Days	Past 60 Days	Past 90 Days
AS350 (PIC)	9.3	9.3	9.3
AS350 (PF)	9.7	9.7	12.2
AS350 (Crew)	0	2.4	2.4
Total Flight Time	9.	12.1	14.6

1.5 Aircraft Information

The aircraft, Aerospatiale model AS350 B2, Ecureuil S/N 2036, was manufactured by Aerospatiale (Airbus Helicopters), with a certificate issue date of November 24, 1987. The aircraft power plant, model Arriel 1D1, S/N: 9524, was manufactured by Turbomeca with an airworthiness date of November 24, 1987. The aircraft is registered to the Department of Homeland Security as N841BP. The aircraft total flight time at the time of the mishap was 15,261.6 hours.

1.6 Meteorological Information

Weather was not a direct factor in the mishap sequence; however, based on the wind direction and velocity, the loss of tail rotor effectiveness during the mishap sequence could have occurred as the aircraft rotated. The nearest reporting facility was the Clarence E. Page Municipal Airport automated weather observation station, which reported overcast skies at 5,500 feet with 10 statute miles visibility and winds out of the northeast at 030 degrees magnetic at 8 knots.

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1.6.1 Clarence E. Page Municipal Airport (KRCE)/ UTC-5/ (-4DT)

Figure 12 – Data at 2015 UTC (1515L) May 12, 2021

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KRCE 122055Z AUTO 01008KT 10SM FEW038 FEW047 OVC060 17/09 A3030 RMK A02  
KRCE 122035Z AUTO 36008KT 10SM FEW037 OVC060 18/10 A3030 RMK A02  
KRCE 122015Z AUTO 03008KT 10SM OVC055 18/09 A3030 RMK A02  
KRCE 121955Z AUTO VRB05KT 10SM OVC050 17/09 A3031 RMK A02  
KRCE 121935Z AUTO 03010KT 10SM FEW039 OVC050 17/10 A3031 RMK A02  
KRCE 121915Z AUTO 04006G12KT 10SM SCT039 OVC050 17/09 A3032 RMK A02
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1.7 Communications

The mishap location was on the airport property just west of runway 35L at Clarence E. Page Municipal Airport. This airport is in the Oklahoma City, Oklahoma, city limits, which afforded the aircrew the ability to use a cellular telephone to contact the ODO and make initial notification.

1.8 Mishap Location Information

The mishap occurred in the grassy area northwest of runway 35L on the property of Clarence E. Page Municipal Airport in Oklahoma City, Oklahoma.

1.9 Aircraft Performance

Based on gross weight calculation of the aircraft at takeoff, the aircraft was found to be below maximum gross weight limitations and within center of gravity limitations for the flight.

1.10 Wreckage Information

The aircraft was destroyed due to an extensive post-crash fire. Charred remains of the fuselage, main gear box, flight controls, hydraulics, crew station, instrumentation, and two of the three main rotor blades were recovered. Only eight feet of the aircraft’s tail boom remained, to include the vertical and horizontal stabilizers, damaged tail rotor, gearbox, and drive shaft.

1.11 Medical and Pathological Information

Both crewmembers were transported to the University of Oklahoma Medical Center post mishap. The crewmembers reported only minor injuries and were subsequently released that evening. The aircrew tested negative IAW post-mishap drug testing, as outlined in the “U.S. Customs and Border Protection Drug-Free Workplace Plan,” dated October 1, 2017.

1.12 Fire

Extensive post-crash fire consumed approximately 85 percent of the total aircraft.

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1.13 Additional Information

This flight was properly dispatched IAW branch and AMO policies by the Supervisory Air Interdiction Agent (SAIA)/CDO/CA at NATC. A written record is on file in the Tasking, Operations, and Management Information System (TOMIS) (Mission number MOKC202101074).

2 Analysis

The mishap IP and mishap PUI arrived at NATC at approximately 1200L, as assigned, on their scheduled duty day. Interview statements from both crewmembers, including a review of their scheduling history and rest times, revealed they had sufficient rest prior to reporting for duty. Review of the aircrew's schedule 120 hours prior to the mishap reflected both crewmembers received greater than the minimum 10-hour uninterrupted crew rest required by Aviation Operations Handbook (AOH) policy, and both conveyed that fatigue was not an issue during the mishap sequence. It was noted, however, that the mishap IP's schedule was shifted four hours earlier on the day of the mishap. His schedule was shifted from 1600L-0000L to 1200L-2000L to accomplish the mishap PUI's scheduled training flights. The shift in schedule still allowed for 12 hours off duty prior to the next scheduled duty day. This practice, although within AOH policy, creates an opportunity for the mishap IP to accumulate acute fatigue due to the change in sleep patterns needed to meet short-notice schedule changes and is not the most conservative approach when scheduling aircrew.

The two training flights scheduled for the mishap PUI that afternoon were tailored to meet his training needs. A group consisting of the CDO, a NATC Aircraft Flight Instructor, and an SAIA reviewed the PUI's gradesheets and discussed a concern regarding the mishap PUI's ability to complete the AS350 Instructor Qualification Course. This was due to several deficiencies and below-standard grades in Oral Knowledge, Emergency Procedures, Limitations, and Instruments on his five previous instructional flights. Multiple instructors are often used to provide breadth of instruction and techniques; however, the decision was made to provide the mishap PUI with more consistent instruction to aid him in successfully completing the course. The CDO discussed the mishap PUI's performance with the mishap IP and advised him to "*focus on the oral evaluation, instrument procedures, [and] touchdown autorotational training.*" The mishap IP, therefore, worked to develop a training plan to improve those tasks. The mishap IP briefed the mishap PUI on the training plan and specifically discussed tail rotor control malfunctions and the importance of airspeed when one is identified. A risk assessment was completed, reviewed, and evaluated by the mishap IP and CDO as medium risk with a risk value of 39. They finalized the mishap PUI's training plan and discussed the fitness of the crew, where both crewmembers indicated they had good crew rest and that no abnormalities on the risk assessment were noted. An additional discussion revolved around the intent to accomplish touchdown autorotational training and instrument training to clear up the deficient maneuvers from the previous day.

At the Clarence E. Page Municipal Airport, the mishap IP began instruction with some off-field landing zone training. However, due to tall grass, the mishap IP called off this training maneuver. During the subsequent training evolutions, the mishap IP instructed the mishap PUI to conduct a steep approach to a simulated pinnacle landing area on the airport property. Doing this

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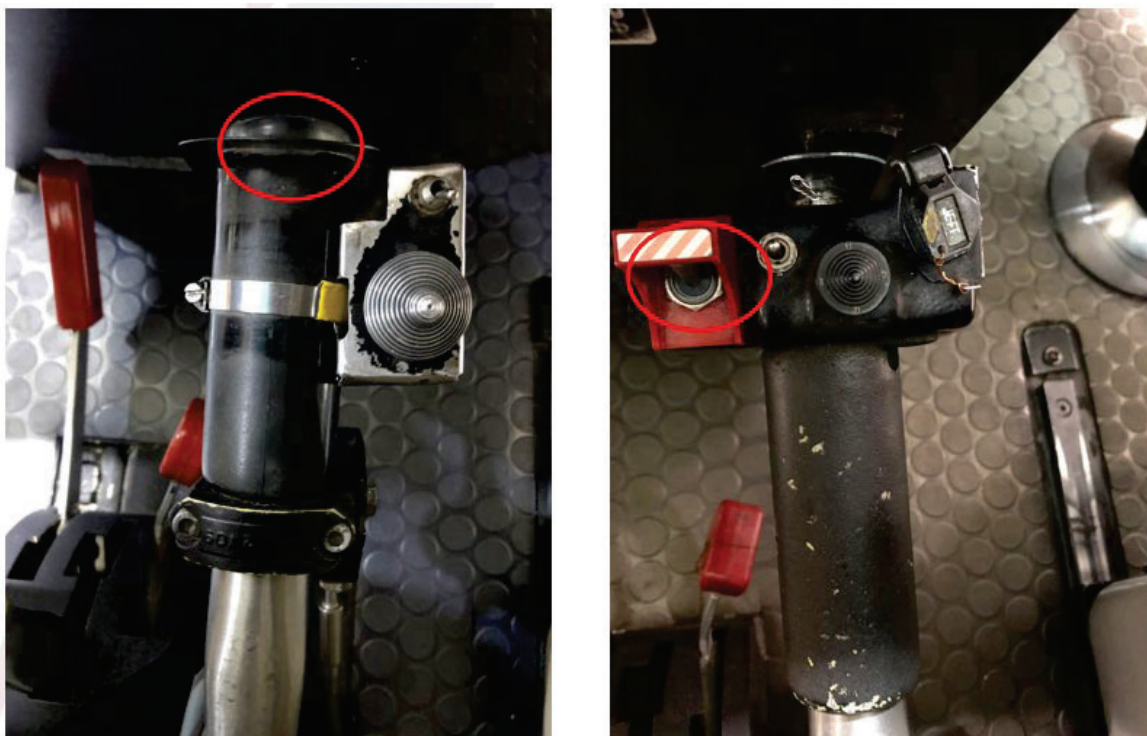
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maneuver incorrectly can result in higher-than-anticipated or needed engine power settings, which may produce an undesired aircraft state during operations at high-density altitudes, hot temperatures, and heavy-aircraft gross weights. The mishap PUI did not accomplish the maneuver correctly and was given further instruction to correct deficiencies in his approach techniques. Upon departing the simulated pinnacle training area, the mishap IP gave the mishap PUI a simulated tail rotor control failure emergency procedure at a high-power setting while conducting an altitude over airspeed takeoff. The mishap PUI identified the simulated emergency procedure correctly and accomplished the appropriate emergency responses IAW the CBP checklist. However, the investigation team determined that the mishap IP inappropriately conducted the simulated tail rotor control emergency procedure outside the requirements listed under the description in Task 40 of AMO's Aircraft Standardization Manual (ASM) for the AS350. The ASM specifies in Chapter 2.1(D) for Crewmember Training Guidelines, "Instructors shall train tasks in accordance with the task description or with the referenced publication(s). When descriptions of tasks are indicated, the description is the mandatory technique for training and evaluation." Task 40 in the ASM states that the aircraft must be at 80 KIAS and level flight prior to applying tail rotor pedal pressure to deviate the aircraft's heading plus or minus 10 degrees and holding it to simulate a fixed-pitch setting and subsequent simulated loss of tail rotor control. Simulating a loss of tail rotor control outside these parameters constitutes a violation of the ASM. (*HFACS – Routine Violation – Violated SOP/Policy – RV24*)

As the training flight continued, the mishap IP instructed the mishap PUI to conduct left hand traffic for runway 35L. During the downwind, the mishap IP simulated a servo slide valve seizure by applying lateral pressure on the cyclic. The mishap PUI identified the simulated emergency correctly and accomplished the appropriate emergency response IAW the CBP checklist by isolating the primary flight control hydraulics through the Hydraulic Pressure Push Button on the forward portion of the collective (Figure 15, R/H photo). This configuration of the Hydraulic Pressure Push Button exists on older model AS350 B2 aircraft, of which AMO had three in its inventory—two at NATC and one at the Del Rio Air Unit in Del Rio, Texas. This is a non-standard configuration for AMO AS350 B2 aircraft. Pilots are briefed prior to each training flight at NATC when these aircraft are used. (Figure 13, L/H photo) The standard collective configuration for all other AMO AS350 aircraft is depicted in the below comparison photo. (Figure 13, R/H photo)

Figure 13 – AS350 B2 Collective Stick Comparison

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As the previous simulated emergency procedure was completed and the mishap IP was returning the aircraft back to a normal configuration, the mishap IP determined that the hydraulics for the primary flight controls took longer than expected to repressurize. The mishap IP stated in his post-mishap interview that *“it took a little longer than usual to repressurize. Normally, it takes two to three seconds to repressurize, but the light didn’t go out like normal, and controls were still stiff after seven seconds.”* The investigation team learned that Airbus Helicopters was consulted by AMO’s contract maintenance provider, Pacific Architects and Engineers (PAE), after several pilots voiced concerns and wrote up hydraulic re-pressurization discrepancies against this specific aircraft in the aircraft’s logbook. PAE referenced Airbus’s reply, which described that *“this type of hydraulic system may exhibit this type of behavior,”* and that *“it’s a normal phenomenon.”* Regardless, the mishap IP determined that they were not going to manipulate the Hydraulic Pressure Push Button anymore during this flight as the mishap IP had a previous incident where the Hydraulic Pressure Push Button was *“sticky,”* which could compromise the training flight. The mishap IP proceeded to discuss quick stops above and below effective translational lift with the mishap PUI for the next training iteration.

The mishap IP continued the training flight by instructing the mishap PUI to conduct several iterations of quick stop maneuvers to determine the mishap PUI’s level of competency and control touch of the aircraft during the bottom portion of an autorotation. According to the FAA’s Instructor Handbook, the quick stop maneuver is *“a rapid deceleration, or quick stop, which is used to decelerate from forward flight to a hover. The objective of a rapid deceleration or quick stop is to lose airspeed rapidly while maintaining a constant heading, ensuring adequate tail rotor to ground clearance at all times. Quick stops are practiced to improve coordination and to increase proficiency in maneuvering a helicopter.”*

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Figure 14 – Quick Stop Maneuver



During the final quick stop maneuver, the mishap IP gave the mishap PUI a simulated tail rotor control failure at a low-power setting (Figure 14, point 4) when the aircraft was at 50-55 KIAS and in a decelerative attitude. The mishap PUI inappropriately responded to the simulated emergency procedure by depressing the Hydraulic Pressure Push Button located on the forward end of the collective (Figure 15, R/H photo). The mishap PUI stated in his post-mishap interview that *“the controls were very stiff. The IP yelled, ‘Get the hydraulics back on!’ I intentionally pressed the button but felt no effect. I pressed the button a second time attempting to re-engage the hydraulics while attempting to verify with the hydraulic light on the Caution Warning Panel. I noticed the hydraulic light still on and attempted to press the button a third time. By this time, I could see the ground approaching rapidly out my right-side door.”* The design characteristics of this specific collective control head does not allow the pilot to visually observe the position of the switch. Therefore, the only way to determine the hydraulic configuration of the aircraft is to feel it tactilely, which is hindered by a gloved hand, and to verify the red HYD warning light on the CWP is not illuminated. This action ultimately resulted in the depressurization of hydraulic pressure to all three primary flight control servos, producing an undesired aircraft state based on the aircraft’s attitude, altitude, and airspeed relative to the Earth’s surface. Continued pressing of the Hydraulic Pressure Push Button resulted in a continuous cycle of depressurization and re-pressurization of the primary flight control hydraulics. The sequence and timing of depressing the Hydraulic Pressure Push Button never allowed the hydraulic system to reach full pressurization. (*HFACS – Unsafe Act–Decision Error–Misdiagnosing an alarm or emergency. DE-17*)

The physical strength to move the flight controls while depressurized is difficult and places the aircraft in a Land as Soon as Possible configuration using a shallow approach to a run-on landing. The mishap IP reported that the controls did not respond as expected, so the mishap IP initially terminated the simulated emergency; however, the aircraft’s nose continued to yaw left. Both crewmembers reported that the mishap IP announced to the mishap PUI to *“stop fighting me on the controls, I have the aircraft!”* The mishap PUI reported in his post-mishap interview that *“I panicked. I was trying to do anything to stop the left yaw and get a response. I remained on the controls because I was trying to help.”* The mishap IP reported that he glanced at the CWP and observed the red HYD warning light was illuminated. The illumination of this light

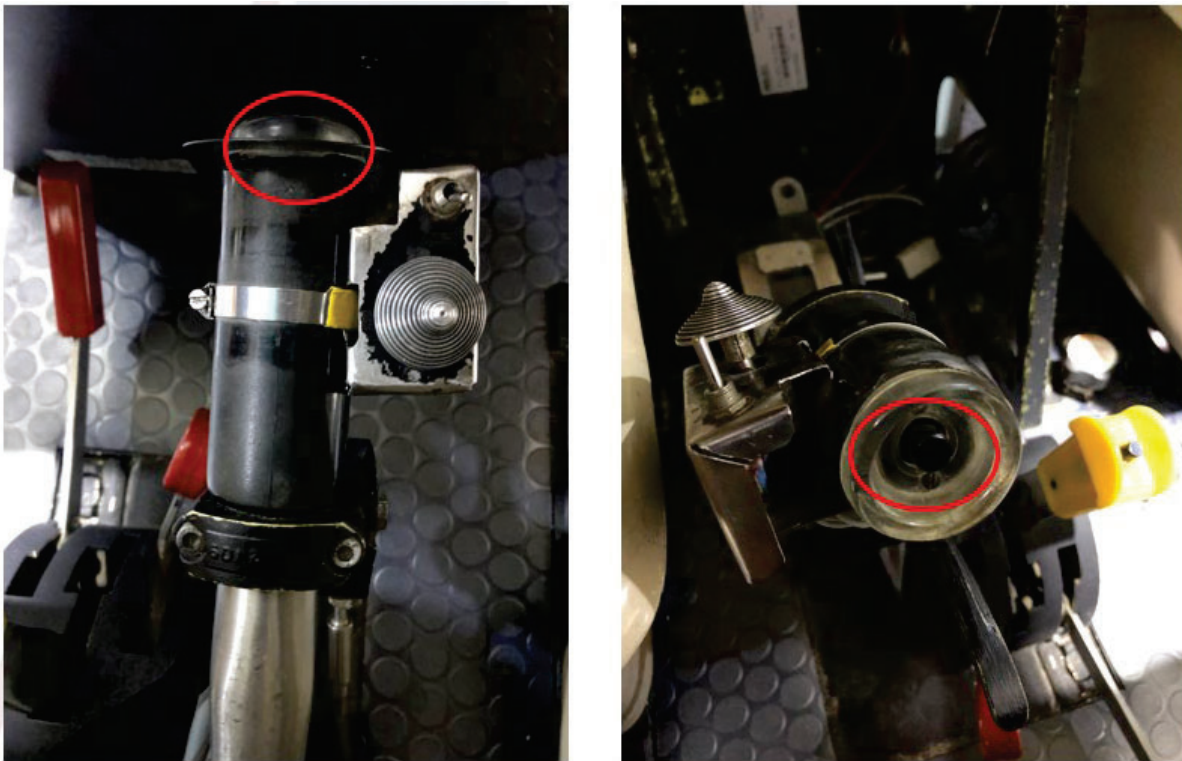
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without the presence of the audible warning horn indicated the hydraulics were switched OFF through the Hydraulic Pressure Push Button being depressed on the collective. Because the mishap PUI remained on the control and without hydraulic pressure to assist the mishap IP in making flight control inputs, the investigation team determined it would be nearly impossible for the mishap IP to recover the aircraft based on the aircraft's configuration, proximity to the ground, and interference from the mishap PUI on the controls. (HFACS – Unsafe Act–Decision Error–Delayed Necessary Action – DE28) – (HFACS – Unsafe Act–Skill Based Error – Undesired Aircraft State – SBE26)

As the aircraft entered the undesired aircraft state, it departed controlled flight, initially moving over the ground at approximately 30 feet above ground level and at 25 knots ground speed. The mishap IP reported that the aircraft made three revolutions counterclockwise just prior to impact. The aircraft impacted the ground in a nose-low attitude with a right lateral movement and came to rest on its right side after at least one more complete revolution occurred. This was determined by the ground scarring in the grassy sod adjacent to the final crash site.

Figure 15 – Hydraulic Pressure Push Button



The investigation team determined that the mishap PUI incorrectly responded to the simulated tail rotor control failure by isolating the primary flight control hydraulics through the collective mounted Hydraulic Pressure Push Button. The appropriate response according to the AS350 ASM, Chapter 3, Task 40 – “Standard: (1) Determine the appropriate corrective action and

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perform or describe all immediate action procedures” described in the AMO pilot checklist for a tail rotor control failure initially is “AIRSPEED – SET 70 KIAS / LEVEL FLIGHT”. Instead, the mishap PUI improperly responded to the simulated tail rotor control failure through the Hydraulic Failure in Flight emergency procedure. The mishap PUI accomplished step number two, as recalled by memory, by placing the Hydraulic Pressure Push Button HYDRAULIC PRESSURE SWITCH (Collective) OFF (Figure 15, R/H photo). This action was causal to the mishap, as it produced the undesired aircraft state and subsequent chain reaction leading to the loss of aircraft control, departure of controlled flight, and ground impact of the aircraft. (*Unsafe Act–Skill Based Error–Aircraft Control Inadequate (e.g., abrupt, excessive, not maintained) – SBE-2*), (*Unsafe Act–Decision Error–Misdiagnosing an alarm or emergency – DE-17*) – (*Unsafe Act–Decision Error–Wrong Choice of Action During an Operation (e.g., wrong response to an emergency) – DE-29*) – (*Precondition for Unsafe Act–Physical-Mental Limitation–Inadequate or Limited experience/proficiency/practice – PML-3*)

Figure 16 – PUI Emergency Procedure Checklist Error

ENGINE FAILURE – CRUISE		MAIN SERVO CONTROL SLIDE VALVE SEIZURE	
AUTOROTATE AIRSPEED 40 KIAS		1. HYDRAULIC PRESSURE SWITCH (Collective) OFF	
GOVERNOR FAILURE – LOW SIDE		2. AIRSPEED ADJUST (40-60 KIAS)	
1. AUTOROTATE AIRSPEED 40 KIAS		3. LAND AS SOON AS POSSIBLE SHALLOW APP/RUN-ON LG	
2. FUEL FLOW CONTROL ADVANCE (Gas Emergency Stop) 70% N ₁		After Landing:	
3. COLLECTIVE ADJUST to 100% (200%)		4. COLLECTIVE LOCK	
4. FUEL FLOW CONTROL INCREASE to 100% (200%)		5. ENGINE SHUTDOWN COMPLETE	
5. REEVALUATE OR THE FLIGHT (200%)		YAW SERVO CONTROL SLIDE VALVE SEIZURE (ROVER)	
6. LAND AS SOON AS PRACTICABLE SHALLOW APP/RUN-ON LG		If not control is maintained	
GOVERNOR FAILURE – HIGH SIDE (eg. T₁₀, N₁, & T₁₀ increase)		LAND AS SOON AS POSSIBLE	
1. COLLECTIVE (to maintain N ₁ Limit) DO NOT REDUCE		If not control is maintained	
2. FUEL FLOW CONTROL (Load N ₁ within Limits) REDUCE		1. HYDRAULIC PRESSURE SWITCH (Collective) OFF	
3. MAINTAIN N ₁ IN THE GREEN ARC WITH COLLECTIVE AND FFC		2. LAND AS SOON AS POSSIBLE	
4. LAND AS SOON AS PRACTICABLE SHALLOW APP/RUN-ON LG		After Landing:	
ENGINE SURGING		1. COLLECTIVE LOCK	
1. COLLECTIVE ADJUST		2. ENGINE SHUTDOWN COMPLETE	
If surging continues		ENG P LIGHT ENG P	
2. FUEL FLOW CONTROL REDUCE (To Lower Governor Range)		1. POWER REDUCE	
3. LAND AS SOON AS POSSIBLE		If Oil Press Low or Zero	
If surge E & tendency for divergence or increasing oscillation		AND TQ is Very Low AUTOROTATE ENG SHUTDOWN	
4. AUTOROTATE ENG SHUTDOWN		AND TQ is Normal LAND IMMEDIATELY	
ENGINE FIRE – DURING START ENG F		If Oil Press Normal	
1. FFC OFF		LAND AS SOON AS POSSIBLE	
2. FUEL SHUT OFF CLOSE		LOW ENGINE OIL PRESSURE (GAUGE)	
3. BOOST BRAKE (to Stop) ENGAGE		1. WARN FIRE TEST CHECK ENG P LIGHT	
4. FUEL PUMP 1 & 2 OFF		BENG Fuel Off when tested AUTOROTATE ENG SHUTDOWN	
5. CRANK ENGINE SWITCH ENGAGE (20 seconds)		AND TQ is Very Low	
6. BRAKE POWER OFF		AND TQ is Normal LAND AS SOON AS POSSIBLE	
ENGINE FIRE (IN FLIGHT) ENG F		AND TQ is Very Low	
1. AUTOROTATE AIRSPEED 40 KIAS		AND TQ is Normal LAND AS SOON AS PRACTICABLE	
2. FUEL SHUT OFF CLOSE		HIGH ENGINE OIL TEMPERATURE (ROVER OR FLIGHT)	
3. FUEL PUMPS 1 & 2 OFF		1. LAND AS SOON AS POSSIBLE	
4. GENERATOR OFF		If TEMPERATURE DECREASES BELOW THE REDLINE	
5. MASTER CUTOFF (if there is a backup start) OFF		3. LAND AS SOON AS PRACTICABLE	
TAIL ROTOR DRIVE FAILURE – ROVER/EGE		If THE TEMPERATURE REMAINS ABOVE THE REDLINE	
1. COLLECTIVE REDUCE		4. LAND AS SOON AS POSSIBLE	
2. LAND MAINTAIN LEVEL ATTITUDE		NOG FLIGHT NOG	
TAIL ROTOR DRIVE FAILURE – ROVER/EGE		1. POWER REDUCE	
1. COLLECTIVE REDUCE (to 100%)		2. LAND AS SOON AS POSSIBLE	
2. AIRSPEED INCREASE		3. LAND AS SOON AS POSSIBLE	
3. LAND AS SOON AS POSSIBLE		MAINT LIGHT MAINT	
4. AUTOROTATE ENG SHUTDOWN MINIMIZE TOUCHDOWN SPEED		1. POWER REDUCE	
TAIL ROTOR DRIVE FAILURE – IN FLIGHT		2. LAND AS SOON AS POSSIBLE	
1. COLLECTIVE REDUCE (to 100%)		MAINT CHIP LIGHT MAINT	
2. AIRSPEED ADJUST (to Maintain 100%)		1. POWER REDUCE	
3. LAND AS SOON AS POSSIBLE		2. LAND AS SOON AS POSSIBLE	
4. AUTOROTATE ENG SHUTDOWN MINIMIZE TOUCHDOWN SPEED		ENG CHIP LIGHT ENG	
TAIL ROTOR CONTROL FAILURE		1. POWER REDUCE	
1. AIRSPEED SET TO 70 KIAS / LEVEL FLIGHT		2. LAND AS SOON AS POSSIBLE	
2. HYD TEST ENGAGE (5 Sec) & RESET		TGB CHIP LIGHT TGB	
3. LAND AS SOON AS PRACTICABLE SHALLOW APP/RUN-ON LG		1. POWER REDUCE	
HYDRAULIC FAILURE IN FLIGHT HYD		2. LAND AS SOON AS POSSIBLE	
1. AIRSPEED ADJUST (40-60 KIAS)		FIL LIGHT (JITTER) FIL	
2. HYDRAULIC PRESSURE SWITCH (Collective) OFF		1. POWER REDUCE	
3. LAND AS SOON AS POSSIBLE SHALLOW APP/RUN-ON LG		2. LAND AS SOON AS POSSIBLE	
After Landing:		N INDICATOR FAILURE	
4. COLLECTIVE LOCK		1. TORQUE MAINTAIN ABOVE 10%	
5. ENGINE SHUTDOWN COMPLETE		2. RPM MONITOR	
HYDRAULIC FAILURE IN ROVER HYD		3. LAND AS SOON AS POSSIBLE	
1. LAND NORMALLY		ENGINE SHUTDOWN COMPLETE	
After Landing:			
2. COLLECTIVE LOCK			
3. ENGINE SHUTDOWN COMPLETE			



TAIL ROTOR CONTROL FAILURE

- AIRSPEED SET TO 70 KIAS / LEVEL FLIGHT
- HYD TEST ENGAGE (5 Sec) & RESET
- LAND AS SOON AS PRACTICABLE SHALLOW APP/RUN-ON LG

HYDRAULIC FAILURE IN FLIGHT HYD

- AIRSPEED ADJUST (40-60 KIAS)
- HYDRAULIC PRESSURE SWITCH (Collective) OFF
- LAND AS SOON AS POSSIBLE SHALLOW APP/RUN-ON LG



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2.1 Pilot Under Instruction Hiring Process

According to the Institute of Medicine (US) Committee on Quality of Health Care in America; Kohn LT, Corrigan JM, Donaldson MS, editors. *To Err is Human: Building a Safer Health System*. Washington (DC): National Academies Press (US); 2000, “Latent errors pose the greatest threat to safety in a complex system because they are often unrecognized and have the capacity to result in multiple types of active errors.”¹

According to *Human error: Models and management*, James Reason, Professor of Psychology, Department of Psychology, University of Manchester, Manchester M13, “Latent conditions are the inevitable ‘resident pathogens’ within the system. They arise from decisions made by designers, builders, procedure writers, and top-level management. Such decisions may be mistaken, but they need not be. All such strategic decisions have the potential for introducing errors into the system... Latent conditions—as the term suggests—may lie dormant within the system for many years before they combine with active failures and local triggers to create an accident opportunity. Unlike active failures, whose specific forms are often hard to foresee, latent conditions can be identified and remedied before an adverse event occurs. Understanding this leads to proactive rather than reactive risk management.”²

The AMO hiring process for new hire AIA pilots is structured to ensure compliance to CBP hiring policy and, more importantly, to insulate the organization from latent safety errors. This is accomplished by denying employment to persons who do not possess the appropriate experience to accomplish AMO’s mission safely and without unnecessary organizational risk assumption. Therefore, the AMO hiring process is the first and most important organizational safety process designed to protect the organization from unrecognized latent safety errors. Active errors while conducting organizational safety processes can insert multiple types of latent errors later during AMO mission-specific operations. During the investigation, the investigation team determined that the hiring process the mishap PUI was assessed under had errors, which allowed the mishap PUI to gain employment as an AIA outside of CBP hiring requirements and circumvent AMO’s organizational safety processes through the introduction of latent safety errors.

The mishap PUI received several opportunities in the year prior to his appointment as an AIA to acquire flight experience while on temporary duty as an AEA. In May 2019, the mishap PUI was approved by the NASOC–SV Director, Air and Marine Operations (DAMO), to travel to the Laredo Air Branch in Laredo, Texas, for 30 days on a

¹ Institute of Medicine (US) Committee on Quality of Health Care in America; Kohn LT, Corrigan JM, Donaldson MS, editors. Washington (DC): National Academies Press (US); 2000. <https://www.ncbi.nlm.nih.gov/books/NBK225171/>

² *Human error: Models and management*, James Reason, Professor of Psychology, Department of Psychology, University of Manchester, Manchester M13 9PL, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1117770/>

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professional development opportunity, or “seasoning,” prior to his assessment as an AIA. During this professional development opportunity, the mishap PUI was scheduled to fly on operational missions with multiple PICs in the EC120 helicopter. Also, during that time, the mishap PUI logged 38.9 hours of “Pilot Flying” flight time in TOMIS and, according to the mishap PUI’s post-mishap statement, *“logged PIC flight time as the sole manipulator of the flight controls in my personal logbook.”*

IAW Federal Aviation Regulation (FAR) § 61.51(e)(1)(i), “a pilot may log” PIC flight time “except when logging flight time under § 61.159(c), when the pilot is the sole manipulator of the controls of an aircraft for which the pilot is rated.” This process allowed the mishap PUI to sit in the left-hand seat of an AMO helicopter and log flight time IAW FAR § 61.51 under his helicopter category airman certificate. It was noted that, although these flights exposed the mishap PUI to the operational rigors in light enforcement helicopter flying, at no time was the mishap PUI under the formal instruction of an AMO instructor pilot, enrolled in any formal flight training plan to include the AEA Transition Program, or primarily assigned as the PIC responsible for formal risk decisions.

In November 2019, the mishap PUI was approved by the NASOC–SV DAMO to travel to the Manassas Air Branch for approximately one week on another professional development opportunity. During this time, the mishap PUI was scheduled to fly operational missions with a Manassas Air Branch PIC and IP. The mishap PUI logged “Pilot Flying” flight time in TOMIS, amounting to 5.8 flight hours. Again, the PUI was not enrolled in any formal flight training plan, to include the AEA Transition Program, or primarily assigned as the PIC responsible for formal risk decisions. In December 2019, the mishap PUI was scheduled by NASOC–SV to attend a NATC hiring event in El Paso, Texas. This event provided the mishap PUI with the opportunity to take a NATC 3-part AIA hiring assessment, which included a structured interview, pilot document inspection, oral knowledge evaluation, and flight evaluation with a NATC IP. The mishap PUI passed this assessment and entered on duty with AMO as an AIA on April 15, 2020.

The mishap PUI received an AMO Human Capital-generated New Hire Flight Hour Waiver at some point during his hiring process. The New Hire Flight Hour Waiver is based on five specific categories of flight experience, which will qualify an AIA new hire candidate to receive a waiver towards the total number of required flight hours for the AIA position (1,500 hours). The individual assigned to complete AMO New Hire Flight Hour Waivers for AMO was a Supervisory Aviation Enforcement Agent. Based on a review of this individual’s qualifications, the individual did not have the aviation background, FAA certification experience, or requisite knowledge to qualify or adequately assess reductions in flight hour requirements based on specific FARs for pilot certifications. FAA certifications, when possessed by AIA applicants, mitigate latent safety hazards from infiltrating AMO operations. An individual in the position to determine flight hour reductions needs appropriate formal training on FAA airmen certification requirements and a formal checklist process to compare waiver requests to AMO policy and safety considerations. Without the knowledge of the requirements for

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FAA certifications according to the FAA FARs, this Supervisory Aviation Enforcement Agent was placed in the position without the requisite knowledge to perform the duties required of that position.

The mishap PUI subsequently received a 300-hour Flight Hour Waiver for Complex Aircraft Flight Instructor Experience and a 200-hour Flight Hour Waiver for Multi-Engine Aircraft Time. This allowed the mishap PUI to continue with AMO's new hire assessment process because it afforded him a 500-hour Flight Hour Waiver, thus reducing the total flight hour requirement to 1,000 hours from a 1,500-hour hiring requirement. The accident investigation team determined that, in fact, the mishap PUI had neither a Certified Flight Instructor airman certificate nor a Multi-Engine rating on his airman certificate to qualify for such a Flight Hour Waiver. Therefore, the New Hire Flight Hour Waiver used to qualify the mishap PUI for a reduction in the total number of required flight hours from 1,500 to 1,000 hours for the AIA, 1881 series position was invalid. *(HFACS – Unsafe Act–Skill Based Error–Data Entry/Cross Check Error – SBE-6) (Latent Error #1)*

After reviewing the mishap PUI's Human Capital Automated Workflow (HCAW) hiring documentation and the NATC 3-part AIA hiring assessment, the investigation team determined the mishap PUI did not meet the NATC-administered AMO new hire pilot assessment prerequisites, IAW the CBP job series 1881 In-Service Placement Action Policy guidance, at the time of the mishap PUI's interview on December 10, 2019. The previously invalid New Hire Flight Hour Waiver was reviewed and accepted at this time; however, it was not determined to be invalid by the NATC hiring team. An additional CBP Office of Personnel Management (OPM) Job Series Waiver for the CBP job series 1881 qualification requirements specified the mishap PUI would require 1,125 hours of documented flight time and an FAA First-Class Medical Certificate to be considered fully qualified for the AIA 1881 position under this specific CBP OPM Job Series Waiver. The 1,125-hour Job Series Waiver requirement is determined based on OPM's policy guidance for the CBP job series 1881, which states "up to one-fourth of the total flight hours may be waived for individuals who have demonstrated possession of the knowledge and skills needed to perform the work." This computation results in 1,125 hours based on one-fourth of 1,500 hours required for the series 1881 position. The mishap PUI self-reported 1,089 hours on his resume on December 10, 2019, which was subsequently reviewed during the NATC 3-part AIA hiring assessment. This value was 36 flight hours shy of the 1,125 hours needed for the Job Series Waiver. The investigation team determined that due to the previous error committed by the AIA hiring assessment team at NATC by validating the invalid New Hire Flight Hour Waiver that verification of this job series waiver requirement was not accomplished. *(HFACS – Unsafe Act–Skill Based Error–Data Entry/Cross Check Error – SBE-6) (Latent Error #2)*

The mishap PUI's FAA First-Class Medical Certificate needed to qualify for the CBP job series 1881 and submitted for use on the mishap PUI's HCAW was dated December 19, 2019. This medical certificate was dated nine days after the NATC 3-part AIA hiring assessment. Therefore, the medical certificate used to qualify the mishap PUI under the

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NATC 3-part AIA hiring assessment was not the same medical certificate used to process the mishap PUI through the HCAW, which must be submitted to the CBP Headquarters Office of Human Resources Management (HRM) prior to scheduling the NATC 3-part AIA hiring assessment. Either the NATC 3-part AIA hiring assessment pilot document inspection also failed to identify this deficiency or the mishap PUI did not have an appropriate medical certificate at the time of the new hire assessment. (*HFACS – Unsafe Act–Skill Based Error–Data Entry/Cross Check Error – SBE-6*) (*Latent Error #3*)

Throughout the investigation and during the interviews of several key AMO Headquarters Human Capital personnel, all reported that they had understood the mishap PUI was assessed through AMO’s AEA Transition Program (AMO Policy 250.01, dated January 13, 2020) as the term “AEA to AIA” was an understood AMO-specific hiring phrase and was repeatedly used to describe the mishap PUI’s hiring process. The mishap PUI’s AMO Headquarters Personnel Request Justification Form, dated February 12, 2020, mirrored this understanding, as it labeled the mishap PUI’s justification for hire as being completed under the AEA Transition Program since it was labeled “AEA to AIA” under the solicitation announcement block. Further investigation found no “AEA to AIA” internal solicitation announcement IAW AMO Policy 250.01 for the mishap PUI to be assessed under, and instead he was hired through a change to a lower grade personnel action from an AEA, GS-13, to an AIA, GS-12, by AMO Human Capital. To reiterate, the AEA Transition Program policy was signed and implemented almost one month prior to the mishap PUI’s personnel action; however, it was not followed for one of two possible conclusions. Either AMO Human Capital personnel processed the mishap PUI’s AIA assessment under the AEA Transition Program process IAW AMO Policy 250.01 without any of the required justification as dictated by the policy; or every individual from AMO Human Capital responsible for contributing to the hiring process through the HCAW assessed the mishap PUI under a generic AIA hiring announcement, even though the Headquarters Personnel Request Justification Form, dated February 12, 2020, labeled the mishap PUI’s assessment as an “AEA to AIA” and the HCAW Operations Researcher noted on the HCAW that “this selection is IAW the staffing requirements of NASOC–SV and is IAW the ‘AEA to AIA’ Transition Program.” This particular conclusion is predicated on the understanding that the AMO Human Capital team members were unfamiliar with the AEA Transition Program policy, its existence, and its requirements prior to processing the mishap PUI’s personnel action. Subsequently, this assumption was allowed to propagate based on the expectation that everyone in the chain of command required to approve the HCAW personnel action, to include top-level management, would reject the personnel action if an error was to be identified. This overreliance on others within the organization to identify errors creates a human factors error referred to in “The Field Guide to Understanding ‘Human Error’” as a “Fallacy of Social

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Redundancy.”³ Ultimately, this led key decision makers to assume the mishap PUI was being assessed under one program that, by design, is meant to mitigate latent organizational safety errors by requiring adherence to specific training, mentorship, and hiring processes prior to being hired rather than a generic personnel action that merely changed the mishap PUI’s job series and pay grade to that of an AIA. (*HFACS – Unsafe Act–Skill Based Error–Data Entry/Cross Check Error – SBE-6; Organizational Climate – Human Resource Policy/Practices/Procedures not Practiced, Enforced or Consistent – (OC-2); Organizational Climate – Organizational Over-Confidence in Safety Standards – (OC-22) (Latent Error #4)*)

Further review of the mishap PUI’s acquired flight hours and TOMIS flight hour entries produced only 2 additional flight hours which were acquired from December 10, 2019, to April 15, 2020, placing the mishap PUI 34 hours short of the CBP job series 1881 In-Service Placement Action qualification requirements. At the time of the writing of this report, it has been identified by the investigation team that the mishap PUI does not currently have the requisite number of flight hours to be qualified as an AIA, CBP job series 1881 employee. (*HFACS – Unsafe Act–Skill Based Error–Data Entry/Cross Check Error – SBE-6) (Latent Error #5)*)

2.2 Aircrew Flight Helmets

The investigation team determined the mishap crewmembers were wearing two different helmet types when the mishap occurred. The mishap IP was wearing AMO’s previously issued MSA LH250 Gallet helmet and was seated in the left-hand seat of the aircraft, while the mishap PUI wore AMO’s new Gentex HGU-56P helmet and was seated in the right-hand seat of the aircraft. Both helmets were sent to certified helmet repair facilities for inspection and post-mishap analysis. Post-accident analysis of both helmets was necessary to ensure AMO-issued aviation life support equipment (ALSE) performed appropriately during this accident sequence. The primary concern is to identify, if any, shortcomings which would pose a safety risk to AMO aircrew members using this AMO-issued ALSE.

Merit Apparel, a certified Gallet helmet repair company, completed an evaluation of the mishap MSA LH250 Gallet helmet worn by the mishap IP. This helmet was built by the

³ “The Fallacy of Social Redundancy states safety barriers designed to stop accidents from occurring which consists of people who know each other are not independent at all. In fact, they interact in a way where they erode both elements. So, when trying to apply one particular safety process model at the expense of another actually serve to increase risk rather than reduce it.”

The Field Guide to Understanding “Human Error”, Sydney Dekker, 2017, <https://dokumen.pub/the-field-guide-to-understanding-human-error-3nbsped-9781317031826-1317031822-9781317031833-1317031830-9781317031840-1317031849.html#Sidney+Dekker>

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MSA company on February 16, 2009, and shipped to AMO on December 10, 2009. The post-crash analysis included the complete tear down of the helmet, including the styrene liner, to fully evaluate the condition of the helmet shell and liner. In summary, Merit Apparel concluded “this helmet shell was actually in very good condition and still fully functional. The styrene liner showed a very slight depression at the impact point; therefore, it would be recommended to put a new styrene liner in the shell if it were to be used again in the field.” The investigation team, therefore, concludes that this helmet performed appropriately during the mishap sequence and protected the mishap IP from serious head injury. The helmet did not have a current inspection completed in the previous six months by a PAE ALSE technician IAW PAE’s contractual obligation, nor did the helmet have a current inspection sticker installed indicating a current completed airworthiness inspection

Pro Flight Gear, a certified Gentex helmet repair company, completed an evaluation of the mishap Gentex HGU-56P helmet worn by the mishap PUI. The helmet was built by Gentex helmets and delivered to Gibson and Barnes for sale and shipment to AMO. Records are not available to determine exact delivery dates and previous ownership of the helmet since issue. In summary, Pro Flight Gear concluded the helmet “does not look like [it] took significant strike – aircrew member post-crash condition seems to support this as well. Helmet protected aircrew member in this incident but had internal damage that either developed over 14 months or was introduced during the original build of the helmet.” The investigation team, therefore, concludes that the internal damage noted by the contractor may lead to audio performance issues; however, the internal damage did not indicate any adverse impact performance of this helmet, and, therefore, the helmet performed appropriately during the mishap sequence, which protected the mishap PUI from serious head injury. The helmet did not have a current inspection completed in the previous six months by a PAE ALSE technician IAW PAE’s contractual obligation, nor did the helmet have a current inspection sticker installed indicating a current completed airworthiness inspection.

As for the discrepancy in the use of the two different helmet types, the mishap IP stated in his post-mishap interview, *“I wore the previously issued helmet due to the currently issued Gentex helmet not fitting appropriately.”* The NATC DAMO in the previous year assigned a local Aircraft Flight Instructor to manage the helmet program for the branch. The branch Air Safety Officer had identified the nonstandard use of different helmets within the branch and was working to correct this deficiency by documenting it on the branch’s safety council minutes. This led the NATC DAMO to assign a helmet manager as an additional duty. Working with the branch helmet manager, both individuals identified aircrew members with helmet problems and placed them on a list locally and then provided the list to the AMO Headquarters’ Helmet Program Manager to receive a new appropriately fitting helmet once the branch acquired them.

In August 2020, AMO placed an order for new Gentex helmets for issue to AMO aircrew. However, due to COVID-19, the production capability of the Gentex helmet manufacturer was greatly impacted. Therefore, AMO Headquarters did not receive its

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order for new helmets until late May 2021, several days after this mishap occurred. In the end, both helmets protected the aircrew from further injury and are a testament to each helmet's safe design and protective capabilities.

Figure 17 – Aircrew Flight Helmets



2.3 Standard Aero Crashworthy Fuel Cell

An immediate post-crash fire ignited when the aircraft came to rest after impact. The aircraft had approximately 60 percent of fuel on board (based on the mishap IP's statement to conduct autorotational training) or 86 gallons of JET A fuel. The aircrew owes their survival to the mishap IP's quick thinking in egressing the aircraft without delay. By a stroke of luck, both aircrew members remained conscious throughout the crash sequence and were able to egress the helicopter before any smoke or fire caused serious life-threatening injuries.

The purpose of a Crashworthy Fuel Cell design is to allow for a greater period of time to egress the helicopter prior to the initiation of a post-crash fire when post-crash injuries likely have occurred. The FAA's Fatality and Injury Rates for Two Types of Rotorcraft Accidents Final Report, dated October 2005, states, "The National Transportation Safety Board (NTSB) defines a survivable accident as one in which the fuselage remains basically intact, the impact forces are within human tolerance limits, and the seat belts restrain the passengers during impact. Using this definition, fatalities in survivable accidents are caused by events that occur after the initial impact. That is, the crash impact forces do not kill the occupants, but rather the post-crash fire and toxic smoke routinely

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cited in the autopsy reports are the primary cause of death.”⁴ Both crewmembers are fortunate that the impact forces generated during the mishap only resulted in minor bumps and bruises, allowing them to remain conscious post impact. Had either crewmember sustained serious or life-threatening injuries, their likelihood of survival would have been minimal. Of AMO’s past three light helicopter Class A mishaps, N841BP was the only aircraft to sustain damage from a post-crash fire. This was due in part to the high fuel state in the aircraft at the time of impact which, with reasonable certainty, allowed enough fuel to be present in the fuselage to allow a post-crash fire to ignite. Currently, all new H125 A-star helicopter aircraft being acquired by AMO have the new Standard Aero Crashworthy Fuel Cell installed from Airbus helicopters.

An AMO Aircraft Configuration Change Request was submitted in November 2016 to outfit all AMO AS350 aircraft with Standard Aero’s Crashworthy Fuel Cell. The initial quote AMO received from Standard Aero amounted to \$9.3 million. The installation was to be conducted onsite at each air branch. Assuming all purchase and installations of the Crashworthy Fuel Cell occurred, AMO would receive a \$2 million training credit to use as AMO determined. This Aircraft Configuration Change Request has yet to be funded at of the publication date of this mishap report.

Figure 18 – Standard Aero Crashworthy Fuel Cell



⁴ FAA - https://www.faa.gov/data_research/research/med_humanfacs/oamtechreports/2000s/media/0517.pdf

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2.4 Findings

- The mishap IP was trained and qualified IAW current FAA and AMO policy and was appropriately designated by the NATC DAMO as an IP in the AS350 B2 aircraft.
- The mishap PUI was trained and qualified IAW current FAA and AMO policy and was not designated in the AS350 B2 aircraft, as he was currently attending the AS350 Instructor Qualification Course.
- The aircrew was sufficiently rested prior to this accident. There was no evidence of fatigue or any other human factor issues that would have adversely affected their ability to perform their assigned duties.
- The aircraft was certified, equipped, and maintained IAW current FAA and AMO policy.
- The mishap flight was properly dispatched, and a written record is on file.
- The risk assessment was completed by the mishap IP and reviewed by the SAIA/CDO/CA prior to departure IAW the AOH.
- The mishap IP and SAIA/CDO/CA discussed the mishap PUI's training deficiencies and evaluated and approved the mishap IP's training plan for the flight.
- The mishap IP and SAIA/CDO/CA did not discuss or approve any deviations to the ASM or AOH for the training flight.
- The mishap IP inappropriately conducted a simulated tail rotor control malfunction when the mishap PUI conducted an altitude over airspeed take off from the simulated confined training area outside ASM standards.
- The mishap IP inappropriately conducted a simulated tail rotor control malfunction when the mishap PUI conducted a quick stop maneuver over runway 35L. (Contributing)
- The mishap PUI improperly responded to the simulated tail rotor control failure by depressing the Hydraulic Pressure Push Button on the collective. (Causal)
- The mishap PUI improperly remained on the flight controls when the mishap IP attempted to recover the aircraft. (Contributing)
- The mishap IP announced, "*Stop fighting me on the controls, I have the aircraft!*"
- The mishap IP announced, "*Turn the hydraulics back on!*"
- The location of the Hydraulic Pressure Push Button prevents the visual identification of the switch position, preventing the crew from identifying the aircraft's hydraulic configuration. (Contributing)
- The mishap PUI pressed and depressed the Hydraulic Pressure Push Button up to three times.
- The aircraft impacted the ground and immediately ignited in a post-crash fire.

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- The mishap IP contacted the SAIA/CDO/CA directly by cellular phone to report the mishap.
- The SAIA/CDO/CA executed the NATC mishap plan.
- The DAMO at NATC dispatched a SAIA with the Air Safety Officer to assess damages at the Clarence E. Page Municipal Airport.
- Both crewmembers were transported to the University of Oklahoma Medical Center for medical evaluation and later released that night.
- The aircraft was recovered and taken to the Transportation Safety Institute on the FAA campus in Oklahoma City, Oklahoma.
- The mishap PUI did not have an FAA Class 1 Medical Certificate at the time of the NATC 3-part AIA hiring assessment.
- The mishap PUI did not have 1,125 documented flight hours at the time of the NATC 3-part AIA hiring assessment.
- AMO Human Capital produced an invalid New Hire Flight Hour Waiver which was used at the time of the NATC 3-part AIA hiring assessment.
- NATC failed to properly inspect the mishap PUI's flight documentation paperwork and New Hire Flight Hour Waiver at the time of the NATC 3-part AIA hiring assessment.

3 Conclusions

3.1 Causal Factors

The primary causal factor for this mishap was the mishap PUI's improper response to the simulated tail rotor control failure by depressing the Hydraulic Pressure Push Button on the collective. (*HFACS – SBE-2, DE-17, DE-29, PML-3*)

3.2 Contributing Factors

- The mishap IP inappropriately conducted a simulated tail rotor control malfunction when the mishap PUI conducted a quick stop maneuver over runway 35L outside ASM standards (Task 40). (Contributing) (*HFACS – RV-24*)
- The mishap PUI improperly remained on the flight controls against the mishap IP's command when the mishap IP attempted to recover the aircraft. (Contributing) (*HFACS – DE-28*)
- The location of the Hydraulic Pressure Push Button prevents the visual identification of the switch position, preventing the crew from identifying the aircraft's hydraulic configuration. (Contributing)

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3.3 Present Noncontributing Factors

- The AMO Human Capital New Hire Flight Hour Waiver used to qualify the mishap PUI for a reduction in the total number of required flight hours for the CBP job series 1881 AIA position was invalid. (*HFACS – SBE-6*)
- The NATC 3-part AIA hiring assessment pilot document inspection failed to identify the mishap PUI's lack of total flight hours and FAA Class 1 Medical Certificate needed to qualify him for the CBP job series 1881 AIA position. (*HFACS – SBE-6*)

4 Recommendations

- Recommend NATC standardization staff formalize differences training for the AS350 B2 aircraft with pushbutton Hydraulic Pressure Switches.
- Recommend NATC Air Safety Officer document a Flight Crew Information File entry informing aircrew of the perceptual limitation of the pushbutton Hydraulic Pressure Switch.
- Recommend NATC standardize internal processes and improve training to ensure conformance to standards when conducting the 3-part AIA hiring assessment.
- Recommend Training, Safety, and Standards (TSS) issue a Special Emphasis Safety Bulletin advising users of AS350 B2 aircraft with pushbutton Hydraulic Pressure Switches of the perceptual limitation of the pushbutton Hydraulic Pressure Switch.
- Recommend TSS issue a Special Emphasis Safety Bulletin advising all AS350 IPs review the ASM tasks, standards, and descriptions to ensure ASM conformance when executing simulated emergency procedures.
- Recommend TSS better define policy for the “U.S. Customs and Border Protection Drug-Free Workplace Plan” within the AOH.
- Recommend TSS strengthen the post-mishap evaluation verbiage to include all designations, both manned and unmanned aircraft.
- Recommend AMO Human Capital standardize internal processes and improve training and conformance to standards when conducting research to qualify and justify waivers for candidates seeking employment in the CBP job series 1881 AIA position.
- Recommend convening a Crewmember Evaluation Board for the mishap PUI. (Executive Director, Operations)
- Recommend N842BP and N843BP aircraft with pushbutton Hydraulic Pressure Switches either be expeditiously retired or modified with the standard AS350 B2 collective stick. (Executive Assistant Commissioner (EAC))
- Recommend NATC be equipped with standardized aircraft for training matching the same configuration found in the rest of AMO. (EAC)
- Recommend installation of crashworthy fuel cells in all AS350 aircraft. (EAC)

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Appendix A: Human Factors Analysis and Classification System

- **Unsafe Act–Skill Based Error–Data Entry/Cross Check Error** – AMO Human Capital produced an invalid New Hire Flight Hour Waiver for the mishap PUI. NATC failed to properly inspect the mishap PUI’s flight documents during the 3-part AIA hiring assessment. (SBE-6)
- **Unsafe Act–Skill Based Error–Aircraft Control Inadequate (e.g., abrupt, excessive, not maintained)** – Mishap IP failed to maintain aircraft control during the simulated tail rotor control malfunction. Mishap PUI failed to maintain aircraft control during the simulated tail rotor control malfunction. (SBE-2)
- **Unsafe Act–Routine Violation–Violated SOP/Policies** – The mishap IP inappropriately conducted a simulated tail rotor control malfunction when the mishap PUI executed a quick stop maneuver outside ASM standard in ASM TASK 40. (RV-24)
- **Unsafe Act–Decision Error–Delayed Necessary Action** – The mishap PUI improperly remained on the flight controls when the mishap IP attempted to recover the aircraft. (DE-28)
- **Unsafe Act–Decision Error–Misdiagnosing an alarm or emergency** – The mishap PUI improperly diagnosed the simulated tail rotor control failure as a hydraulic failure in flight emergency. (DE-17)
- **Unsafe Act–Decision Error–Wrong Choice of Action During an Operation (e.g., wrong response to an emergency)** – The mishap PUI improperly responded to the simulated tail rotor control failure by depressing the Hydraulic Pressure Push Button on the collective. (DE-29)
- **Unsafe Act–Skill Based Error–Undesired Aircraft State** – The mishap PUI improperly remained on the flight controls when the mishap IP attempted to recover the aircraft. (SBE26)
- **Precondition for Unsafe Act–Physical-Mental Limitation–Inadequate or Limited experience/proficiency/practice** – The mishap PUI did not have the appropriate flight experience or proficiency in accordance with the CBP 1881 job series. (PML-3)

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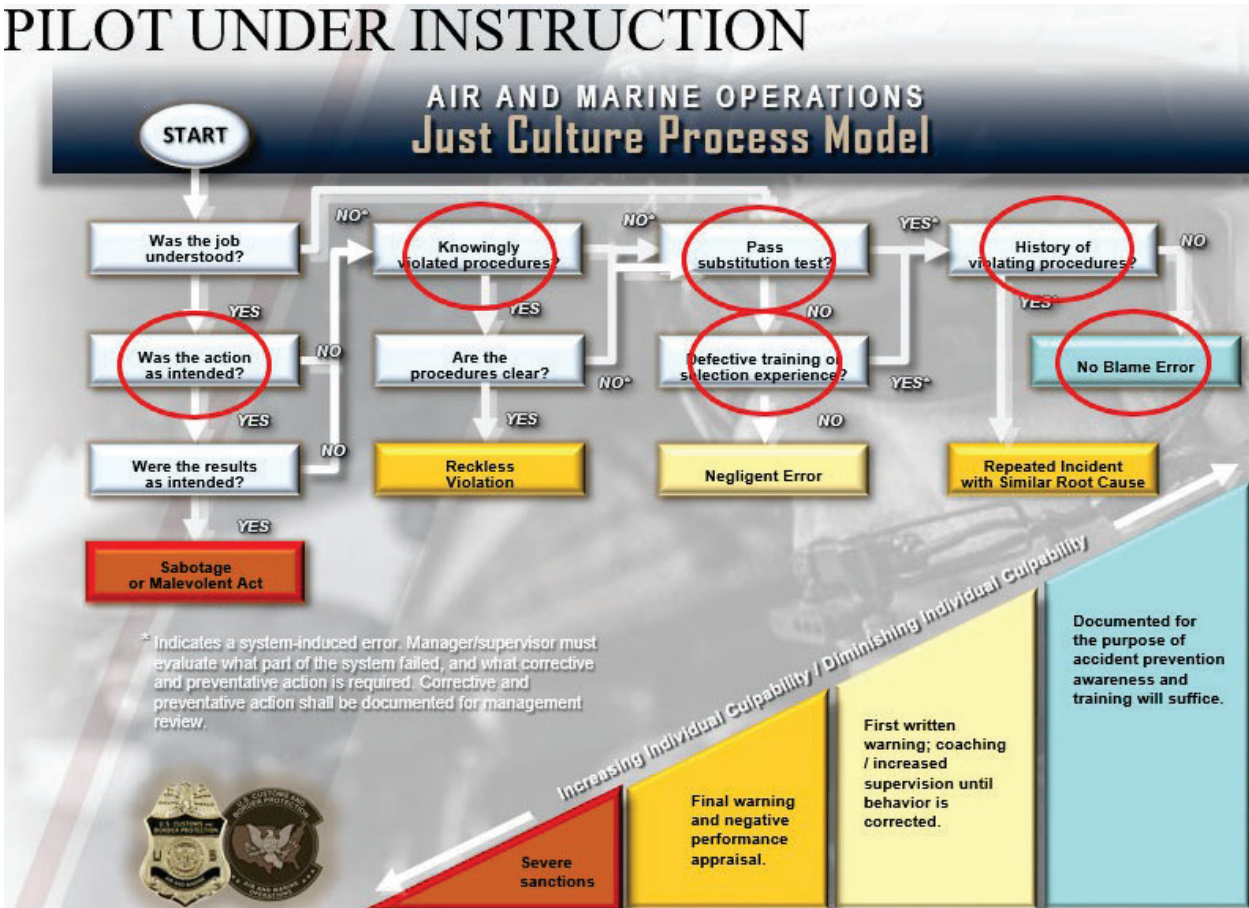
Appendix B: Acronyms and Abbreviations

AEA	Aviation Enforcement Agent
AIA	Air Interdiction Agent
ALSE	aviation life support equipment
AMO	Air and Marine Operations
AOH	Aviation Operations Handbook
ASM	Aircraft Standardization Manual
CA	clearance authority
CBP	U.S. Customs and Border Protection
CDO	Command Duty Officer
CWP	Caution Warning Panel
DAMO	Director, Air and Marine Operations
EAC	Executive Assistant Commissioner
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulation
HFACS	Human Factors Analysis and Classification System
HCAW	Human Capital Automated Workflow
HRM	Office of Human Resources Management
IAW	in accordance with
IP	Instructor Pilot
KIAS	knots indicated airspeed
KOKC	Will Rogers World Airport
KRCE	Clarence E. Page Municipal Airport
NASOC-SV	National Air Security Operations Center-Sierra Vista
NATC	National Air Training Center
NTSB	National Transportation Safety Board
ODO	Operations Duty Officer
OPM	Office of Personnel Management
PAE	Pacific Architects and Engineers
PIC	Pilot-in-Command
PUI	pilot under instruction
SAIA	Supervisory Air Interdiction Agent
SOP	standard operating procedure
TOMIS	Tasking, Operations, and Management Information System
TSS	Training, Safety, and Standards
UTC	Coordinated Universal Time

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Appendix C: Just Culture Process Results 1

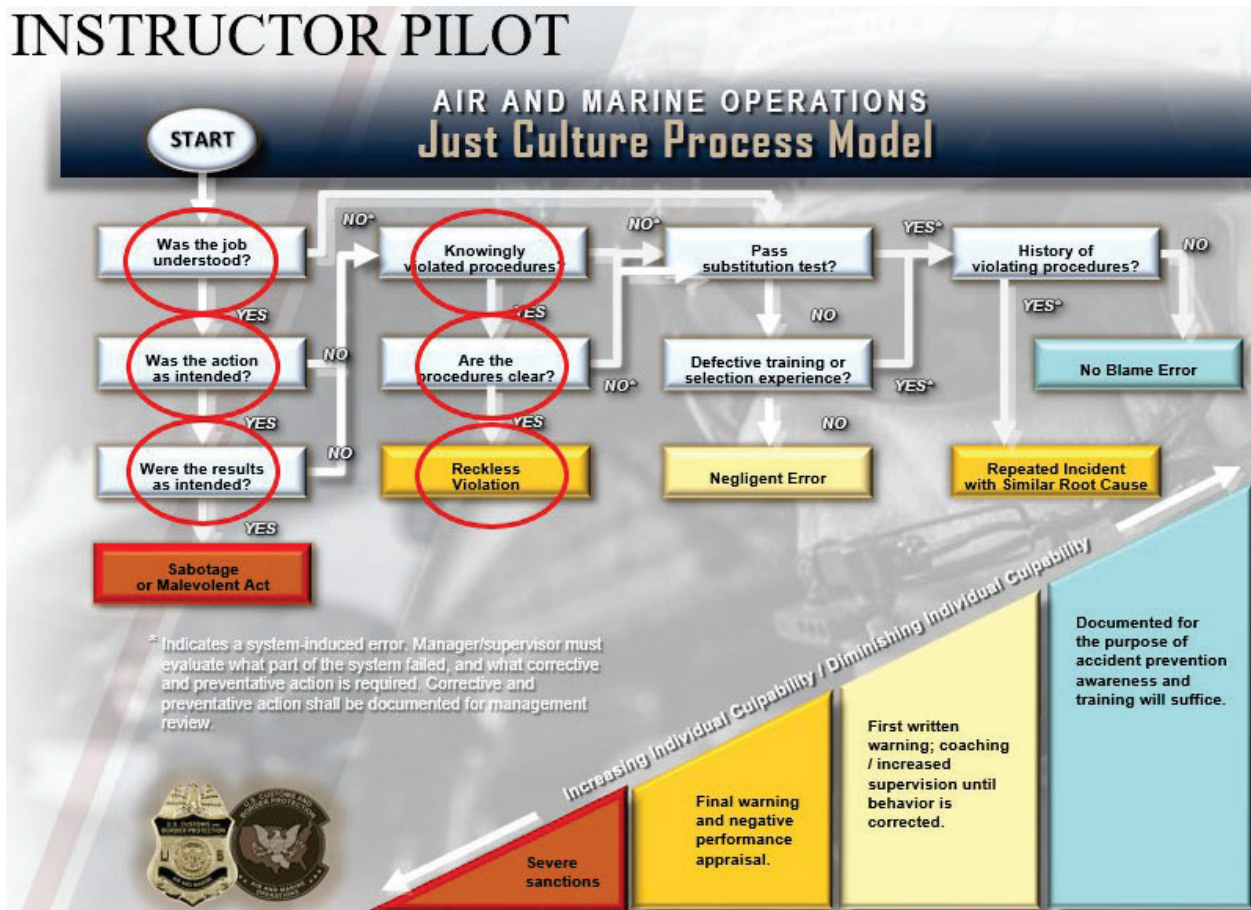
PILOT UNDER INSTRUCTION



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Appendix C: Just Culture Process Results 2

INSTRUCTOR PILOT



O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 2

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 2
Dir. [REDACTED]
Interview
August 3, 2021

INTERVIEW SCRIPT

For use on interviews of NON-BARGAINING CBP Employees

(NOTE: this document is to be kept as file notes; it is not to be made an exhibit in your investigative file.)

****Begin Recording****

PRE-INTERVIEW

"This interview is being video recorded."

"Today's date is August 3 2022 and the time is 10:13 ^{EST} (m)/p.m."
(Day, month, and year)

"This is the statement of SA [REDACTED], for case number 202209243 + 202209182
(Title and Name of person being interviewed) (Case No.)

which is being given at Ronald Reagan Building Washington, D.C.
(Location and Address, city and state)

"Present at this interview is: (Titles and names of all attendees of interview-have each person identify themselves and spell out their last name)."

"Questions will be asked by Special Agents [REDACTED]
(Full name(s) of Special Agent(s))

"Responses will be provided by [REDACTED], unless otherwise specified."
(Full name of person being interviewed)

"We will now provide you with the following forms:"

Notices, Rights, and Advisements (Investigators shall ensure the applicable forms were prepared before the interview and served at the beginning of the interview)

- Your Required Appearance and Sworn Statement
- Administrative Warning Acknowledgment for Non-Bargaining Unit Employees
- Kalkines (ONLY if criminal prosecution was declined)
- Miranda (CBP Form 2100) (If applicable)
- Garrity (If applicable)

ADMINISTERING OF OATH

"Please stand and raise your right hand. Do you solemnly swear or affirm the statements you are about to provide will be true and correct to the best of your knowledge and belief?"

"Please state your complete name." [REDACTED]

"What is your position title, job series, pay grade, and duty station?"
GS-15 S. Air Interdiction Agent Div. Training Safety Standards Division
Washington, D.C.

"Are you currently taking any medication, or under the influence of any drug or alcohol, which would impair your ability to answer these questions?"
No

TITLE 18 U.S.C. § 1001 ADVISEMENT

"You are advised this is an official investigation being conducted by the CBP/Office of Professional Responsibility. Knowingly providing false or fictitious statements may subject you to criminal prosecution under Title 18 U.S.C. § 1001, or administrative discipline up to and including dismissal from Federal service."

"Do you understand this requirement?" Yes

NON-DISCLOSURE NOTICE

"You are hereby notified any discussion of matters under official review by the Office of Professional Responsibility to unauthorized personnel is prohibited. Further, you are cautioned any discussion or disclosure of the substance of the interview, or any of the circumstances surrounding any of the incidents discussed during this interview, may result in disciplinary action being taken against you. Do you understand this non-disclosure requirement?" Yes

"Do you have any questions before we begin the interview?" No

(Begin questions related to the investigation at this point)

BREAKS DURING AN INTERVIEW

An employee's review of the recording (Next section in this document) is not considered a break.

DO NOT TURN OFF RECORDING DURING BREAKS

Upon the employee's return to the interview room following a break, remind the employee all previous rights, advisements and warnings are still in effect.

NOTE: Investigators shall ONLY stop a recording, when an employee requests a meal break during the interview (e.g., lunch or dinner).

EMPLOYEE'S REVIEW OF THE RECORDING

"Is there anything you would like to add or clarify regarding your statement?" No

"Would you like the opportunity to review the electronic recording of the interview, in whole or in part, to ensure the investigatory interview was properly recorded?" No

If the non-bargaining CBP employee requests a review of the electronically recorded investigative interview, the investigator shall:

- Advise the non-bargaining CBP employee there will be no off-the-record conversations during the review;
- Inform the non-bargaining CBP employee that if the employee wishes to ask questions, make comments, or additional statements, they will be addressed after the review when the recording resumes;
- Stop the recording, utilizing the field interviewer tablet;
- Utilize only the field interviewer tablet to review the recorded investigative interview; and,
- Always maintain physical and visual control of the Star Witness Field Interviewer Kit during the employee's review of the recording.

Investigators shall not ask questions of the employee or have investigative interaction during any review period. Any follow-up questions from investigators should be asked on the record, while the investigative interview or supplemental investigative interview is being recorded.

At the conclusion of the review, the investigator shall:

- Activate the recording equipment;
- Remind the employee all previous rights, advisements, and warnings are still in effect;
- Have the employee attest the recording is an exact and true copy of the previously reviewed recording; and,
- Allow the employee to clarify answers and make additional statements.

CONCLUDING THE INTERVIEW

"Before concluding this interview,"

IF EMPLOYEE CHOSE TO REVIEW THE RECORDING: In a supplemental recording following the review, the investigator shall ensure the following occur, prior to concluding the interview:

- The employee shall be reminded that all previous rights, advisements, and warnings are still in effect;
- In a supplemental recorded statement, the employee attests the recording is an exact and true copy of the previously reviewed recording; and,
- Additional statements are recorded.

Followed by asking:

"Have I, or any other Federal agent threatened you or intimidated you in any way?" **No**

"Have I, or any other Federal agent offered you a reward, promise of reward, or immunity for your statement?" **No**

"Were you treated fairly and professionally here today?" **Yes**

"This concludes the statement of [REDACTED] *_____.* The time is now **11:50** **PM** *d.m./p.m.*
(write and name of employee)
and the date is **8/3/22** *_____."*
(day, month, and year)

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the Code of Federal Regulations, (31 CFR 0.207): "Employees shall respond to questions truthfully and under oath when required, whether orally or in writing, and must provide documents and other materials concerning matters of official interest when directed to do so by competent authority."

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print) [REDACTED]

Signature of Employee: [REDACTED]

Date: 8/3/22 Time: [REDACTED]

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 3

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 3
NTSB-CBP
Accident Investigation
Protocol MOU
March 24, 2016



National Transportation Safety Board

Office of Aviation Safety

NTSB/CBP Accident Investigation Protocol

1. Issuing Organization. This document was developed by the National Transportation Safety Board's (NTSB) Office of Aviation Safety (OAS) in cooperation with the U.S. Customs and Border Protection (CBP) Agency, and issued March 24, 2016. It is due for review by March 24, 2021.
2. Purpose. This document provides NTSB investigators with guidance and procedures for the conduct of investigations of aircraft operated by CBP.
4. Cancellation. This document will remain in effect unless cancelled or revised, in writing, by the NTSB.
5. Authority.
 - 49 U.S.C. Chap. 11.
 - 49 C.F.R. Part 831
6. Procedures.
 - A. Upon notification from the CBP or other sources of an accident involving a CBP aircraft, the NTSB investigator-in-charge (IIC) shall immediately contact the CBP via 800.553.9072 or 951.656.8059 and obtain the name of the CBP Air Safety Program Manager. Whether it is a field or limited investigation, the IIC shall provide the CBP Air Safety Program Manager or his/her designee, a reasonable amount of time to respond to the accident site prior to wreckage removal.
 - B. The IIC shall ensure that the CBP coordinator is aware of the NTSB's authority as the lead entity and spokesman in the investigation, the NTSB's protocol in regard to party participation, and the NTSB's right to review all proposed press advisories, CBP communications, etc., that are meant to convey safety information to other CBP employees.
 - C. The IIC shall make CBP a party to CBP aircraft accident investigations, consistent with section 1131 (a)(2)(A), which states "[t]he Board shall provide for appropriate participation by other departments, agencies, or instrumentalities in the investigation."
 - D. If CBP fails to follow the IIC's direction or NTSB regulations, directives, or policy, every effort will be made by the NTSB IIC to work with CBP to bring CBP's conduct into compliance. Before the IIC removes the CBP as a party, the IIC will brief the OAS Deputy or Director, who will contact CBP's management to try to resolve any disputes

before further action is taken.

E. The IIC shall allow CBP to conduct its own independent investigation of the accident, in accordance with section 1131 (a)(3) of the Safety Board's legislation, which states that the Safety Board's authority "*...does not affect the authority of another department, agency, or instrumentality of the Government to investigate an accident under applicable law or to obtain information directly from the parties involved in, and witnesses to, the accident.*" However, prior to conducting such activities, CBP shall advise the IIC of all proposed investigative activity (i.e. interviews, testing, etc.) and provide a copy of all collected material, analysis, and any written reports to the IIC.

F. The IIC shall share investigative documentation with CBP, including notes, transcripts, interviews, or drawings and pictures to ensure accuracy and thoroughness, in accordance with section 1131 (a)(3) of the NTSB's legislation, which states: "*[t]he Board and other departments, agencies, and instrumentalities shall ensure that appropriate information developed about the accident is exchanged in a timely manner.*"

G. The IIC shall provide CBP ten days to review the final draft factual report as described in 49 CFR 831.4. If comments are received, the IIC will review and consider CBP's comments for inclusion into the final report.

H. If NTSB does not send an investigator to the CBP accident site, CBP will collect factual information and forward its completed report to the IIC. Additionally, if a representative of the Federal Aviation Administration (FAA) arrives at the accident in accordance with their accident investigation protocol, the NTSB IIC shall coordinate with the FAA representative and CBP representative to ensure that an "on-scene commander" is chosen to lead the on-scene portion of the investigation.

NOTE: In discussing who will serve as the on-scene commander with the agencies' representatives, the IIC should consider the specific circumstances surrounding the accident, the specific role and authority of the FAA in regard to the operator, the qualifications of the CBP and FAA investigators, and the logistics involved in documenting the accident. In some cases, the FAA may not have jurisdiction over a particular public operator or aircraft, or may not send an inspector. Conversely, it may be inappropriate for the CBP coordinator to lead the on-scene investigation if there is an experienced FAA inspector on scene and to further preserve the neutrality of the investigation. In any case, the IIC shall maintain frequent communications with the FAA, CBP, and the on-scene commander to ensure that the on-scene documentation is conducted in an efficient and cooperative manner.

I. The IIC will not include information in the public docket deemed sensitive by CBP, unless necessary to support key facts or safety issues. The IIC will ensure that NTSB coordinates with CBP before publishing sensitive data in the docket. The IIC will ensure that NTSB coordinates with CBP to redact CBP internal reports as necessary before publishing CBP's internal reports on the public docket.

J. The IIC shall attempt to independently verify information obtained from CBP investigative efforts.

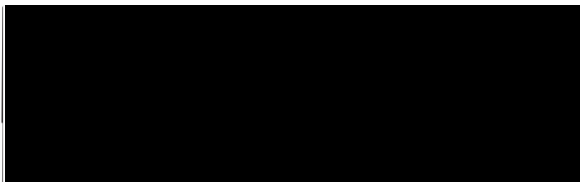
AGREED:

For the National Transportation Safety Board



Deputy Director for Regional Operations
Office of Aviation Safety

For the US Customs and Border Protection



Executive Director, Training, Safety and Standards
Air and Marine Operations

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 4

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 4
NTSB-CBP
Party Certification
May 14, 2021

**NATIONAL TRANSPORTATION SAFETY BOARD (NTSB)
WASHINGTON, D.C.**

**INFORMATION AND GUIDANCE FOR PARTIES
TO NTSB ACCIDENT AND INCIDENT INVESTIGATIONS**

I. Introduction

This guidance is intended to familiarize participants in NTSB accident and incident investigations with the NTSB investigative process, and the NTSB's expectations regarding the roles and responsibilities of organizations and individual employees of those organizations assigned to work in support of an NTSB investigation.

The Independent Safety Board Act of 1974, as amended, sets forth the powers and responsibilities of the NTSB, and all participants are encouraged to review its provisions. A recent compilation of these statutory provisions can be reviewed on the NTSB's website: http://www.ntsb.gov/alj/2003_Statute.PDF.

In addition, participants should be familiar with the NTSB's regulations governing accident and incident investigation procedures: 49 C.F.R. Part 831. These and other NTSB regulations can be viewed on the Government Printing Office's website: http://www.access.gpo.gov/nara/cfr/waisidx_06/49cfr831_06.html.

II. The NTSB and the Investigative Process

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation—railroad, highway, marine, pipeline and hazardous materials—and issuing an official determination regarding probable cause and, as appropriate, safety recommendations to prevent future accidents. The NTSB also investigates certain incidents that present significant safety issues. The NTSB strives to accurately identify and report all relevant facts, conditions, and circumstances relating to each accident or incident it investigates.

Safety recommendations are the most important product of an NTSB investigation. NTSB safety recommendations are based on findings of the investigation and may address deficiencies that do not pertain directly to what is ultimately determined to be the probable cause of the accident. The NTSB may issue safety recommendations before the completion of a specific investigation and may designate some recommendations as "urgent."

For major accidents, the NTSB dispatches a "Go Team." The purpose of the NTSB Go Team is to deploy NTSB investigators to the accident scene as quickly as possible and assemble the broad spectrum of technical expertise that is needed to investigate complex transportation accidents.

The NTSB designates other organizations whose employees, functions, activities, or products were involved in the accident or incident as parties to the NTSB investigation to facilitate the rapid and complete acquisition of all relevant factual information. Except for the Federal Aviation Administration (FAA) and the Coast Guard, which by law are automatically designated a party to an NTSB investigation in their respective mode, the NTSB has complete discretion over which organizations it designates as parties to an investigation. Only those organizations that can provide technical expertise or knowledge to an NTSB investigation are granted party status, and only those persons who can provide the NTSB with needed technical expertise or specialized knowledge are permitted to participate in an investigation.

Parties, and party representatives or participants, to an NTSB investigation only participate directly in the fact-finding phase of an NTSB investigation. Although parties are encouraged to submit their own proposed findings and analysis regarding an accident, at the appropriate time, NTSB staff independently conducts its own analyses of the factual information developed during the investigation.

Persons occupying legal positions, pursuing litigation interests, or representing claimants or insurers, are not permitted to be involved in an NTSB investigation.

III. Role and Responsibilities of Parties to the Investigation

At the discretion of the investigator-in-charge (IIC), the NTSB may invite various qualified and interested organizations whose employees, functions, activities, or products were involved in the accident or incident, and who can provide suitable qualified technical personnel actively to assist in the investigation, to participate as parties to the fact-finding phase of the NTSB investigation. Participation as a party to an NTSB investigation is a privilege and confers no rights or benefits. The "party system" utilized by the NTSB to investigate accidents has been in use for decades, primarily because it is the most effective investigatory process for major transportation accidents. Parties are asked to participate in an NTSB investigation because the IIC believes they have unique knowledge or technical expertise, relevant to the investigation, that will assist NTSB staff in developing the most complete and accurate factual record. Only those party employees who have suitable and needed technical qualifications will be permitted to work on the NTSB investigation.

There are other, ancillary advantages to the "party system." In addition to the synergistic and cooperative effects that arise from use of the "party system," a collateral purpose is to ensure that, with appropriate coordination with the NTSB, responsible officials of party organizations whose products or services were involved in the accident or incident will have access to information necessary to expeditiously initiate any necessary preventive and/or corrective actions.

Parties and party participants may not withhold any information pertaining to the accident, or in any manner relevant to the investigation, from the NTSB.

Parties and party participants in the investigation shall be responsive to the direction of NTSB personnel and may lose party status if they conduct themselves in a manner prejudicial to the investigation or do not comply with NTSB instructions.

Each participating party will designate a party coordinator (spokesman) for its organization. The party coordinator will be the NTSB's direct and official point-of-contact for the party and should, therefore, be available to the IIC at all times during the on-scene investigation and periodically available on short notice during the post on-scene phase of the investigation. This party coordinator must have sufficient status and authority within his/her organization to effect a complete and timely response with minimal need for higher approval or coordination in response to a request of the IIC. During the on-scene phase of the investigation, and any additional field investigation activities, party coordinators are responsible for the behavior of their organization's employees or representatives.

All participants in an NTSB investigation (with the exception of representatives from federal regulatory agencies and law enforcement agencies, and Accredited Representatives of foreign governments and their foreign Technical Advisors) will be required to sign the "Certification of Party Representative," which is a statement of compliance with NTSB investigation procedures, rules, and restrictions. Party coordinators are responsible for ensuring that all group participants from their organization sign the NTSB statement of compliance.

IV. (Aviation and Marine Modes Only) The Role of the FAA or Coast Guard in the Investigation

Pursuant to statute, the FAA is automatically afforded party status to all NTSB aviation investigations, "[i]n order to assure the proper discharge by the Secretary of Transportation of his duties and responsibilities[.]"

Also pursuant to statute, the Secretary of the department in which the Coast Guard is operating, generally through the Commandant of the Coast Guard, is automatically afforded party status to all NTSB marine investigations.

V. (Aviation Mode Only) Accredited Representatives of Foreign Governments

The Accredited Representative of a foreign government and his or her properly designated advisors will be afforded the courtesies and rights as outlined in Annex 13 to the Convention of International Civil Aviation. The NTSB restriction on dissemination of accident information

applies to all those supporting an NTSB investigation as advisors to the NTSB on foreign-led accident investigations or to an Accredited Representative in NTSB-led accident investigations involving a non-U.S. State of Design/Manufacture, State of Operator, or State of Registration. [The Accredited Representative and foreign Technical Advisors are not required to sign the party form.]

VI. Assignment and Duties of Group Members

The IIC will assign and organize investigative groups to document specific aspects of the accident. Each group will be under the direction of an NTSB investigator who is designated as the Group Chairman. Individuals representing selected parties will be assigned to investigative groups as the IIC and Group Chairman deem necessary and for the duration of the investigation. Not all parties will have members on every group; only those parties who can provide needed specific expertise relevant to the focus of the group will be considered for group assignments. Because parties are invited to participate in an investigation on the basis of their specialized, technical, party-specific knowledge about their product or operations, the NTSB does not, except in extremely rare circumstances, allow the use of outside consultants as participants in investigative groups. Those selected as group members *must have expertise in their proposed area of investigation*. Those selected as group members must be prepared to remain with the investigation until completion of the on-scene investigation, as well as any additional field investigative work and the development of a factual report on the work of the group.

Additional restrictions apply concerning information obtained from on-board image or audio recording devices. Participants on NTSB investigative groups working with these recorders will be briefed on these additional restrictions and required to sign additional documents confirming their agreement to comply with these restrictions.

Under the direction of the Group Chairman, one or more sets of group notes, termed "field notes," will be developed by each investigative group. Preparation of the field notes is a collaborative effort by the investigative group but managed by the NTSB Group Chairman leading the group. Field notes should include all relevant factual information developed by the group and will typically also include appendices of supporting documentation, photographs, or other records collected by the group. It is the responsibility of the NTSB Group Chairman to ensure that an accurate and complete set of field notes is compiled while the group is on-scene, or, as applicable, during follow-on investigative activity, and that each group member signs the completed field notes before being released from their on-scene duties. In addition, the IIC must approve the field notes before group members may be released from their on-scene duties. Accordingly, each group member must participate in a complete review of the field notes for technical accuracy and adequacy of the scope of the investigation of the group and affirm agreement with the contents of the field notes by signing them. If there is disagreement over the accuracy of any information documented in the field notes, or their scope, the NTSB Group Chairman will make all reasonable efforts to focus the group on resolving any such issues to the collective satisfaction of the group members. In the rare case that a disagreement of one member cannot be resolved, that member is expected to sign the field notes verifying their general agreement with the notes and annotating their specific objections to the disputed content in the notes. The NTSB Group Chairman is responsible for providing a copy of the signed group field notes to the IIC, who will ensure that each party coordinator receives a copy of the field notes from each investigative group.

Each NTSB Group Chairman will later prepare a Group Chairman Factual Report, which will draw extensively on the information in the field notes. A copy of the Group Chairman's draft factual report will be provided to participating group members for comment. It should be understood, however, that the final factual report is the NTSB Group Chairman's responsibility and concurrence by the entire group is not required. Any dissent regarding the factual accuracy or completeness of the factual report should be communicated to the NTSB Group Chairman, and, if necessary, will be discussed formally during a technical review meeting later in the investigative process.

VII. Flow and Dissemination of Investigative Information

All information obtained by members of an investigative group will immediately be brought to the attention of the Group Chairman. All information obtained during the investigation by the various groups will be passed to the IIC by the Group Chairmen.

No information may be passed to others within the party's organization, beyond those individuals actually participating in the NTSB investigation, without the approval of the IIC. If necessary for public safety, and with the IIC's permission, party coordinators may release information to their respective organizations provided the information is factual, neutral and objective in tone, and without purported NTSB characterization of the matter's contribution to the underlying accident. If a party's organization has a need, in the interest of safety, to transmit information to operators utilizing their products regarding issues related to the investigation, they must first provide the IIC with a written draft of the proposed correspondence and obtain the IIC's permission before its release.

The limitations on the release of factual information (within the party's organization) obtained from participation in the investigation shall normally end once the fact-finding phase of the investigation is complete. Limitations on parties commenting publicly on possible findings of the investigation, including the probable cause of the accident, will remain in effect until after the Board adopts the final report.

VIII. Release of Information

Prior to the NTSB's adoption of the final report, only appropriate NTSB personnel are authorized to publicly disclose investigative findings, and, even then, the release shall be limited to verified factual information identified during the course of the investigation. In addition, party participants or their respective organizations must refrain from providing opinions or analysis of the accident outside of the participants in the investigation. Failure to abide by these requirements may lead to removal of a party from the investigation. Any questions on this policy may be directed to the NTSB's IIC on an investigation, or to the NTSB's Public Affairs Office at 202-314-6100.

IX. Proprietary, Commercially Sensitive, and Export-Controlled Information

The NTSB has rules published at 49 C.F.R. § 831.6 governing identification and treatment of proprietary and commercially sensitive records and information. All records provided to the NTSB must be clearly marked if they contain proprietary or commercially sensitive information.

Parties are also obligated to inform the NTSB, in writing, when materials and information provided to the NTSB, verbally or in writing, or in any other format, are subject to Export Administration Regulations (EAR), International Traffic in Arms Regulations (ITAR) and/or their participation in the investigation may be impacted by sanctions programs administered by the U.S. Department of the Treasury Office of Foreign Assets Control (OFAC) or other U.S. Government sanctions programs. All export-controlled records provided to the NTSB must be clearly and appropriately marked. All participants in the NTSB investigation who acquire or handle such materials must do so in compliance with the law and NTSB rules.

X. Organizational Meeting

The initial investigative meeting on-scene is designated as the "organizational meeting." It is during the organizational meeting that the IIC introduces him/herself, explains his/her expectations for the investigation and the participants working with the NTSB, and introduces the NTSB Group Chairmen who will lead the anticipated investigative groups. During the organizational meeting, the parties to the investigation will be formally named, party coordinators will be formally assigned, and various individual group members will be vetted and assigned to appropriate investigative groups.

An attendance roster will be circulated, and everyone in the room must sign the roster and provide the requested contact information.

At the beginning of the meeting, all persons present will be required to identify themselves, including their affiliation and routine role within

their organization. Persons responsible for managing litigation or insurance interests, members of the media, and, generally, corporate executives who will not be providing needed technical expertise as participants on an NTSB investigative group are not permitted to participate in an NTSB investigation.

XI. On-Scene Progress Meetings

A “progress meeting” is typically held at the end of each workday to review significant information obtained by each investigative group and to identify additional investigative activity to be pursued. These meetings also provide an opportunity to address investigative issues that require higher-level resolution or coordination, changes to the investigative plan, need for additional investigative support, or, possibly, an evaluation of whether urgent safety recommendations are needed.

Party coordinators must attend each progress meeting. For other participants in an NTSB investigation, attendance at each progress meeting is generally encouraged, but individual group members should communicate with their NTSB Group Chairman on a case-specific basis as to whether they are needed at the progress meeting, whether other group investigative activities will take precedence, or whether they have been released from further on-scene participation. No persons other than those specifically designated by the IIC during the organizational meeting may attend progress meetings.

Each investigative group may also hold daily meetings that include participation from all group members. The responsibility for arranging these meetings is that of the Group Chairmen. Each group member is expected to raise in a timely manner any concerns, facts, and suggestions for proper consideration by the entire group so as to ensure maximum precision and thoroughness of the group’s investigative efforts. In addition, group members may pass factual information to their respective party coordinators only after the information has been made known to the Group Chairman.

Finally, the IIC may meet daily with all of the NTSB Group Chairmen and, sometimes separately, with all of the party coordinators. These meetings are conducted as a means of encouraging open discussion and resolution of problems of concern to any party coordinator or Group Chairman.

XII. Safety Precautions During Investigations

Access to the site of an accident may be hazardous because of debris and hazardous or toxic materials. Participants are expected to arrive on-scene, or at field investigation activities, with appropriate personal protective equipment, supplied by their respective organizations. All participants must comply with safety procedures established by the on-scene incident command, the local organization(s) in charge of the accident site security and safety. Participants must exercise good judgment, use necessary personal protective equipment, and use caution in working at the site. All party participants should be instructed by their respective party coordinators to not exceed their physical limitations.

If you have questions concerning the existence of hazards, consult your Group Chairman. Any perceived hazards should be brought to the immediate attention of the appropriate Group Chairman and the IIC.

The NTSB does not assume responsibility for personal injuries received during the course of participation in an investigation.

The party coordinator or party participant will inform the IIC of any safety concerns regarding any on-scene activities, to include actions requested by the IIC, that the party coordinator or participant believes have material safety risks.

XIII. Dissemination of Information to Media

Contacts with news media concerning the investigation will be made **only** by the NTSB, through the Board Member if on-scene, the NTSB’s representative of its Office of Public Affairs, or the IIC. The guiding policy is that the NTSB is a public agency engaged in the public’s business and supported by public funds. The agency’s work is open for public review, and the Act under which it operates makes this mandatory. The NTSB believes that periodic factual briefings to the news me-

dia are a normal part of its investigation and that, for the public to perceive the investigation as credible, the investigation should speak with one voice, that being the independent agency conducting the investigation.

Therefore, the NTSB insists that it be the sole source of public information regarding the progress of an accident investigation.

Parties are encouraged to refer media inquiries to the NTSB’s Office of Public Affairs. In any case, release to the media of investigative information at any time is grounds for removal as a party.

XIV. Public Hearing

After completion of the on-scene phase of the investigation, formal depositions or a public hearing may be conducted. Parties to the on-scene investigation may be consulted for their views on the value of conducting a hearing and may also be requested to participate in these activities. Parties to a public hearing may be different than those participating during the on-scene phase of the investigation. A public hearing or formal depositions may be held prior to completion of all field work, such as component testing, simulator runs, etc.

XV. Party Recommendations as to Findings, Conclusions, and Recommendations

Any party to an investigation may, and is encouraged to, submit to the NTSB proposed findings of fact and conclusions that the party believes should be drawn from the evidence obtained during the investigation. A party may also propose safety recommendations for preventive action. All submissions should be made in writing and parties should serve copies of submissions on all other parties. The IIC will provide a date by which such submissions must be made.

Title 49. Transportation

Subtitle B. Other Regulations Relating to Transportation

 Chapter VIII. National Transportation Safety Board

➔ Part 831. Accident/Incident Investigation Procedures

➔ § 831.1 Applicability of part.

Unless otherwise specifically ordered by the National Transportation Safety Board (Board), the provisions of this part shall govern all accident or incident investigations, conducted under the authority of title VII of the Federal Aviation Act of 1958, as amended, and the Independent Safety Board Act of 1974. Rules applicable to accident hearings and reports are set forth in Part 845.

§ 831.2 Responsibility of Board.

(a) Aviation.

(1) The Board is responsible for the organization, conduct, and control of all accident and incident investigations (see [§ 830.2](#) of this chapter) within the United States, its territories and possessions, where the accident or incident involves any civil aircraft or certain public aircraft (as specified in [§ 830.5](#) of this chapter), including an investigation involving civil or public aircraft (as specified in [§ 830.5](#)) on the one hand, and an Armed Forces or intelligence agency aircraft on the other hand. It is also responsible for investigating accidents/incidents that occur outside the United States, and which involve civil aircraft and/or certain public aircraft, when the accident/incident is not in the territory of another country (i.e., in international waters).

(2) Certain aviation investigations may be conducted by the Federal Aviation Administration (FAA), pursuant to a "Request to the Secretary of the Department of Transportation to Investigate Certain Aircraft Accidents," effective February 10, 1977 (the text of the request is contained in the appendix to part 800 of this chapter), but the Board determines the probable cause of such accidents or incidents. Under no circumstances are aviation investigations where the portion of the investigation is so delegated to the FAA by the Board considered to be joint investigations in the sense of sharing responsibility. These investigations remain NTSB investigations.

¹ The authority of a representative of the FAA during such investigations is the same as that of a Board investigator under this part.

(3) The Board is the agency charged with fulfilling the obligations of the United States under Annex 13 to the Chicago Convention on International Civil Aviation (Eighth Edition, July 1994), and does so consistent with State Department requirements and in coordination with that department. Annex 13 contains specific requirements for the notification, investigation, and reporting of certain incidents and accidents involving international civil aviation. In the case of an accident or incident in a foreign state involving civil aircraft of U.S. registry or manufacture, where the foreign state is a signatory to Annex 13 to the Chicago Convention of the International Civil Aviation Organization, the state of occurrence is responsible for the investigation. If the accident or incident occurs in a foreign state not bound by the provisions of Annex 13 to the Chicago Convention, or if the accident or incident involves a public aircraft (Annex 13 applies only to civil aircraft), the conduct of the investigation shall be in consonance with any agreement entered into between the United States and the foreign state.

(b) Surface. The Board is responsible for the investigation of: railroad accidents in which there is a fatality, substantial property damage, or which involve a passenger train (see part 840 of this chapter); major marine casualties and marine accidents involving a public and non-public vessel or involving Coast Guard functions (see part 850 of this chapter); highway accidents, including railroad grade-crossing accidents, the investigation of which is selected in cooperation with the States; and pipeline accidents in which there is a fatality, significant injury to the environment, or substantial property damage.

² Part 850 also governs the conduct of certain investigations in which the Board and the Coast Guard participate jointly.

(c) Other Accidents/Incidents. The Board is also responsible for the investigation of an accident/incident that occurs in connection with the transportation of people or property which, in the judgment of the Board, is catastrophic, involves problems of a recurring character, or would otherwise carry out the policy of the Independent Safety Board Act of 1974. This authority includes, but is not limited to, marine and boating accidents and incidents not covered by part 850 of this chapter, and accidents/incidents selected by the Board involv-

ing transportation and/or release of hazardous materials.

§ 831.3 Authority of Directors.

The Directors, Office of Aviation Safety, Office of Railroad Safety, Office of Highway Safety, Office of Marine Safety, and Office of Pipeline and Hazardous Materials Safety, subject to the provisions of [§ 831.2](#) and part 800 of this chapter, may order an investigation into any accident or incident.

§ 831.4 Nature of investigation.

Accident and incident investigations are conducted by the Board to determine the facts, conditions, and circumstances relating to an accident or incident and the probable cause(s) thereof. These results are then used to ascertain measures that would best tend to prevent similar accidents or incidents in the future. The investigation includes the field investigation (on-scene at the accident, testing, teardown, etc.), report preparation, and, where ordered, a public hearing. The investigation results in Board conclusions issued in the form of a report or "brief" of the incident or accident. Accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties. They are not subject to the provisions of the Administrative Procedure Act ([5 U.S.C. 504 et seq.](#)), and are not conducted for the purpose of determining the rights or liabilities of any person.

§ 831.5 Priority of Board investigations.

Any investigation of an accident or incident conducted by the Safety Board directly or pursuant to the appendix to part 800 of this chapter (except major marine investigations conducted under [49 U.S.C. 1131\(a\)\(1\)\(E\)](#)) has priority over all other investigations of such accident or incident conducted by other Federal agencies. The Safety Board shall provide for the appropriate participation by other Federal agencies in any such investigation, except that such agencies may not participate in the Safety Board's determination of the probable cause of the accident or incident. Nothing in this section impairs the authority of other Federal agencies to conduct investigations of an accident or incident under applicable provisions of law or to obtain information directly from parties involved in, and witnesses to, the transportation accident or incident, provided they do so without interfering with the Safety Board's investigation. The Safety Board and other Federal agencies shall assure that appropriate information obtained or developed in the course of their investigations is exchanged in a timely manner.

§ 831.6 Request to withhold information.

(a) Trade Secrets Act ([18 U.S.C. 1905](#)), Exemption 4 of the Freedom of Information Act ([5 U.S.C. 552](#)) (FOIA), and The Independent Safety Board Act of 1974, as amended.

(1) General. The Trade Secrets Act provides criminal penalties for unauthorized government disclosure of trade secrets and other specified confidential commercial information. The Freedom of Information Act authorizes withholding of such information; however, the Independent Safety Board Act, at [49 U.S.C. 1114\(b\)](#), provides that the Board may, under certain circumstances, disclose information related to trade secrets.

(2) Procedures. Information submitted to the Board that the submitter believes qualifies as a trade secret or confidential commercial information subject either to the Trade Secrets Act or FOIA Exemption 4 shall be so identified by the submitter on each and every page of such document. The Board shall give the submitter of any information so identified, or information the Board has substantial reason to believe qualifies as a trade secret or confidential commercial information subject either to the Trade Secrets Act or FOIA Exemption 4, the opportunity to comment on any contemplated disclosure, pursuant to [49 U.S.C. 1114\(b\)](#). In all instances where the Board determines to disclose pursuant to [49 U.S.C. 1114\(b\)](#) and/or [5 U.S.C. 552](#), at least 10 days' notice will be provided the submitter. Notice may not be provided the submitter when disclosure is required by a law other than FOIA if the information is not identified by the submitter as qualifying for withholding, as is required by this paragraph, unless the Board has substantial reason to believe that disclosure would result in competitive harm.

(3) Voluntarily-provided safety information. It is the policy of the Safety Board that commercial, safety-related information provided to it voluntarily and not in the context of particular accident/incident investigations will not be disclosed. Reference to such information for the purposes of safety recommendations will be undertaken with consideration for the confidential nature of the underlying database(s).

(b) Other. Any person may make written objection to the public disclosure of any other information contained in any report or document filed, or otherwise obtained by the Board, stating the grounds for such objection. The Board, on its own initiative or if such objection is made, may order such information withheld from public disclosure when, in its judgment, the information may be withheld under the provisions of an exemption to the Freedom of Information Act ([5 U.S.C. 552](#), see part 801 of this chapter), and its release is found not to be in the public interest.

§ 831.7 Right to representation.

Any person interviewed by an authorized representative of the Board during the investigation, regardless of the form of the interview (sworn, unsworn, transcribed, not transcribed, etc.), has the right to be accompanied, represented, or advised by an attorney or non-attorney representative.

§ 831.8 Investigator-in-charge.

The designated investigator-in-charge (IIC) organizes, conducts, controls, and manages the field phase of the investigation, regardless of whether a Board Member is also on-scene at the accident or incident site. (The role of the Board member at the scene of an accident investigation is as the official spokesperson for the Safety Board.) The IIC has the responsibility and authority to supervise and coordinate all resources and activities of all personnel, both Board and non-Board, involved in the on-site investigation. The IIC continues to have considerable organizational and management responsibilities throughout later phases of the investigation, up to and including Board consideration and adoption of a report or brief of probable cause(s).

§ 831.9 Authority of Board representatives.

(a) General. Any employee of the Board, upon presenting appropriate credentials, is authorized to enter any property where an accident/incident subject to the Board's jurisdiction has occurred, or wreckage from any such accident/incident is located, and do all things considered necessary for proper investigation. Further, upon demand of an authorized representative of the Board and presentation of credentials, any Government agency, or person having possession or control of any transportation vehicle or component thereof, any facility, equipment, process or controls relevant to the investigation, or any pertinent records or memoranda, including all files, hospital records, and correspondence then or thereafter existing, and kept or required to be kept, shall forthwith permit inspection, photographing, or copying thereof by such authorized representative for the purpose of investigating an accident or incident, or preparing a study, or related to any special investigation pertaining to safety or the prevention of accidents. The Safety Board may issue a subpoena, enforceable in Federal district court, to obtain testimony or other evidence. Authorized representatives of the Board may question any person having knowledge relevant to an accident/incident, study, or special investigation. Authorized representatives of the Board also have exclusive authority, on behalf of the Board, to decide the way in which any testing will be conducted, including decisions on the person that will conduct the test, the type of test that will be conducted, and any individual who will witness the test.

(b) Aviation. Any employee of the Board, upon presenting appropriate credentials, is authorized to examine and test to the extent necessary any civil or public aircraft (as specified in [§ 830.5](#)), aircraft engine, propeller, appliance, or property aboard such aircraft involved in an accident in air commerce.

(c) Surface.

(1) Any employee of the Board, upon presenting appropriate credentials, is authorized to test or examine any vehicle, vessel, rolling stock, track, pipeline component, or any part of any such item when such examination or testing is determined to be required for purposes of such investigation.

(2) Any examination or testing shall be conducted in such a manner so as not to interfere with or obstruct unnecessarily the transportation services provided by the owner or operator of such vehicle, vessel, rolling stock, track, or pipeline component, and shall be conducted in such a manner so as to preserve, to the maximum extent feasible, any evidence relating to the transportation accident, consistent with the needs of the investigation and with the cooperation of such owner or operator.

§ 831.10 Autopsies.

The Board is authorized to obtain, with or without reimbursement, a copy of the report of autopsy performed by State or local officials on any person who dies as a result of having been involved in a transportation accident within the

jurisdiction of the Board. The investigator-in-charge, on behalf of the Board, may order an autopsy or seek other tests of such persons as may be necessary to the investigation, provided that to the extent consistent with the needs of the accident investigation, provisions of local law protecting religious beliefs with respect to autopsies shall be observed.

§ 831.11 Parties to the investigation.

(a) All Investigations, regardless of mode.

(1) The investigator-in-charge designates parties to participate in the investigation. Parties shall be limited to those persons, government agencies, companies, and associations whose employees, functions, activities, or products were involved in the accident or incident and who can provide suitable qualified technical personnel actively to assist in the investigation. Other than the FAA in aviation cases, no other entity is afforded the right to participate in Board investigations.

(2) Participants in the investigation (i.e., party representatives, party coordinators, and/or the larger party organization) shall be responsive to the direction of Board representatives and may lose party status if they do not comply with their assigned duties and activity proscriptions or instructions, or if they conduct themselves in a manner prejudicial to the investigation.

(3) No party to the investigation shall be represented in any aspect of the NTSB investigation by any person who also represents claimants or insurers. No party representative may occupy a legal position (see [§ 845.13](#) of this chapter). Failure to comply with these provisions may result in sanctions, including loss of status as a party.

(4) [Title 49, United States Code § 1132](#) provides for the appropriate participation of the FAA in Board investigations, and [§ 1131\(a\)\(2\)](#) provides for such participation by other departments, agencies, or instrumentalities. The FAA and those other entities that meet the requirements of paragraph (a)(1) of this section will be parties to the investigation with the same rights and privileges and subject to the same limitations as other parties, provided however that representatives of the FAA need not sign the "Statement of Party Representatives to NTSB Investigation" (see paragraph (b) of this section).

(b) Aviation investigations. In addition to compliance with the provisions of paragraph (a) of this section, and to assist in ensuring complete understanding of the requirements and limitations of party status, all party representatives in aviation investigations shall sign "Statement of Party Representatives to NTSB Investigation" immediately upon attaining party representative status. Failure timely to sign that statement may result in sanctions, including loss of status as a party.

§ 831.12 Access to and release of wreckage, records, mail, and cargo.

(a) Only the Board's accident investigation personnel, and persons authorized by the investigator-in-charge to participate in any particular investigation, examination or testing shall be permitted access to wreckage, records, mail, or cargo in the Board's custody.

(b) Wreckage, records, mail, and cargo in the Board's custody shall be released by an authorized representative of the Board when it is determined that the Board has no further need of such wreckage, mail, cargo, or records. When such material is released, Form 6120.15, "Release of Wreckage," will be completed, acknowledging receipt.

§ 831.13 Flow and dissemination of accident or incident information.

(a) Release of information during the field investigation, particularly at the accident scene, shall be limited to factual developments, and shall be made only through the Board Member present at the accident scene, the representative of the Board's Office of Public Affairs, or the investigator-in-charge.

(b) All information concerning the accident or incident obtained by any person or organization participating in the investigation shall be passed to the IIC through appropriate channels before being provided to any individual outside the investigation. Parties to the investigation may relay to their respective organizations information necessary for purposes of prevention or remedial action. However, no information concerning the accident or incident may be released to any person not a party representative to the investigation (including non-party representative employees of the party organization) before initial release by the Safety Board without prior consultation and approval of the IIC.

§ 831.14 Proposed findings.

(a) General. Any person, government agency, company, or association whose employees, functions, activities, or products were involved in an accident or incident under investigation may submit to the Board written proposed findings to be drawn from the evidence produced during the course of the investigation, a proposed probable cause, and/or proposed safety recommendations designed to prevent future accidents.

(b) Timing of submissions. To be considered, these submissions must be received before the matter is calendared for consideration at a Board meeting. All written submissions are expected to have been presented to staff in advance of the formal scheduling of the meeting. This procedure ensures orderly and thorough consideration of all views.

(c) Exception. This limitation does not apply to safety enforcement cases handled by the Board pursuant to part 821 of this chapter. Separate ex parte rules, at part 821, subpart J, apply to those proceedings.

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 5

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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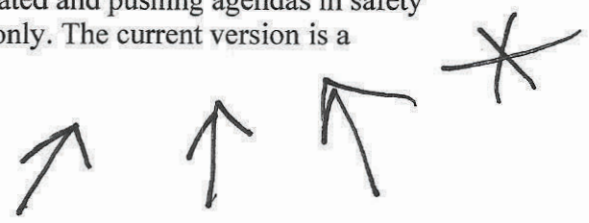
O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 5
XD [REDACTED] Email
December 17, 2021

From: [REDACTED]
To: [REDACTED]
Subject: NATC Safety Report
Date: Friday, December 17, 2021 10:58:22 AM
Attachments: [v3 NATC OKC Mishap Report Routed 11.12.21 no comments.docx FINAL \[REDACTED\].docx](#)
[image001.png](#)

[REDACTED]
The NATC Safety Report needs to be pulled from routing and re-worked. TSS does not need to be including the hiring process or helmet debate in an accident report – the Galette helmet was banned from use in 2019.. We have become opinionated and pushing agendas in safety briefs and documents. We shall be unbiased and factual only. The current version is a litigation hazard. See my comments on attachment.

Thanks



[REDACTED]
Executive Director
Training, Safety, Standards
CBP Air and Marine Operations
1300 Pennsylvania Ave NW 8.4D
Washington DC, 20229



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U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 6

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 6
Agent Affidavit
SSA [REDACTED] / NTSB [REDACTED]
September 8, 2022

**Department of Homeland Security
U.S. Customs and Border Protection
Office of Professional Responsibility**

A F F I D A V I T

DISTRICT OF COLUMBIA

CITY OF WASHINGTON

I, [REDACTED] being duly sworn do hereby depose and say:

I am a Senior Special Agent (SSA) currently assigned to the U.S. Customs and Border Protection (CBP) Office of Professional Responsibility (OPR), Investigative Operations Division (IOD), Special Agent in Charge Washington office (SACW), Washington, D.C.

I have been assigned Office of Special Counsel Case # DI-22-000519 and JICMS Cases # 202209078, 202009245 & 202209182. This cases involves a CBP Air and Marine Operations (AMO) Aircraft Mishap Report for AMO Helicopter N841BP, that occurred on May 12, 2021, in Oklahoma City, OK. The events being investigated mainly stem from various actions that occurred post mishap.

On September 8, 2022, I spoke with National Transportation Safety Board (NTSB) Chief [REDACTED] [REDACTED] I was provided Chief [REDACTED] point of contact by Training, Safety and Standards (TSS) Acting (A) Executive Director [REDACTED] [REDACTED] and TSS Director [REDACTED] [REDACTED]

Chief [REDACTED] stated when the Federal Aviation Administration (FAA) needs to implement changes in the aviation industry regarding procedures, parts or components, an FAA Airworthiness Directive (AD) will be issued. Chief [REDACTED] said in order to determine if crashworthy fuel cells are required, an FAA AD would need to be located. Chief [REDACTED] said all major airlines have a Principle Operating Inspector (POI). He said CBP should have one. The POI is normally the point of contact for FAA ADs. Chief [REDACTED] said ADs are rarely retroactive.

Chief [REDACTED] said falsifying the hours in a flight logbook are a big deal. He said a pilot learns about the importance of maintaining a logbook during “Day 1 of Basic Flight School”.

Chief [REDACTED] said a crash safety investigation report (such as the Aircraft Mishap Report) should contain all the relevant information regarding a mishap. He said a report should contain information about culture, training and hiring. Chief [REDACTED] said an agency that is granted the authority to investigate, should not squash or omit information. He provided if another agency, such as the NTSB and FAA, identified issues not contained in the report at a later time, the investigating agency could have their delegated authority to investigate removed. He stated this could be costly to the agency’s reputation.

The delegated authority is also commonly referred to as being a “Certification of Party Representative” which the NTSB allows for an agency to become a party to the investigation if certain conditions exists in an aviation mishap.

Chief [REDACTED] said if CBP needs an unbiased opinion regarding the contents of a safety investigation, he could provide assistance. Chief [REDACTED] said a mishap report should not contain litigation issues. He said all aircraft crashes are going to have litigation issues.

The contents of this statement are true and correct to the best of my knowledge and belief.

Subscribed and sworn to by:

[REDACTED] _____

Before me this day, March 8, 2023

[REDACTED] _____

U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED] _____

Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 7

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 7
Agent Affidavit
SSA [REDACTED]/NTSB
September 23, 2022

**Department of Homeland Security
U.S. Customs and Border Protection
Office of Professional Responsibility**

A F F I D A V I T

DISTRICT OF COLUMBIA

CITY OF WASHINGTON

I, [REDACTED] being duly sworn do hereby depose and say:

I am a Senior Special Agent (SSA) currently assigned to the U.S. Customs and Border Protection (CBP) Office of Professional Responsibility (OPR), Investigative Operations Division (IOD), Special Agent in Charge Washington office (SACW), Washington, D.C.

I have been assigned JICMS Cases # 202009245 & 202209182. The cases involves a CBP Air and Marine Operations (AMO) Aircraft Mishap Report for AMO Helicopter N841BP, that occurred on May 12, 2021, in Oklahoma City, OK. The events being investigated mainly stem from various actions that occurred post mishap.

On September 23, 2022, I spoke with National Transportation Safety Board (NTSB) Chief [REDACTED] [REDACTED] I was provided Chief [REDACTED] point of contact by Training, Safety and Standards (TSS) Acting (A) Executive Director [REDACTED] and TSS Director [REDACTED] [REDACTED]

Chief [REDACTED] and I discussed aviation accident investigations. Chief [REDACTED] said the NTSB is the investigating agency and CBP will present its findings regarding their investigation to the NTSB. Chief [REDACTED] said the originally assigned NTSB investigator, [REDACTED] [REDACTED], has retired.

I explained to Chief [REDACTED] the issue of CBP Air and Marine management not approving the mishap Report of Investigation (ROI). Chief [REDACTED] said when disagreements arise, the agency should attach an addendum or memorandum to the ROI. The memorandum should identify the differences and the proactive measures being taken to resolve the differences.

I informed Chief [REDACTED] how CBP AMO wanted information regarding [REDACTED] [REDACTED] hiring process removed. Chief [REDACTED] stated the information regarding the hiring pitfalls needs to be included in the ROI. He said CBP needs to exercise due diligence when hiring pilots and the waiver authority should be centralized. Chief [REDACTED] suggested the Head of Safety should examine the waiver process. Chief [REDACTED] asked who reviewed [REDACTED] [REDACTED] flying background, and further asked why CBP is using a hiring system based on flight waivers. He stated the entire hiring process needs to be reviewed.

Chief [REDACTED] said accident statements should not be used against pilots for discipline. He said there is a disconnect when the safety report is used to discipline pilots. He said this will lead to pilots providing testimony that is untruthful in fear of receiving discipline. He said if the agency wants to discipline a pilot, the agency would need to build a case without his statement.

The contents of this statement are true and correct to the best of my knowledge and belief.

Subscribed and sworn to by:



Before me this day, March 8, 2023



U.S. Customs and Border Protection
Office of Professional Responsibility



U.S. Customs and Border Protection
Office of Professional Responsibility

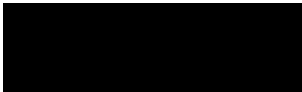
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OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 8

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 8
AIA 
Interview
September 13, 2022

INTERVIEW SCRIPT

For use on interviews of NON-BARGAINING CBP Employees

(NOTE: this document is to be kept as file notes; it is not to be made an exhibit in your investigative file.)

****Begin Recording****

PRE-INTERVIEW

"This interview is being video recorded."

"Today's date is September 13, 2022 and the time is 1:30 pm a.m./p.m."
(Day, month, and year)

"This is the statement of [REDACTED], for case number 202209245, 202209078, 202209182
(Title and Name of person being interviewed) (Case No.)

which is being given at CBP Air and Marine Branch Tucson AZ
(Location and Address, city and state)

"Present at this interview is: (Titles and names of all attendees of interview-have each person identify themselves and spell out their last name)."

"Questions will be asked by Special Agents [REDACTED] and [REDACTED]"
(Full name(s) of OPR Special Agents)

"Responses will be provided by [REDACTED], unless otherwise specified."
(Full name of person being interviewed)

"We will now provide you with the following forms:"

Notices, Rights, and Advisements (Investigators shall ensure the applicable forms were prepared before the interview and served at the beginning of the interview)

- Your Required Appearance and Sworn Statement
- Administrative Warning Acknowledgment for Non-Bargaining Unit Employees
- Kalkines (ONLY if criminal prosecution was declined)
- Miranda (CBP Form 2100) (If applicable)
- Garrity (If applicable)

ADMINISTERING OF OATH

"Please stand and raise your right hand. Do you solemnly swear or affirm the statements you are about to provide will be true and correct to the best of your knowledge and belief?"

"Please state your complete name." [REDACTED]

"What is your position title, job series, pay grade, and duty station?"

Air Interdiction Agent, 1881, GS-13, Tucson, AZ

"Are you currently taking any medication, or under the influence of any drug or alcohol, which would impair your ability to answer these questions?"

no

TITLE 18 U.S.C. § 1001 ADVISEMENT

“You are advised this is an official investigation being conducted by the CBP/Office of Professional Responsibility. Knowingly providing false or fictitious statements may subject you to criminal prosecution under Title 18 U.S.C. § 1001, or administrative discipline up to and including dismissal from Federal service.”

“Do you understand this requirement?” **no/yes**

NON-DISCLOSURE NOTICE

“You are hereby notified any discussion of matters under official review by the Office of Professional Responsibility to unauthorized personnel is prohibited. Further, you are cautioned any discussion or disclosure of the substance of the interview, or any of the circumstances surrounding any of the incidents discussed during this interview, may result in disciplinary action being taken against you. Do you understand this non-disclosure requirement?”

“Do you have any questions before we begin the interview?” **yes/no**

(Begin questions related to the investigation at this point)

BREAKS DURING AN INTERVIEW

An employee’s review of the recording (Next section in this document) is not considered a break.

DO NOT TURN OFF RECORDING DURING BREAKS

Upon the employee’s return to the interview room following a break, remind the employee all previous rights, advisements and warnings are still in effect.

NOTE: Investigators shall ONLY stop a recording, when an employee requests a meal break during the interview (e.g., lunch or dinner).

EMPLOYEE’S REVIEW OF THE RECORDING

“Is there anything you would like to add or clarify regarding your statement?” **no**

“Would you like the opportunity to review the electronic recording of the interview, in whole or in part, to ensure the investigatory interview was properly recorded?” **no**

If the non-bargaining CBP employee requests a review of the electronically recorded investigative interview, the investigator shall:

- Advise the non-bargaining CBP employee there will be no off-the-record conversations during the review;
- Inform the non-bargaining CBP employee that if the employee wishes to ask questions, make comments, or additional statements, they will be addressed after the review when the recording resumes;
- Stop the recording, utilizing the field interviewer tablet;
- Utilize only the field interviewer tablet to review the recorded investigative interview; and,
- Always maintain physical and visual control of the Star Witness Field Interviewer Kit during the employee’s review of the recording.

Investigators shall not ask questions of the employee or have investigative interaction during any review period. Any follow-up questions from investigators should be asked on the record, while the investigative interview or supplemental investigative interview is being recorded.

At the conclusion of the review, the investigator shall:

- Activate the recording equipment;
- Remind the employee all previous rights, advisements, and warnings are still in effect;
- Have the employee attest the recording is an exact and true copy of the previously reviewed recording; and,
- Allow the employee to clarify answers and make additional statements.

CONCLUDING THE INTERVIEW

“Before concluding this interview,”

IF EMPLOYEE CHOSE TO REVIEW THE RECORDING: In a supplemental recording following the review, the investigator shall ensure the following occur, prior to concluding the interview:

- The employee shall be reminded that all previous rights, advisements, and warnings are still in effect;
- In a supplemental recorded statement, the employee attests the recording is an exact and true copy of the previously reviewed recording; and,
- Additional statements are recorded.

Followed by asking:

“Aside from compelling this interview, have I, or any other Federal agent threatened you or intimidated you in any way?”

no

“Have I, or any other Federal agent offered you a reward, promise of reward, or immunity for your statement?”

no

“Were you treated fairly and professionally here today?”

yes

“This concludes the statement of [REDACTED], The time is now 4:15 a.m./p.m.

(Title and name of employee)

and the date is 09/13/22

(day, month, and year)

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the U.S. Customs and Border Protection, Standards of Conduct (CBP Directive No. 51735-13A), Section 6.4.2: "When directed by proper authority, employees must truthfully and fully testify, provide information, and respond to questions (under oath when required) concerning matters of official interest that are being pursued administratively".

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print):

Signature of Employee:

Date: 09/13/2022 Time: 0822

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 9

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 9
AIA 
Training
Certifications

of Investigations he has conducted. *Essentially I am asking for the same information for both [REDACTED] and [REDACTED]*

3. According to the reports, CBP AMO has 97 AS350 Helicopters in the fleet. It is reported 81 of those helicopters do not have crashworthy fuel tanks. I need to obtain an itemized list of each helicopter in the fleet. The list should contain: helicopter location, date of manufacture, crashworthy fuel tank (yes or no) and the inventory, tail number, SAP# or whatever is used to identify that particular aircraft. Since some assets may have been manufactured prior to entering the AMO fleet, please provide the date it entered into the AMO fleet.
4. One of the preliminary recommendations of the May 12, mishap was for a Crew Member Evaluation Board to convene regarding (Pilot Under Instruction) [REDACTED] [REDACTED]. It is my understanding the board did convene. I need to obtain any and all documents, and interviews associated with the board's investigation and findings.
5. There was a Misconduct Review Board (MRB) that involved Instructor Pilot (IP) [REDACTED] [REDACTED]. Please provide any and all documents related to this MRB to include the names of all the parties involved.
6. Did PIU [REDACTED] and IP [REDACTED] provide a written memorandum regarding the accident? If so please provide and all documents.
7. AMO Hiring needs to provide any and all documents associated to PUI [REDACTED] [REDACTED] hiring process?
8. AMO Hiring needs to provide a list of all applicants that AMO SME [REDACTED] [REDACTED] was involved with. The list should identify all applicants that received a waiver from Mr. [REDACTED] during their hiring process. The list needs to identify if the applicant was successfully hired. I will need any and all documents associated with those applicants once identified.

Again, I do understand this information request contains numerous taskings. In an effort to meet our established investigative milestones, I have set a deadline of September 2, 2022 for this information to be provided to me. If there are any questions or concerns regarding the information that has been requested please don't hesitate to contact me.

Thanks and Have a Safe Day

[REDACTED] [REDACTED]
Special Agent
US Customs and Border Protection
Office of Professional Responsibility
Investigative Operations Division
Washington, D.C.

NON-DISCLOSURE: This information is part of an Official Investigation and should not be disclosed to anyone outside of CBP or anyone within CBP, besides the person indicated on this email chain. In addition, the employee to which this request pertains should not be informed in any way; including, but not limited to, placing the requestors name in the employee's file, making notation that a request was made in employee's file, information must not be disclosed in writing or verbally to the employee.

Viterbi School of Engineering
University of Southern California

This is to certify that



has completed the

THREAT AND ERROR MANAGEMENT COURSE

28 MARCH 2018



Yehuda C. Levin
Dean, Viterbi School of Engineering

Thomas R. Amy
Director, Aviation Safety and Security

University of Southern California

The Continuing Education Program of the Viterbi School of Engineering

has awarded this program certificate in

Aviation Safety and Security

to

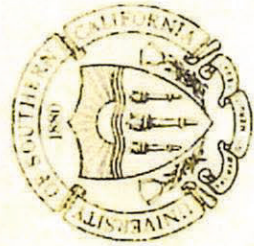


for the successful completion of the required hours of instruction
in the following areas

- THREAT AND ERROR MANAGEMENT DEVELOPMENT
- AVIATION SAFETY MANAGEMENT SYSTEMS
- LEGAL ASPECTS OF AVIATION SAFETY
- HUMAN FACTORS IN AVIATION SAFETY
- AIRCRAFT ACCIDENT INVESTIGATION

OCTOBER 4, 2019

2478



Yusef C. ...

Dean, Viterbi School of Engineering

Thomas R. Aug

Director, Aviation Safety and Security

National Transportation Safety Board



Certificate of Training
Awarded to



for the successful completion of

Aircraft Accident Investigation
9/11/2017-9/22/2017
CEU

A handwritten signature in dark ink, appearing to read "Dr. Paul F. Schuda".

Dr. Paul F. Schuda
Director

A handwritten signature in dark ink, appearing to read "Robert L. Sumwalt".

Robert L. Sumwalt
Chairman

OpStar Designation List for AI

Agent Training Record **Branch Waivers (0)**

Student Name: [Redacted] Tucson Air Branch (TUC) Time Range: Most Recent and Initials

Include retired agents

Designation (14)

[Quick View](#) [Full View](#)

Designation	Resource	Init Date	Sign Date	Director
Pilot in Command (PIC)	AS350 B2	11/27/2017	02/12/2021	[Redacted]
Pilot in Command (PIC)	AS350 B3 2B1	11/27/2017	02/12/2021	[Redacted]
Night Vision Goggle Pilot (NVG Pilot)	AS350 B2	11/27/2017	02/12/2021	[Redacted]
Night Vision Goggle Pilot (NVG Pilot)	AS350 B3 2B1	11/27/2017	02/12/2021	[Redacted]
Maintenance Check Pilot (MCP)	AS350 B2	11/27/2017	02/12/2021	[Redacted]
Maintenance Check Pilot (MCP)	AS350 B3 2B1	11/27/2017	02/12/2021	[Redacted]
Aviation Safety Officer (ASO)	NON-SPECIFIC	03/01/2018	02/12/2021	[Redacted]
Tactical Team Member (Air) (TTM)	NON-SPECIFIC	08/23/2017	02/12/2021	[Redacted]
Air Safety Investigator (ASI)	OTHER (specify in Comments)	10/11/2019	02/12/2021	[Redacted]
Second in Command (SIC)	BE-350 PL21	05/11/2022	05/12/2022	[Redacted]

[02/12/2021 APPROVED](#)
[01/08/2020 APPROVED](#)
[10/15/2019 APPROVED](#)
[10/11/2019 SUBMITTED](#)

U.S. Customs and Border Protection Air and Marine Operations



CERTIFICATE OF COMPLETION FY 2022 SAFETY REFRESHER TRAINING PROGRAM

This certificate of completion is awarded to

Fiscal Year 2022 AMO Safety Refresher Training Program, conducted in Dallas, TX, from June 6th - 10th 2022, provided mandatory initial and recurrent safety training for primary aviation and marine safety officers, safety investigators, and collateral duty safety officers. Topics included Crew Resource Management, Human Factors, information on AMO's International Standard for Business Aircraft Operations certification and respective policy changes, and the training officer's role within the Safety Management Systems.

*Director, Safety and Risk Management
Air and Marine Operations*

June 2022

*We are a federal law enforcement organization dedicated to serving and protecting the American people.
We apply advanced aeronautical and maritime capabilities and employ our unique skill sets to preserve America's security interests.*

Certificate of Completion

This is to certify that



Has successfully completed a 4-day course on
Line Operations Safety Audit for Flight Operations
(LOSA-F) on this day of Sept 3, 2020

Training Location: Virtual



The Aviation Consulting Group



Certificate of Completion

This is to certify that

[REDACTED]

Has successfully completed Line Operations Safety
Audit for Flight Operations (LOSA-F) Observer Training
on this day of September 2, 2020 and has been
approved to conduct LOSA observations

Training Location: Virtual

[REDACTED]

President,
The Aviation Consulting Group



The Aviation Consulting Group

LOSA Training Completion Assessment

Class Date: 08/31/2020 - 09/03/2020

Class Title: LOSA for Flight Operations

NAME	Core Test	LOSA Observer Test	Steering Committee Test	Certificates Issued
██████████	85%	Ready	95%	Core/Observer

NOTES: Thanks, ██████! It was a pleasure working with you.

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 10

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 10
SAEA [REDACTED]
Interview
October 20, 2022

O F F I C I A L U S E O N L Y
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U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 11

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 11
XD 
Interview
January 6, 2023

INTERVIEW SCRIPT

For use on interviews of NON-BARGAINING CBP Employees

(NOTE: this document is to be kept as file notes; it is not to be made an exhibit in your investigative file.)

Begin Recording

PRE-INTERVIEW

"This interview is being video recorded."

"Today's date is January 6, 2023 and the time is 9:31 ^{EST} a.m."
(Day, month, and year)

"This is the statement of XD [REDACTED], for case number 202209078
(Title and Name of person being interviewed) (Case No.)

which is being given at 90 K St NE Washington, D.C. @ the OPR WFO
(Location and Address, city and state)

"Present at this interview is: (Titles and names of all attendees of interview-have each person identify themselves and spell out their last name)."

"Questions will be asked by Special Agents [REDACTED]
(Full name(s) of OPR Special Agents)"

"Responses will be provided by [REDACTED], unless otherwise specified."
(Full name of person being interviewed)

"We will now provide you with the following forms:"

Notices, Rights, and Advisements (Investigators shall ensure the applicable forms were prepared before the interview and served at the beginning of the interview)

- Your Required Appearance and Sworn Statement
- Administrative Warning Acknowledgment for Non-Bargaining Unit Employees
- Kalkines (ONLY if criminal prosecution was declined)
- Miranda (CBP Form 2100) (If applicable)
- Garrity (If applicable)

ADMINISTERING OF OATH

"Please stand and raise your right hand. Do you solemnly swear or affirm the statements you are about to provide will be true and correct to the best of your knowledge and belief?"

"Please state your complete name." [REDACTED]

"What is your position title, job series, pay grade, and duty station?"

1801 SES XD Dir Training Safety and Standards, AMO Washington, D.C.

"Are you currently taking any medication, or under the influence of any drug or alcohol, which would impair your ability to answer these questions?"

no

TITLE 18 U.S.C. § 1001 ADVISEMENT

"You are advised this is an official investigation being conducted by the CBP/Office of Professional Responsibility. Knowingly providing false or fictitious statements may subject you to criminal prosecution under Title 18 U.S.C. § 1001, or administrative discipline up to and including dismissal from Federal service."

"Do you understand this requirement?"

I understand

NON-DISCLOSURE NOTICE

"You are hereby notified any discussion of matters under official review by the Office of Professional Responsibility to unauthorized personnel is prohibited. Further, you are cautioned any discussion or disclosure of the substance of the interview, or any of the circumstances surrounding any of the incidents discussed during this interview, may result in disciplinary action being taken against you. Do you understand this non-disclosure requirement?"

I do

"Do you have any questions before we begin the interview?"

no questions

(Begin questions related to the investigation at this point)

BREAKS DURING AN INTERVIEW

An employee's review of the recording (Next section in this document) is not considered a break.

DO NOT TURN OFF RECORDING DURING BREAKS

Upon the employee's return to the interview room following a break, remind the employee all previous rights, advisements and warnings are still in effect.

NOTE: Investigators shall ONLY stop a recording, when an employee requests a meal break during the interview (e.g., lunch or dinner).

EMPLOYEE'S REVIEW OF THE RECORDING

"Is there anything you would like to add or clarify regarding your statement?"

no

"Would you like the opportunity to review the electronic recording of the interview, in whole or in part, to ensure the investigatory interview was properly recorded?"

no

If the non-bargaining CBP employee requests a review of the electronically recorded investigative interview, the investigator shall:

- Advise the non-bargaining CBP employee there will be no off-the-record conversations during the review;
- Inform the non-bargaining CBP employee that if the employee wishes to ask questions, make comments, or additional statements, they will be addressed after the review when the recording resumes;
- Stop the recording, utilizing the field interviewer tablet;
- Utilize only the field interviewer tablet to review the recorded investigative interview; and,
- Always maintain physical and visual control of the Star Witness Field Interviewer Kit during the employee's review of the recording.

Investigators shall not ask questions of the employee or have investigative interaction during any review period. Any follow-up questions from investigators should be asked on the record, while the investigative interview or supplemental investigative interview is being recorded.

At the conclusion of the review, the investigator shall:

- Activate the recording equipment;
- Remind the employee all previous rights, advisements, and warnings are still in effect;
- Have the employee attest the recording is an exact and true copy of the previously reviewed recording; and,
- Allow the employee to clarify answers and make additional statements.

CONCLUDING THE INTERVIEW

"Before concluding this interview,"

IF EMPLOYEE CHOSE TO REVIEW THE RECORDING: In a supplemental recording following the review, the investigator shall ensure the following occur, prior to concluding the interview:

- The employee shall be reminded that all previous rights, advisements, and warnings are still in effect;
- In a supplemental recorded statement, the employee attests the recording is an exact and true copy of the previously reviewed recording; and,
- Additional statements are recorded.

Followed by asking:

"Aside from compelling this interview, have I, or any other Federal agent threatened you or intimidated you in any way?"

no

"Have I, or any other Federal agent offered you a reward, promise of reward, or immunity for your statement?"

no

"Were you treated fairly and professionally here today?"

yes

"This concludes the statement of [REDACTED] . The time is now 11:55 a.m./p.m.

(Title and name of employee)

and the date is 01/06/23
(day, month, and year)

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the Code of Federal Regulations, (31 CFR 0.207): "Employees shall respond to questions truthfully and under oath when required, whether orally or in writing, and must provide documents and other materials concerning matters of official interest when directed to do so by competent authority."

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print): [REDACTED]

Signature of Employee: [REDACTED]

Date: 1/6/23 Time: 0934

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

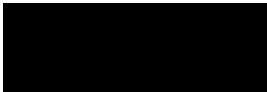
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U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 12

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 12
XD 
Interview
January 12, 2023

INTERVIEW SCRIPT

For use on interviews of NON-BARGAINING CBP Employees

(NOTE: this document is to be kept as file notes; it is not to be made an exhibit in your investigative file.)

"Begin Recording"

PRE-INTERVIEW

"This interview is being video recorded."

"Today's date is January 12, 2023 and the time is 11:05 am a.m./p.m." ^{9:10 am EST}
(Day, month, and year)

"This is the statement of [REDACTED], for case number OSC 01-22-000519
(Title and Name of person being interviewed) (Case No.)

which is being given at 90 K St NE CBP OPR WFO
(Location and Address, city and state)

"Present at this interview is: (Titles and names of all attendees of interview-have each person identify themselves and spell out their last name)."

"Questions will be asked by Special Agents [REDACTED]
(Full name(s) of OPR Special Agents)

"Responses will be provided by [REDACTED], unless otherwise specified."
(Full name of person being interviewed)

"We will now provide you with the following forms:"

Notices, Rights, and Advisements (Investigators shall ensure the applicable forms were prepared before the interview and served at the beginning of the interview)

- Your Required Appearance and Sworn Statement
- Administrative Warning Acknowledgment for Non-Bargaining Unit Employees
- Kalkines (ONLY if criminal prosecution was declined)
- Miranda (CBP Form 2100) (If applicable)
- Garrity (If applicable)

ADMINISTERING OF OATH

"Please stand and raise your right hand. Do you solemnly swear or affirm the statements you are about to provide will be true and correct to the best of your knowledge and belief?"

"Please state your complete name." [REDACTED]

"What is your position title, job series, pay grade, and duty station?"
1851 1801 SES, Washington, D.C. Executive Director National Air Security Operat.

"Are you currently taking any medication, or under the influence of any drug or alcohol, which would impair your ability to answer these questions?"

no

TITLE 18 U.S.C. § 1001 ADVISEMENT

"You are advised this is an official investigation being conducted by the CBP/Office of Professional Responsibility. Knowingly providing false or fictitious statements may subject you to criminal prosecution under Title 18 U.S.C. § 1001, or administrative discipline up to and including dismissal from Federal service."

"Do you understand this requirement?"

I do

NON-DISCLOSURE NOTICE

"You are hereby notified any discussion of matters under official review by the Office of Professional Responsibility to unauthorized personnel is prohibited. Further, you are cautioned any discussion or disclosure of the substance of the interview, or any of the circumstances surrounding any of the incidents discussed during this interview, may result in disciplinary action being taken against you. Do you understand this non-disclosure requirement?"

"Do you have any questions before we begin the interview?"

I do

(Begin questions related to the investigation at this point)

BREAKS DURING AN INTERVIEW

An employee's review of the recording (Next section in this document) is not considered a break.

DO NOT TURN OFF RECORDING DURING BREAKS

Upon the employee's return to the interview room following a break, remind the employee all previous rights, advisements and warnings are still in effect.

NOTE: Investigators shall ONLY stop a recording, when an employee requests a meal break during the interview (e.g., lunch or dinner).

EMPLOYEE'S REVIEW OF THE RECORDING

"Is there anything you would like to add or clarify regarding your statement?"

no

"Would you like the opportunity to review the electronic recording of the interview, in whole or in part, to ensure the investigatory interview was properly recorded?"

no

If the non-bargaining CBP employee requests a review of the electronically recorded investigative interview, the investigator shall:

- Advise the non-bargaining CBP employee there will be no off-the-record conversations during the review;
- Inform the non-bargaining CBP employee that if the employee wishes to ask questions, make comments, or additional statements, they will be addressed after the review when the recording resumes;
- Stop the recording, utilizing the field interviewer tablet;
- Utilize only the field interviewer tablet to review the recorded investigative interview; and,
- Always maintain physical and visual control of the Star Witness Field Interviewer Kit during the employee's review of the recording.

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the Code of Federal Regulations, (31 CFR 0.207): "Employees shall respond to questions truthfully and under oath when required, whether orally or in writing, and must provide documents and other materials concerning matters of official interest when directed to do so by competent authority."

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print): [REDACTED]

Signature of Employee: [REDACTED]

Date: 1/12/13 Time: 6:13

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 13

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 13
DEAC 
Interview
February 27, 2023

INTERVIEW SCRIPT

For use on interviews of NON-BARGAINING CBP Employees

(NOTE: this document is to be kept as file notes; it is not to be made an exhibit in your investigative file.)

“Begin Recording”

PRE-INTERVIEW

“This interview is being video recorded.”

“Today’s date is February 27, 2023 and the time is 11:57 @m/p.m.”
(Day, month, and year)

“This is the statement of DEAC [REDACTED], for case number 202209078
(Title and Name of person being interviewed) (Case No.)

which is being given at Ronald Regan Building Washington, DC
(Location and Address, city and state)

“Present at this interview is: (Titles and names of all attendees of interview-have each person identify themselves and spell out their last name).”

“Questions will be asked by Special Agents [REDACTED]”
(Full name(s) of Special Agents)

“Responses will be provided by [REDACTED], unless otherwise specified.”
(Full name of person being interviewed)

“We will now provide you with the following forms:”

Notices, Rights, and Advisements (Investigators shall ensure the applicable forms were prepared before the interview and served at the beginning of the interview)

- Your Required Appearance and Sworn Statement
- Administrative Warning Acknowledgment for Non-Bargaining Unit Employees
- Kalkines (ONLY if criminal prosecution was declined)
- Miranda (CBP Form 2100) (If applicable)
- Garrity (If applicable)

ADMINISTERING OF OATH

“Please stand and raise your right hand. Do you solemnly swear or affirm the statements you are about to provide will be true and correct to the best of your knowledge and belief?” I Swore

“Please state your complete name.” [REDACTED]

“What is your position title, job series, pay grade, and duty station?”

DEAC SES Washington, DC 1801

“Are you currently taking any medication, or under the influence of any drug or alcohol, which would impair your ability to answer these questions?” no

TITLE 18 U.S.C. § 1001 ADVISEMENT

"You are advised this is an official investigation being conducted by the CBP/Office of Professional Responsibility. Knowingly providing false or fictitious statements may subject you to criminal prosecution under Title 18 U.S.C. § 1001, or administrative discipline up to and including dismissal from Federal service."

"Do you understand this requirement?" **Yes**

NON-DISCLOSURE NOTICE

"You are hereby notified any discussion of matters under official review by the Office of Professional Responsibility to unauthorized personnel is prohibited. Further, you are cautioned any discussion or disclosure of the substance of the interview, or any of the circumstances surrounding any of the incidents discussed during this interview, may result in disciplinary action being taken against you. Do you understand this non-disclosure requirement?" **Yes**

"Do you have any questions before we begin the interview?" **No**

(Begin questions related to the investigation at this point)

BREAKS DURING AN INTERVIEW

An employee's review of the recording (Next section in this document) is not considered a break.

DO NOT TURN OFF RECORDING DURING BREAKS

Upon the employee's return to the interview room following a break, remind the employee all previous rights, advisements and warnings are still in effect.

NOTE: Investigators shall ONLY stop a recording, when an employee requests a meal break during the interview (e.g., lunch or dinner).

EMPLOYEE'S REVIEW OF THE RECORDING

"Is there anything you would like to add or clarify regarding your statement?" **No**

"Would you like the opportunity to review the electronic recording of the interview, in whole or in part, to ensure the investigatory interview was properly recorded?" **No**

If the non-bargaining CBP employee requests a review of the electronically recorded investigative interview, the investigator shall:

- Advise the non-bargaining CBP employee there will be no off-the-record conversations during the review;
- Inform the non-bargaining CBP employee that if the employee wishes to ask questions, make comments, or additional statements, they will be addressed after the review when the recording resumes;
- Stop the recording, utilizing the field interviewer tablet;
- Utilize only the field interviewer tablet to review the recorded investigative interview; and,
- Always maintain physical and visual control of the Star Witness Field Interviewer Kit during the employee's review of the recording.

Investigators shall not ask questions of the employee or have investigative interaction during any review period. Any follow-up questions from investigators should be asked on the record, while the investigative interview or supplemental investigative interview is being recorded.

At the conclusion of the review, the investigator shall:

- Activate the recording equipment;
- Remind the employee all previous rights, advisements, and warnings are still in effect;
- Have the employee attest the recording is an exact and true copy of the previously reviewed recording; and,
- Allow the employee to clarify answers and make additional statements.

CONCLUDING THE INTERVIEW

"Before concluding this interview,"

IF EMPLOYEE CHOSE TO REVIEW THE RECORDING: In a supplemental recording following the review, the investigator shall ensure the following occur, prior to concluding the interview:

- The employee shall be reminded that all previous rights, advisements, and warnings are still in effect;
- In a supplemental recorded statement, the employee attests the recording is an exact and true copy of the previously reviewed recording; and,
- Additional statements are recorded.

Followed by asking:

"Aside from compelling this interview, have I, or any other Federal agent threatened you or intimidated you in any way?"

no

"Have I, or any other Federal agent offered you a reward, promise of reward, or immunity for your statement?"

no

"Were you treated fairly and professionally here today?"

yes

"This concludes the statement of [REDACTED] (Title and name of employee) The time is now 1:46 a.m./p.m. (circled)
and the date is 02/27/23 (day, month, and year)"

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the U.S. Customs and Border Protection, Standards of Conduct (CBP Directive No. 51735-13A), Section 6.4.2: "When directed by proper authority, employees must truthfully and fully testify, provide information, and respond to questions (under oath when required) concerning matters of official interest that are being pursued administratively".

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print): [REDACTED]

Signature of Employee: [REDACTED]

Date: 02/27/23 Time: 11:58

[REDACTED]
U.S. Customs and Border Protection U
Office of Professional Responsibility

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 14

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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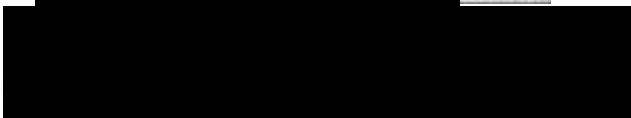
EXHIBIT 14
Operational Requirements Document
for CBP Light Enforcement Helicopter
July 26, 2006

U.S. Department of Homeland Security
U.S. Customs and Border Protection
Office of CBP Air and Marine



OPERATIONAL REQUIREMENTS DOCUMENT (ORD)
FOR THE
U.S. CUSTOMS AND BORDER PROTECTION
LIGHT ENFORCEMENT HELICOPTER

28 July 2006

Submitted by:		<u>8-10-06</u>
	Sponsor	Date
Endorsed by:		<u>8/10/2006</u>
		Date
Accepted by:		<u>8/11/2006</u>
	Head of Organizational Element Senior Executive	Date
Endorsed by:	_____	_____
	Joint Requirements Council	Date
Approved by:	_____	_____
	DHS Acquisition Executive (Deputy Secretary)	Date

COMPETITION SENSITIVE
CBP LEH ORD

Change History

Version Number	Date	Description

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**COMPETITION SENSITIVE
CBP LEH ORD**

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Section A. Introduction

1. Purpose

This Operational Requirements Document (ORD) describes the requirements for a single-engine, turbine-powered light enforcement helicopter (LEH) in support of U.S. Customs and Border Protection (CBP) priority mission of preventing terrorists and terrorist weapons from entering the United States and DHSs broader homeland security mission. The LEH is also required for CBP law enforcement operations to protect the land borders of the United States and support U.S. Immigrations and Customs Enforcement investigations to protect interior ports of entry against the illegal importation of instruments of terrorism, illegal drugs and other contraband. The LEH shall be Federal Aviation Administration (FAA) certificated for day and night visual flight rules (VFR) operations and equipped with sensors capable of tracking surface targets. It shall be capable of operating under adverse environmental conditions such as rough terrain, dust and sand, extreme high and low temperatures, high altitude, high salinity and high humidity. High-density altitude operations are emphasized as the most important attribute.

CBP is the frontline border agency charged with securing more than 5,000 miles of border with Canada, 2,000 miles of border with Mexico, and 95,000 miles of coastline. LEHs are needed for that mission because they improve the efficiency and effectiveness of agents in the detection of, tracking and apprehension of undocumented aliens (UDAs), both visually and using advanced sensor equipment. UDAs use rough terrain such as mountains and deserts to mask their activities. Unattended ground sensors are positioned in the most frequently used areas of penetration into the United States; however, an agent must investigate all sensor activations to determine if they are legitimate activations by people traveling on foot or in vehicles, or false alarms by livestock or wildlife. Those investigations are often lengthy because they require agents to drive long distances to the vicinity of the sensor and then walk or climb to the sensor's location to determine the reason for activation. LEHs serve as a force multiplier during those operations because they provide quick and efficient movement of border agents and equipment to those sites.

LEHs also support other diversified missions such as insertion of agents serving search and arrest warrants and aerial surveillance. The LEH equipped with EO/IR sensors is a multi-mission platform that is used for aerial surveillance, intelligence gathering and tactical support for agents during the execution of warrants and other high risk and surveillance operations. It is the optimal aerial surveillance platform in remote locations and metropolitan areas because its vertical lift capability and maneuverability enable operations from off-airport sites and in close proximity to congested airports. EO/IR sensors and video downlink have provided intelligence that has enhanced covert surveillance operations and

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improved officer safety during high-risk operations. Video recorders have documented suspect activities for evidentiary use.

Many of the LEHs that are used to provide support to the ground units and local law enforcement protecting our borders have out lived their safe and useful life expectancy of 20 years in service. Parts are becoming very difficult to obtain and maintenance costs have increased excessively over the past few years. To meet emerging DHS requirements, new law enforcement LEHs equipped with sensors capable of detecting and tracking surface targets are required. New LEHs would improve reliability and safety. Those capabilities would enhance operational effectiveness by providing faster and more reliable support to the ground forces.

2. Background

Since September 11,2001, the CBP Air and Marine (A&M) mission has evolved and grown while its inventory of aircraft and boats and their capabilities have remained static, creating capability gaps in mission coverage and aircraft performance. Currently, 2/3 of the light observation helicopters that are used to conduct aerial intelligence gathering and incident detection have exceeded or will be reaching the end of their useful lives within the next 5 years. Since some of those helicopters are more than 35 years old, there has been an unavoidable loss of operational sorties because of additional maintenance downtime due to increased inspections and a shrinking pool of spare parts. CBP A&M mission requirements have grown exponentially but the LEH fleet size has increasingly declined.

Standardization of the CBP A&M LEH fleet began in 1993 when the first contract was awarded to acquire American Eurocopter AS-350 helicopters. That fleet standardization effort continued with a second multi-year contract on September 30, 1998. A sole source contract was awarded in 2004 to acquire 4 additional AS-350 LEHs to support border security operations along the Northern Border. The current LEH fleet includes 44 AS-350 helicopters.

Fleet standardization is a key component of CBP A&M Modernization Goals and Objectives in the "Report to Congress on the CBP Air Strategic Plan", submitted as directed by the FY2006 Homeland Security Appropriations Bill, Conference Report 109-241, page 46. A Deployment Goal is to maximize aerial support to focus on the anti-terrorism mission. This may require the shifting of resources from one location to another in order to respond to priority threats. Having a similar type of aircraft, as those already in the inventory would make these redeployment efforts more efficient and operationally effective. A continued acquisition of AS-350 helicopters in the B3 or later variant would assist CBP Air and Marine with fleet standardization.

From a crew standardization standpoint, the CBP Air and Marine Air Operations Handbook, May 2006, restricts aircraft pilots to being qualified in a maximum of

three aircraft. That policy is based on safety. Because of the complexity of our aircraft and the demanding nature of our tactical mission, requiring a pilot to maintain proficiency in more than three different models of aircraft adds an unacceptable level of risk. Therefore, the acquisition of an LEH other than the AS350 B3 would in turn require the hiring of additional pilots.

Another important part of the CBP Air and Marine Modernization Plan is the reduction of maintenance and support costs. This effort is to facilitate more efficient aircraft maintenance can be accomplished by using the fewest types of aircraft possible to conduct required agency operations, thus requiring fewer total spare parts to be purchased and avoiding the training of mechanics on additional types of aircraft. The resulting economies of scale with training and maintenance would allow CBP A&M to operate more efficiently.

3. Timeframe

In 2006, Congress appropriated \$40 million to begin recapitalization of the CBP A&M light enforcement helicopter (LEH) fleet. If the Department approves the LEH acquisition plan, that recapitalization effort will continue in FY 2007. The LEH acquisition plan is a 5-year program that envisions a new standardized fleet of helicopters equipped with EO/IR sensors, video downlinks, secure communications and essential law enforcement equipment. Fleet standardization would improve safety, operational effectiveness, scheduling flexibility, staffing efficiency and aircraft utilization.

Section B. Architectural Philosophy

1. Design

The LEH shall be an integrated end product by a prime contractor using "commercial-off-the-shelf" (COTS) manufactured and supported aircraft and equipment to keep acquisition and maintenance costs within CBP A&M guidelines. All standard factory equipment shall be of the manufacturer's commercial model and all installations shall be designed and installed in accordance with aeronautical industry standards and shall meet the applicable certification requirements of the FAA. The airframe, power plants and major components shall be designed and manufactured for rugged operations.

The aircraft design shall incorporate the latest materials selected on the basis of weight conservation, increased payload, strength and durability. Interior materials shall be selected to absorb sound and minimize adverse environmental and health effects such as flammability, smoke, and toxicity when burned. Weight of interior materials and seats shall also be an important consideration.

Installed equipment shall not impede access to panels and enclosures that require opening for periodic inspections and maintenance. All organic finishes

used on the aircraft shall comply with manufacturer specifications. Where dissimilar metals come in contact on the aircraft, the metals shall be adequately protected against galvanic corrosion.

Electrical disconnect panels with connectors for connecting and removing the mission equipment are required. Connector dust caps and panel covers are needed to protect the connectors when equipment is not installed.

2. Reliability

The primary measure of reliability will be the Mean-Time-Between-Failure (MTBF) for the LEH and subsystems incorporated as part of the modification and integration efforts. The reliability of the LEH and major components shall be predicated on 1,200 hours of operation of per year when operated and maintained in accordance with the contractor's recommendations. An operational mission failure is any hardware, software failure, or fault that prevents the LEH from meeting operational requirements defined herein. Design controllable failures used in determining reliability are:

Design/Workmanship Failures: Failures due to design deficiencies or poor workmanship of the equipment, component part, or software.

- Component Part Failures: Failures due to defective component parts. In the event that several component parts of the same type fail during test, each one shall be considered as a separate failure, unless it can be shown that one failure caused one or more of the others to fail.
- Built-in-Test (BIT) Failures: All BIT-detected failures that result in any hardware being replaced/repaired including the BIT circuitry itself.
- Connectors/Contacts Failures: Failures caused by faulty, corroded, or contaminated Systems Replaceable Assembly external contacts or connections that can not be corrected by reseating or treating.

3. Availability

The availability of the LEH shall be no less than 80 percent based on 24 hours, 7 days per week, and 1200 hours per year; however, depot level work or crash repair of aircraft shall not count against availability computations. The probability of the LEH completing the mission without a component or system failure, or required non-scheduled maintenance, shall be at least 95 percent.

4. Maintainability

All avionics and electrical components requiring routine maintenance shall be readily accessible. The installation design of mission system equipment and line replaceable units, subassemblies and parts shall allow for the easy removal,

replacement and adjustment of equipment on-site or in the field by aviation technicians using standard material, mechanics tools and electronic repair equipment. Access panels and closures shall provide access to components requiring inspection, replacement, calibration and adjustment, as well as to disconnect fittings for ease of maintenance and reduction in maintenance time. Access to compartments that require entrance between scheduled inspections, other than those required to replace a component due to malfunction, shall provide easy entry. Connectors shall be mounted to allow for disconnection and reconnection with minimum effort during component removal. Wiring bundles shall be long enough to permit replacement of connectors at least three times without splicing or before replacing the wire bundles. Wiring bundles shall not be hard wired to any equipment or equipment racks. Built-In-Test features shall be included.

5. Survivability

The aircraft critical functions shall be preserved to allow continued safe flight and landing following any damage that does not otherwise incapacitate the aircraft. All practical design precautions will be taken to minimize the risk of catastrophic damage due to engine failures resulting in non-contained rotor debris.

6. Personnel, Safety, Human Factors, and Environmental Considerations

The contractor shall maintain a system safety program that identifies all hazards associated with the design, fabrication and integration of the LEH. In addition, the contractor shall provide a methodology to either eliminate or control those hazards. Materials and processes shall, along with other design criteria, minimize environmental impacts from the manufacture, operation, maintenance, and repair of the aircraft and its subsystems. Ozone-depleting substances shall not be used.

Interior acoustical noise and external ambient noise shall not exceed noise limits in FAR Part 36 and shall conform to the guidance set forth in Occupational Safety and Health Administration (OSHA) guidelines. All interior panels, partitions and structural supports shall be made of sound-absorbent materials.

Human factors engineering shall be performed to satisfy man-machine interface and facility interfaces to ensure efficient implementation of mission requirements. FAA or relevant military standards for human factors engineering practices and design standards shall be followed during the manufacture and modification of the LEH.

The laser illuminator shall include a lockout control to prevent inadvertently illuminating the inside of the cockpit with the laser illuminator/designator. Laser safety goggles must be available on-site in case the LEH recovers while the illuminator is still radiating so as to not injure ground personnel.

7. Training Requirements

7.1 Pilot Training

Systems and flight training necessary to qualify 2 designated personnel are required before delivery of each helicopter. The training shall be recorded in a flight syllabus document that meets all applicable FAA regulations and fully qualifies the designated pilots. Every 10 pilots trained shall include at least 2 that are trained for both aircraft qualification and instructor training.

7.2 Maintenance Training

Maintenance training necessary to qualify 2 designated personnel is required before delivery of each helicopter. The training shall be recorded in a syllabus document that meets all applicable FAA regulations and fully qualifies the designated maintenance technicians. Areas of training shall include:

- a. Engine and Related Systems
- b. Electrical Systems
- c. Maintenance of the engine, airframes, electrical and sensor systems and associated components.

Section C. Mission Requirements

The primary mission of the LEH is to support law enforcement operations that detect and interdict illegal aliens, terrorists and means of terrorism, drugs, and other contraband. The expansiveness of the Southwest Border (SWB) and Northern Border pose significant challenges to border security enforcement. Smugglers have used vehicles, horses and people to transport people and drugs into the United States. CBP A&M has responded to this threat by working in concert with the U.S. Border Patrol and other law enforcement agencies to assist in the identification and apprehension of terrorists, smugglers and UDAs.

LEHs are operated throughout the United States and Puerto Rico. It shall be capable of deploying to and operating in various geographical areas, including the extreme cold and snow of the Northern regions, high-altitude and high-temperature conditions of the Southwest Border regions and high-humidity and high-temperature conditions of the Southeast and Caribbean regions.

■ . Concept Of Operations - Normal Conditions

LEHs transport law enforcement officers and equipment to remote locations when time is of the essence. In the SWB region responding to illegal border incursions in a consistent and effective manner, ultimately resulting in the

successful apprehension of undocumented aliens, terrorists, and other potential threats, requires a multi-mission helicopter with the ruggedness, range, ground clearance, and capability of performing in adverse environmental conditions such as rugged terrain, hot temperatures and high-density altitudes. In the Northern Border region where terrain, weather, and distance pose significant obstacles to travel between ports, LEHs serve as a force multiplier as they can provide responsive and efficient movement of border agents and equipment.

LEHs also support other diversified missions such as insertion of agents serving search and arrest warrants and aerial surveillance. The LEH equipped with EO/IR sensors is a multi-mission platform that is used for aerial surveillance, intelligence gathering and tactical support for agents during the execution of warrants and other high risk and surveillance operations. It is the optimal aerial surveillance platform in remote locations and metropolitan areas because its vertical lift capability and maneuverability enable operations from off-airport sites and in close proximity to congested airports. EO/IR sensors and video downlink have provided intelligence that has enhanced covert surveillance operations and improved officer safety during high-risk operations. Video recorders have documented suspect activities for evidentiary use.

2. Concept Of Operations - Emergency Conditions

During emergency conditions (e.g., terrorist activities [Threat Condition Orange or Red], wartime, environmental crisis, or natural disaster) the focus of LEH operations may change. In the process of confronting the emergency, CBP National and/or Sector Headquarters (as applicable based on the emergency) will determine the best use for the LEH based on the best fit between capabilities and emergency conditions and pass that information to the tactical commanders. The full spectrum of mission assignments can be expected for the CBP LEH.

Section D. Critical Technical Parameters

1. Basic Requirements

The LEH shall be a single-engine turboshaft helicopter equipped with a sensor system capable of detecting, tracking, and automatically holding in view surface targets. It shall be an FAA type certificated for day/night VFR operation. The LEH with installed sensors shall meet all of the operational requirements of this ORD without exceeding the Maximum Takeoff Weight or Maximum Zero Fuel Weight when operating within all other Flight Manual limitations. The addition or removal of mission equipment shall not adversely affect the center of gravity (CG) of the helicopter. The LEH shall be weighed upon completion and a new weight and balance chart shall be created. Flight manual performance charts shall cover all possible ranges of LEH weights.

The aircraft design shall incorporate materials selected on the basis of weight conservation, strength and durability. All standard factory equipment shall be of the manufacturer's commercial model, unless otherwise noted, and shall be provided as specified herein. All installations shall be designed and installed in accordance with aeronautical industry standards and shall meet the applicable certification requirements of the FAA. The airframe, power plants and major components shall be designed and manufactured for rugged operations. Interior materials shall be selected to absorb sound and minimize adverse environmental and health effects such as flammability, smoke, and toxicity when burned. Installed equipment shall not impede access to panels and enclosures that require opening for periodic inspections and maintenance.

1.1 Seating Capacity

Standard seating for the LEH shall accommodate a minimum of 4 personnel consisting of 1 pilot, 1 cockpit observer and 2 passengers / observers. The flight crew seats shall be high-shock-absorbing crashworthy design in accordance with FAR Part 27. The pilot and forward observer seats shall be constructed with heavy-duty upholstery fabric and/or leather and equipped with an inertial reel type 4-point or better harness system. They shall be capable of movement in the vertical and fore and aft axes. The aft movement of the front seats must be ample enough to allow the use of equipment such as a laptop computer or sensor controller to be used without interference of flight controls. The passenger seats shall be standard production with heavy-duty upholstery fabric and/or leather and equipped with a 4-point or better harness belt. Weight of interior materials and seats shall also be an important consideration. The rear seat shall be a type that can be easily removed by one person without the need for special tools. Materials used in the construction of the seats, such as upholstery, seat cushions, restraining devices and attaching hardware shall meet or exceed the appropriate requirements of FAR Part 27.

1.2 Emergency Egress

Installed equipment shall not impede rapid egress from the cockpit or cabin area in accordance with FAR Part 27 requirements. The crew doors or windows shall be manually jettisonable in case of an emergency and any sliding door installed shall have sufficient height and width to accommodate rapid egress.

1.3 Knobs/Controls

Component knobs, controls and switches shall be protected from inadvertent contact that would reset or damage the device. All such control devices shall be marked in accordance with FAR Part 27.

1.4 Storage Compartments

The contractor shall provide provisions for storage of crew and law enforcement equipment, miscellaneous baggage and emergency equipment. Baggage floor areas shall be covered with high impact resistant material.

1.5 Signs/Placards

All safety placards shall be in English and plainly visible. Wherever possible, pictograms shall be used in lieu of worded placards.

1.6 Cockpit Visibility

The cockpit shall be arranged to give the pilots a clear and undistorted view to enable them to safely perform any maneuvers within the operating limitations of the helicopter, including hover, ground and air taxi, takeoff, approach, and landing. The windshield shall be made of non-splintering material that meets the requirements of survivability of a bird strike as outlined by FAR Part 27. There shall be a capability to prevent fogging of the internal portions of the windshield and cockpit window panels to allow operations under normal internal and external ambient conditions, including high humidity, heavy rain at all speeds and blowing snow. The cockpit shall be free of glare and reflection that could interfere with the normal duties of the pilot.

1.7 Doors and Access Panels

Cabin doors shall be designed so that they may be opened and locked in the open position during flight and for quick egress during tactical operations. Flight operations shall not be prohibited with one or more cabin doors open. All doors and emergency exits that can be opened from the outside shall be configured with standard CBP A&M key locks. A master key will be provided. If available, a high visibility composite main and aft cabin door, as installed in previous versions of the Border Patrol AS350B3, shall be installed on the right side. The left cabin door will be the type that slides open to gain access to the cabin.

1.8 Emergency Equipment

- a. The LEH shall have a minimum of one ABC Class fire extinguisher located between the cockpit and cabin area
- b. The LEH shall have a first aid kit installed and readily accessible in the cabin area to the occupants of the aircraft

- c. The LEH shall have an installed wire strike protection system consisting of passive cutters and deflectors
- d. The LEH shall be equipped with a 406 MHz emergency locator transmitter
- e. Locator Beacon: The aircraft shall possess the capability to emit a locator signal compatible with existing USCG and FAA-capable search and rescue systems.

1.9 Servicing Equipment

- a. The LEH shall be delivered with main rotor tie-downs, protective covers for the engine, pitot tubes and covers that preclude water from entering the LEH during inclement weather and while it is being washed.
- b. The LEH shall be provisioned with quick disconnects for servicing the hydraulic system.

1.10 Engine

The LEH shall be equipped with a dual channel full authority digital engine control (FADEC) and manual back-up control system gas turbine engine capable of being started without the use of external power. Normal operating fuels shall include JP-4, JP-5, JP-8, Type A, A1, and B. The engine shall be equipped with inlet anti-ice to prevent icing in cold weather operations. Engine rinse/compressor wash equipment shall be installed on the aircraft in accordance with the manufacturer's recommendation for use in a salt-water laden environment. An automatic engine reigniting system and a mechanism to prevent compressor blade erosion and foreign object damage shall be installed. The engine compartment shall have a fire and overheat detection system that is approved to TSO C11d standards and compliant with FAR Part 27. Any available power train upgrades available that would increase the ability to operate in high-density altitudes and/or increase available payload are desired.

1.10.1 Engine Inlet Filtration

The LEH shall have installed a "barrier" type of engine inlet air filtration system to protect the turbine engine from foreign object damage, particles, and severe environmental conditions. Updated aircraft performance charts in the aircraft's flight manual and recalibrated aircraft power and flight instrumentation shall be included. A "trend" gauge/monitoring device will be installed and visible by the pilot to display the degree of blockage of the barrier-type inlet filter.

1.10.2 Engine Starting System

The 28 VDC battery supply system shall be capable of starting an aircraft or auxiliary power unit engine on the ground without the assistance of an external ground cart. The starter system and the 28 VDC battery supply system shall be capable of restarting an engine in flight in accordance with FAR Part 27.

1.11 Main Transmission

The main transmission shall be designed with the following:

- a. Freewheeling Unit
- b. Temperature and pressure sensing devices shall be installed and instrumented for cockpit monitoring
- c. Magnetic/thermal chip detectors that are instrumented for cockpit monitoring
- d. A rotor brake system shall be installed

1.12 Tail Transmission (if applicable)

If a tail transmission is installed, it shall provide lubrication and cooling and be equipped with a magnetic chip detector instrumented for cockpit monitoring.

1.13 Electrical System

The AC/DC electrical power generation and distribution system shall be capable of providing electrical power that is equal to or greater than 125% of the standard aircraft total load requirements to support projected mission sensors. Adequate AC/DC power shall be available for engine starting, essential engine and navigation instrumentation, and additional law enforcement sensors and electrical equipment. AC/DC electrical power outlets shall be provided for laptops, cameras and gyro stabilized binoculars.

Power sources shall be capable of functioning properly when operating independently or in combination with other sources and any power source failure shall not cause a hazard or impair the normal operation of the remaining power sources and associated system components. Automatic bus control operation and bus fault protection shall be provided for the standard aircraft systems. Additional grounding, bonding and shielding commensurate with mission equipment requirements shall be installed.

1.14 Generator

The 28VDC, 200 amp or better generator shall be controlled by an independent generator control unit and connected to a main distribution that feeds the electrical buses. The connections between those buses shall be via power contacts that open during engine starting in order to reduce the load available on the generator. In the case of a generator failure, a reset control facility shall be available to attempt to put the failed generator back on-line. The main and auxiliary batteries shall power the emergency loads. All generating system components shall have an indicator type monitoring system for frequency, voltage and current and an advisory system using warning lights in accordance with FAR Part 27.

1.15 Battery

The electrical system shall include a heavy-duty 24 VDC sealed lead acid gel battery. The battery capacity shall be sufficient to accomplish 3 consecutive starts without the use of external power in ambient temperatures ranging from -20 to +50 degrees centigrade. The battery shall have sufficient power to provide emergency operation of flight essential equipment and instruments for 30 minutes.

1.16 External Power Receptacle

The external power receptacle shall facilitate engine starting, aircraft maintenance and servicing. It shall have reverse current protection.

1.17 Fuel Management System

The helicopter shall have a crashworthy fuel system with components and operational procedures that comply with the requirements of FAR Part 27. An auxiliary crashworthy fuel system may be installed, if necessary, to complete the mission requirements.

The fuel system shall be configured for single-point gravity fueling; including any installed auxiliary tanks, in accordance with FAR Part 27. It shall have a grounding system capable of maintaining a zero potential difference between the aircraft, service vehicle and the earth. The grounding system must be capable of adapting to FAA-certified grounding systems regardless of hardware and bonding connections.

The primary fuel indicating system in the cockpit shall consist of a fuel flow indicator for the engine and a fuel quantity indicator for each fuel tank. The fuel flow and fuel quantity indicators shall be calibrated in pounds per hour and pounds respectively.

The fuel quantity systems shall have a low fuel-sensing device with a warning light.

1.18 Landing Gear

The LEH shall be equipped with energy absorbing high-extended skid landing gear that is designed to enable off-airport takeoffs and landings in mountainous regions defined by rugged terrain and slopes in various directions. It shall be equipped with full-length skid shoes and full-length skid steps that allow the crew and maintenance to more easily access the upper parts of the helicopter for inspection. The helicopter will be delivered with removable ground handling wheels. Any modifications or upgrades available to the landing gear that would increase the aircraft's available gross weight are desired.

1.19 Hydraulic System

Hydraulic power shall be provided on the helicopter via a Dual Hydraulic power package that incorporates high-speed, pressure-compensated variable displacement pumps, a reservoir with sight gauge and a low-pressure filter. The flight control hydraulic system shall be driven by the main rotor transmission and shall be completely independent of engine operation. The hydraulic system shall also have a caution light that indicates a pressure drop below an operable limit. System fluids must comply with fire protection requirements listed in FAR Part 27.

1.20 Flight Controls

Each flight crew station shall include a removable cyclic, collective and rudder pedals to enable safe operation of the helicopter primary controls.

1.21 Instrumentation

The preferred instrument panel design is the "half-panel" type, similar to what was installed on Border Patrol AS-350B3 aircraft, provided it is able to contain the required instrumentation listed in this document. This type of panel would allow for improved visibility. The full panel design is the alternate choice. The center console shall be of the type commonly known as the Geneva modification.

- a. The 12" or greater flat panel display used for displaying the sensor information would be of the type that can fold in order to enhance visibility during operations not requiring the sensor system.
- b. The LEH shall be equipped with an electronic flight instrument system with NVG compatible displays that meet FAR Part 27 requirements for VFR and IFR flight.

- c. The primary flight instrument display (ADI and HSI) shall be a high quality, sunlight readable, NVG compatible, flat panel color display. It shall not replace the "First Limit Indicator" display, commonly found on AS-350B3's.
- d. An electric turn coordinator instrument (turn and slip) shall be installed for safety of flight. Pilot flight displays shall be visible by the pilot and copilot with minimum deviation from a line of vision when looking forward along the flight path.
- e. Multifunction displays capable of displaying engine performance, moving map, radar and camera and infrared images, shall be installed in locations that are visible to the pilot and copilot with minimum deviation from a line of vision. Communication and navigation control heads shall be installed so that they are accessible by both the pilot and copilot.

1.22 Interior Lighting

1.22.1 Internal Lighting Requirements

- a. All internal and instrumentation lighting shall be shall be compatible with fourth generation NVGs and controllable with crew accessible rheostats
- b. Commercially available map lights mounted at the pilot, copilot and crew positions shall be NVG compatible
- c. Emergency lighting (internal): The emergency lighting system shall be independent of the main lighting system power source

1.22.2 External Lighting Requirements

- a. High-Intensity Searchlight Provisions: The LEH shall be equipped with provisions for an easily removable high-intensity 15-million candlepower or greater searchlight with a NVG compatible in-flight changeover IR filter. A capability to control the searchlight manually or to slave it to the EO/IR sensor is required.
- b. An external spotlight, controllable in azimuth and elevation by using switches on the pilot's cyclic, shall be installed on the aircraft, independent of the fixed position landing light. The light shall be a dual- mode, HID/IR type, if available. At a minimum, the spotlight must switch from white light to IR illuminator without the need to manually install an IR cover. Note: this is in addition to the high-intensity searchlight requirement in paragraph 1.22.2.a

- c. Navigation Lights: The aircraft shall have a navigation, position, and anti-collision (strobe) lighting system that is compliant with FAA regulations regarding flight in the national airspace system. The CBP LEH should contain anti-collision lighting having an operator-selectable capability for Night Vision Device (NVD) or the visible light range.
1. Position Lights: All position light dihedral angles, distribution, intensity and colors shall comply with FAR Part 27. Light covers and filters shall be flame-resistant and maintain color, shape and designated light transmission during normal use. The position lights switch shall have the following positions:
 - (a) Nav lights off
 - (b) Nav lights on
 - (c) Tail light only
2. Anti-collision Light(s): The LEH shall be equipped with one or more approved (strobe type preferred) anti-collision lights in compliance with FAR Part 27.
3. The search/landing lights shall be installed for safe operation of the LEH during night operations.
4. A Pulselite Model 3060 series Starlight System shall be incorporated into the landing light system and coupled to the Ryan 9900BX TCAD system.

1.23 Air Conditioning

An air conditioning system shall be installed to provide a comfortable environment for the crew in long duration search or surveillance missions. The air conditioning system shall be capable of maintaining a cabin temperature of 80° F or below with an ambient temperature of up to 100° F with 50% humidity. A cabin heater and defroster shall be included.

1.24 Emergency Flotation Equipment Provisions

The LEH shall be equipped with mechanical and electrical provisions for quick connect/disconnect of emergency flotation equipment. The system shall be designed to be activated by water sensors and provide flotation in sea conditions up to Sea State 5.

1.25 Protective Covers

Protective covers shall be provided for the engine, pitot tubes and canopy, as well as any other special covers required to prevent water from entering the LEH during inclement weather and while it is being washed. Protective covers for the inside of the cockpit and side windows shall be provided to prevent heat buildup and heat damage.

1.26 Aircraft Paint

The external paint shall be a standard CBP Air & Marine base color, using the highest quality paint available that can withstand permanent staining from the engine's exhaust.

1.27 Tail Rotor Arch

A tail rotor arch shall be installed for the purpose of increased safety for personnel on the ground and to protect the tail rotor blades.

1.28 Optional Equipment

The following options should be considered:

- Removal Emergency flotation system
- Cargo hook with a minimum capacity of 1000 lbs.
- NVG compatible position/formation lights
- Three-light marker beacon with audio
- External, rear-view mirrors to aid the pilot with off-site landings
- Wire-strike protection system
- Ground proximity warning system

2. Communications/Information Technology

The LEH shall comply with national airspace and navigation requirements. The avionics/communication suite shall provide secure-capable HF, VHF and UHF multiband communications. At a minimum, it shall include the following:

2.1 Commercial Communication/Navigation Equipment

The commercial communication and navigation equipment shall include the following:

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- a. Avionics master switch
- b. Audio integrating (interphone) system
- c. Dual VHF communications system
- d. Pilot and cockpit observer foot switch for internal/external communications
- e. Pilot and Cockpit observer remote "ident" switch for transponder on collective control
- f. Pilot remote frequency flip/flop for Comm 1 on the collective
- g. Emergency locator transmitter with Nav interface
- h. Heated pitot-static system
- i. Cooling blower/ appropriate ventilation
- j. Dual VHF navigation
- k. Instrument landing system (ILS)
- l. Slaved horizontal situation indicator system
- m. Appropriate antennae
- n. Garmin GNS 530 GPS
- o. Garmin GNS 530 "XM Weather" option installed and functioning with subscription service continuously active. If "XM Weather" service has been superseded or is no longer considered modern and useful, then another satellite service is acceptable that provides real-time, localized, live delivery of high-resolution weather information to the aircraft's navigation display.
- p. Ryan TCAD displayed onto a Garmin GNS 530
- q. Radar altimeter (model TRI 40)
- r. Distance measuring equipment (DME) with hold function
- s. Transponder with altitude encoding altimeter, Mode S

2.2 Mission Communication/Navigation Equipment

The mission communication/ navigation equipment shall include the following:

- a. Two APCO P-25 compliant Global Wulfsberg RT-5000 multi-band radio transceivers and one C-5000 communications management controller
- b. A moving map system that features vector street maps, VFR/IFR aeronautical, topographical and nautical charts, displays aircraft position, altitude and navigation information for the LEH and targets of interest and depicts routes, boundaries obstructions and sensor footprints. The map system shall be interfaced with the EO/IR sensor, which enables the EO/IR to "point" and "hold" a GPS position automatically. The operation and interface shall be intuitive and designed for ease of operation (subjective but important).
- c. One high quality video recorder with remote control panel.
- d. The contractor shall install and integrate an Outer Link CP 2 SATRACK system capable of providing time, position, speed, and altitude data at selectable reporting intervals. It shall be 'web browser' receivable at the receiver site.
- e. External communication: A public address system shall be installed on the aircraft.

2.3 Intercommunication System (ICS)

The ICS shall provide undistorted communications between the flight crew and rear cabin seat positions on the aircraft. One control panel shall be installed in the cockpit and one shall be installed in a cabin location to provide selective monitoring and volume control of each radio and "hot mike" communications. The cockpit station shall have the capability to select, transmit, receive, control frequency and monitor all communications radios. The cabin station shall have the capability to select, transmit, receive and monitor all communications radios at the two outboard seat positions.

3. Sensors

The aircraft shall have an integrated EO/IR system that enables detection, sorting and tracking of ground targets of interest. All components shall be currently in production, operationally viable and capable of being easily retrofitted with the latest configurations. At a minimum, the sensor display shall include:

- a. Systems status and fault reporting
- b. Simultaneous display of any two sensor videos in video windows on a 12" monitor

- c. A digitized moving map that displays aircraft position, altitude and navigation information for the LEH and targets of interest

3.1 EO/IR Sensor

The LEH shall have the space, power, control, mounting and display provisions to install an EO/IR penta- or greater sensor and a 12-inch or greater cockpit MFD. The sensor payload shall include a laser range finder, laser pointer, CCD TV, camera spotter scope and infrared camera. The EO/IR sensor shall be sealed against environmental conditions and shall be capable of producing high-resolution color images in daylight and high-resolution thermal imaging in low-light conditions in hot, humid, tropical and freezing cold climates. At a minimum, the sensor capabilities shall include:

- a. A hand controller installed in a location that allows control of the EO/IR sensor from either the observer position in the cockpit or the rear seat
- b. Turret diameter less than 16 inches and weight less than 120 pounds
- c. 4-axis or better stabilization. The line-of-sight jitter shall be less than 15 micro-radians for all sensors.
- d. An automatic focus capability and an automatic tracking capability in all modes
- e. The azimuth field of regard shall be 360 degrees and the elevation field of regard shall be +30 degrees to -120 degrees.
- f. Geographic pointing based on an entered latitude/longitude, the location that the sensor is pointing or the contrast caused by temperature differences. The target location error shall be less than or equal to (\leq) 25 (T), 10 (O) meters circular error probability at 3-5 km slant range.
- g. Capability (T) of detecting a standing human being at night, non-cued, at a slant range of three times the specified operating altitude in wide field of view.
- h. A day and a night digital video imaging capability with a National Imagery Interpretability Rating Scale (NIIRS) level 7 (T) 8 (O) capability at 8 nm slant range

3.2 Video Downlink

The LEH shall be configured for or equipped with the basic provisions for a BMS or equivalent digitally encrypted line-of-sight video downlink capable of transmitting real-time video from an altitude of 2,500 ft MSL or less to a ground terminal that is 50 nm away or greater. It is envisioned that for

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CBP LEH ORD**

every 5 aircraft purchased, 4 will have wiring and provisions for the downlink system and every fifth aircraft will have the complete system installed. The downlink antenna will be configured to automatically retract at a preset radar altitude.

Section E. Key Performance Parameters

When configured in accordance with this specification, the LEH shall meet or exceed the following key performance parameters (**KPP**) under the stated ambient atmospheric conditions at the respective mission weight. The contractor shall provide sufficient information for determination of the weight and drag penalties for each piece of equipment that is installed on the standard configuration. Each **KPP** shall be evaluated using a statistical analysis approach to verify that the requirements are met.

1. KPP 1: Maximum Endurance

a. Mission Payload:

1. 2 crewmembers: 450 lbs.
2. Equipment/cargo: 75 lbs.

b. Fuel: Mission fuel requirement + 20 minute fuel reserve

c. Environmental Conditions:

Sea level, no wind; **ISA** +25° C

d. Mission Profile:

1. Start-up, taxi, depart VFR and climb at best rate to 1,500 ft. MSL
2. Transit 60 nm at long-range cruise speed (not less than 120 **KTS**)
3. Conduct a surveillance at 1,500 ft. MSL, 40 KTAS, for 2 hours
4. Depart area and transit 60 nm at long-range cruise speed (not less than 120 **KTS**)
5. Descend and execute a VFR approach to a landing with a 20-minute fuel reserve

2. KPP 2: Maximum Range

a. Mission Payload:

1. 2 crewmembers: 450 lbs.

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2. 1 passenger: 225 lbs.
 3. Equipment/cargo: 80 lbs.
- b. Fuel: Mission fuel requirement + 20 minute fuel reserve
- c. Environmental Conditions:
Sea level, no wind; ISA +25° C
- d. Mission Profile:
1. Start-up, taxi, depart VFR and climb at best rate to best range altitude
 2. Transit at best range airspeed to reach a remote location 300 nm from base
 3. Descend and execute a VFR approach to a landing with a 20-minute fuel reserve

Section F. Architectural Trade-Offs

- Commercial-off-the-shelf technology and non-developmental systems will meet CBP operational requirements
- Threshold requirements meet the needs of CBP and provide a capability that may be of benefit to other DHS missions
- Other competing priorities could preempt or delay the acquisition of additional helicopters in the follow-on years.
- Full implementation of the LEH acquisition plan within the timeline could impact other CBP A&M fleet modernization projects
- Fleet standardization would improve operational effectiveness, scheduling flexibility, staffing efficiency and aircraft utilization; however, a competitive acquisition process could result in an alternative selection

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EXHIBIT 15

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EXHIBIT 15
14 CFR 27.952

This content is from the eCFR and is authoritative but unofficial.

Title 14 - Aeronautics and Space

Chapter I - Federal Aviation Administration, Department of Transportation

Subchapter C - Aircraft

Part 27 - Airworthiness Standards: Normal Category Rotorcraft

Subpart E - Powerplant

Fuel System

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701-44702, 44704.

Source: Docket No. 5074, 29 FR 15695, Nov. 24, 1964, unless otherwise noted.

§ 27.952 Fuel system crash resistance.

Unless other means acceptable to the Administrator are employed to minimize the hazard of fuel fires to occupants following an otherwise survivable impact (crash landing), the fuel systems must incorporate the design features of this section. These systems must be shown to be capable of sustaining the static and dynamic deceleration loads of this section, considered as ultimate loads acting alone, measured at the system component's center of gravity, without structural damage to system components, fuel tanks, or their attachments that would leak fuel to an ignition source.

(a) **Drop test requirements.** Each tank, or the most critical tank, must be drop-tested as follows:

- (1) The drop height must be at least 50 feet.
- (2) The drop impact surface must be nondeforming.
- (3) The tank must be filled with water to 80 percent of the normal, full capacity.
- (4) The tank must be enclosed in a surrounding structure representative of the installation unless it can be established that the surrounding structure is free of projections or other design features likely to contribute to rupture of the tank.
- (5) The tank must drop freely and impact in a horizontal position $\pm 10^\circ$.
- (6) After the drop test, there must be no leakage.

(b) **Fuel tank load factors.** Except for fuel tanks located so that tank rupture with fuel release to either significant ignition sources, such as engines, heaters, and auxiliary power units, or occupants is extremely remote, each fuel tank must be designed and installed to retain its contents under the following ultimate inertial load factors, acting alone.

- (1) For fuel tanks in the cabin:
 - (i) Upward - 4g.
 - (ii) Forward - 16g.
 - (iii) Sideward - 8g.
 - (iv) Downward - 20g.
- (2) For fuel tanks located above or behind the crew or passenger compartment that, if loosened, could injure an occupant in an emergency landing:

(i) Upward - 1.5g.

(ii) Forward - 8g.

(iii) Sideward - 2g.

(iv) Downward - 4g.

(3) For fuel tanks in other areas:

(i) Upward - 1.5g.

(ii) Forward - 4g.

(iii) Sideward - 2g.

(iv) Downward - 4g.

(c) **Fuel line self-sealing breakaway couplings.** Self-sealing breakaway couplings must be installed unless hazardous relative motion of fuel system components to each other or to local rotorcraft structure is demonstrated to be extremely improbable or unless other means are provided. The couplings or equivalent devices must be installed at all fuel tank-to-fuel line connections, tank-to-tank interconnects, and at other points in the fuel system where local structural deformation could lead to the release of fuel.

(1) The design and construction of self-sealing breakaway couplings must incorporate the following design features:

(i) The load necessary to separate a breakaway coupling must be between 25 to 50 percent of the minimum ultimate failure load (ultimate strength) of the weakest component in the fluid-carrying line. The separation load must in no case be less than 300 pounds, regardless of the size of the fluid line.

(ii) A breakaway coupling must separate whenever its ultimate load (as defined in paragraph (c)(1)(i) of this section) is applied in the failure modes most likely to occur.

(iii) All breakaway couplings must incorporate design provisions to visually ascertain that the coupling is locked together (leak-free) and is open during normal installation and service.

(iv) All breakaway couplings must incorporate design provisions to prevent uncoupling or unintended closing due to operational shocks, vibrations, or accelerations.

(v) No breakaway coupling design may allow the release of fuel once the coupling has performed its intended function.

(2) All individual breakaway couplings, coupling fuel feed systems, or equivalent means must be designed, tested, installed, and maintained so that inadvertent fuel shutoff in flight is improbable in accordance with § 27.955(a) and must comply with the fatigue evaluation requirements of § 27.571 without leaking.

(3) Alternate, equivalent means to the use of breakaway couplings must not create a survivable impact-induced load on the fuel line to which it is installed greater than 25 to 50 percent of the ultimate load (strength) of the weakest component in the line and must comply with the fatigue requirements of § 27.571 without leaking.

- (d) **Frangible or deformable structural attachments.** Unless hazardous relative motion of fuel tanks and fuel system components to local rotorcraft structure is demonstrated to be extremely improbable in an otherwise survivable impact, frangible or locally deformable attachments of fuel tanks and fuel system components to local rotorcraft structure must be used. The attachment of fuel tanks and fuel system components to local rotorcraft structure, whether frangible or locally deformable, must be designed such that its separation or relative local deformation will occur without rupture or local tear-out of the fuel tank or fuel system components that will cause fuel leakage. The ultimate strength of frangible or deformable attachments must be as follows:
- (1) The load required to separate a frangible attachment from its support structure, or deform a locally deformable attachment relative to its support structure, must be between 25 and 50 percent of the minimum ultimate load (ultimate strength) of the weakest component in the attached system. In no case may the load be less than 300 pounds.
 - (2) A frangible or locally deformable attachment must separate or locally deform as intended whenever its ultimate load (as defined in paragraph (d)(1) of this section) is applied in the modes most likely to occur.
 - (3) All frangible or locally deformable attachments must comply with the fatigue requirements of § 27.571.
- (e) **Separation of fuel and ignition sources.** To provide maximum crash resistance, fuel must be located as far as practicable from all occupiable areas and from all potential ignition sources.
- (f) **Other basic mechanical design criteria.** Fuel tanks, fuel lines, electrical wires, and electrical devices must be designed, constructed, and installed, as far as practicable, to be crash resistant.
- (g) **Rigid or semirigid fuel tanks.** Rigid or semirigid fuel tank or bladder walls must be impact and tear resistant.

[Doc. No. 26352, 59 FR 50386, Oct. 3, 1994]

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EXHIBIT 16

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EXHIBIT 16
AMO Headquarters
Proposal for CRFT
November 1, 2016

November 1, 2016

MEMORANDUM FOR:

██████ ██████
Executive Assistant Commissioner (Acting)

FROM:

██████ ██████
Deputy Director
Training Safety and Standards

██████████
Director (Acting)
Logistics and Maintenance

SUBJECT:

Light Enforcement Helicopter (LEH) Crashworthy Fuel Systems

Air and Marine Operations (AMO) Safety Directorate and Logistics and Maintenance (L&M) proposes the procurement of crashworthy fuel systems for all Light Enforcement Helicopters (LEH).

Background

The need for self-sealing (crashworthy) fuel systems was first identified and researched by the Department of Defense (DoD) in the mid-1970s. As a result, the US Army began equipping its helicopters with crash-resistant fuel systems to decrease the number of thermal injuries and fatalities. Doing so resulted in a 66% reduction in post-crash fires in survivable accidents and an 18% reduction in post-crash fires in nonsurvivable accidents. These systems also resulted in a 75% reduction in thermal injuries and no thermal fatalities in survivable impact conditions. The results of the FAA's research program and the US Army's experience demonstrate the importance of ensuring that newly manufactured rotorcraft comply with the current airworthiness standards for crash-resistant fuel systems regardless of when the rotorcraft were certified.

This issue has also been on the NTSB'sⁱ most wanted list since the early 1980s with support of the FAA rule makers. In 1994 the FAA issued regulatory guidanceⁱⁱ requiring the installation of crashworthy fuel systems in aircraft manufactured after 1994. Since then there have been a large number of accidents where post-crash fires contributed to fatalities. This trend was also prevalent within the current Air and Marine Operations as well as the legacy agency (U.S. Customs and Border Patrol) air operations from 1990-present. Since the creation of AMO in 2005, the organization has experienced five LEH accidentsⁱⁱⁱ which resulted in fuel system compromise due to impact forces in which there was a substantial fuel release. Fortunately, only one of the five accidents resulted in a post-crash fire, yet the fire threat potential was clearly evident in the other four accidents due to fuel cell rupture.

In 1994 the FAA adopted the fuel system crash resistance standards of 14 CFR §27.952 and §29.952, and the dynamic crashworthiness standards of §27/29.562 in 1989. But the standards did not apply to rotorcraft with type certificates approved before those dates, such as the AS350, which was first certified in the 1970s.

These facts have created great confusion among operators of Airbus manufactured helicopters over the acquisition of AS350 Fuel Tank Retrofit Kits vs the added weight penalty and cost. This was evident in a recent article in [Vertical Magazine](#) (below) that cited the issues regarding the regulatory “loophole” for modification and the reality faced by operators today.

“The confusion over the AS350 B3e/H125 retrofit kit highlights the uneven way in which the helicopter industry is lurching toward improved occupant protection standards after decades of avoiding the issue. The FAA adopted the fuel system crash resistance standards of §27.952 and §29.952 in 1994, and the dynamic crashworthiness standards of §27/29.562 in 1989. But the standards did not apply to rotorcraft with type certificates approved before those dates, such as the AS350, which was first certified in the 1970s.”

Because new variants of a rotorcraft model usually retain the original model’s type certificate, many new-production helicopters still fail to meet occupant protection standards that have now been in place for more than two decades. The helicopter industry was never unaware of this, but for many years the economic argument against retroactive application of the standards seemed overwhelming.

For this story, Airbus and Vector declined to provide cost estimates for their CRFS solutions, noting that detailed pricing information is available upon customer request. However, other sources estimated the cost of these systems at around \$90,000. Confronted with this sticker shock (and, for the H125 system, a weight penalty of 41 pounds/18.5 kilograms), many helicopter operators have adopted the philosophy, “Just don’t crash.”

Unfortunately, this approach hasn’t been particularly reliable. According to the NTSB, between 1994 and 2013, at least 135 rotorcraft accidents in the U.S. — representing a total of 221 fatalities and 37 serious injuries — have resulted in a post-crash fire. Only three of those accident helicopters had crash-resistant fuel systems and crashworthy fuel tanks. An FAA analysis of fatal rotorcraft accidents over the period between 2008 and 2013 found that the post-crash fire contributed to a fatality in 20 percent of accidents where one was present.”

In light of numerous EMS and General Aviation accidents the past three years the NTSB has produced several recommendations^{iv} that require, *for all newly manufactured rotorcraft regardless of the design’s original certification date, that the fuel systems meet the crashworthiness requirements of 14 Code of Federal Regulations 27.952 or 29.952, “Fuel System Crash Resistance.”*

Currently there are no existing AS350/EC120 in the AMO fleet that have received the Fuel Tank Retrofit Kit modification as of the date of this report.

L&M maintenance will provide a detailed cost estimate for the Fuel Tank Retrofit Kits for the entire AS350/EC120 fleet, cost estimate for the maintenance contracted hours required for the installation and planned timeline time table for modification (with least amount of impact to operations).

Risk Management Discussion

See Appendix ___ for Strategic Risk Plan (SRP) addressing the current hazard and mitigation measures.

Proposed Action

Upon review of this critical information the following actions are recommended:

1. EAC mandate the installation of Fuel Tank Retrofit Kits for the entire AS350/EC120 fleet by the end of FY2020.
2. EAC direct the immediate funding procurement for enough Fuel Tank Retrofit Kits to safely outfit the entire AS350/EC120 fleet.
3. EAC allocate funds for additional maintenance man hours required for PAE maintenance contractor to install requisite Fuel Tank Retrofit Kits for the entire AS350/EC120 fleet.

Authority

14 CFR 27/29.952 and other (FAA)-approved regulations to include but not limited to FAA AD, Aircraft Maintenance Manual Instructions, and Aircraft Flight Manual.

Closing Comment

This issue represents a direct threat to survivability in the event of an LEH accident, and since it is a known hazard, is also an organizational liability in the event someone is injured due to a post mishap fire.

Approve _____ Disapprove _____

Modify _____ More Discussion _____

ⁱ NTSB Accident Study (A80-90 thru -95) completed September 1, 1980\

ⁱⁱ 14 CFR 27/29.952 Fuel system crash resistance (1994)

ⁱⁱⁱ N840BP, AS350, Del Rio, TX, 2006 (NTSB Report – DFW06TA054); N186AE, AS350, Jacksonville, FL, 2009, (NTSB Report – ERA09TA440); N3925A, EC120B, McAllen, TX, 2011 ((NTSB Report – CEN12TA004); N3955A, AS350B3 2B1, McAllen, TX, 2014 (NTSB Report – CEN14GA109); N5204X, AS350B2, Sierra Vista, AZ, (NTSB Report – WPR15LA027)

^{iv} NTSB Accident Recommendations (A-14-001) and (A-15-12)

DRAFT

Aircraft Configuration Change Request

AMO HQ Operations

AMO HQ ACCR Applicant Information		
Branch or Aviation Operational Site: Materiel Readiness	Materiel Readiness Tasker No. 2020-002	
Requestor: [REDACTED]	Date: 12/17/2019	Phone: [REDACTED]
Email address: [REDACTED]		
Aircraft Model or Equipment affected: AS350 series aircraft		
Category Change Requested: <input checked="" type="radio"/> Routine <input type="radio"/> Priority If Priority and Time Sensitive, Needed by date:		
Primary Purpose for Request: <input checked="" type="radio"/> Safety <input type="radio"/> Maintenance <input type="radio"/> Operations		
Existing Condition/Reason for Requested Change (Brief Summary)		
<p>The FAA has released Special Airworthiness Information Bulletin (SAIB SW 17-23R2) which “advises registered owners and operators of certain Airbus Helicopters” of approved supplemental type certificates (STC) that install crash resistant fuel systems in AS350 model helicopters. These systems are not mandatory installations by FAA regulation and Airbus has already begun delivering new H125 aircraft with one or more of these systems installed, specifically a crash resistant fuel system (CRFS).</p>		
Recommended Solution (Brief Summary)		
<p>Purchase and install the Standard Aero CRFS STC and prototype ONE AS350B3e model helicopter as soon as able, preferably during a scheduled maintenance event. Upon successful completion of the prototype and acceptance by CBP AMO, the remainder of the AS350 fleet will be retrofitted with the CRFS as funds are available.</p>		
Cost and Budget Data (If Known)		
Cost to Prototype: \$111,290 (plus burden)	Total Number Aircraft to Modify: ONE	Total Cost to Complete: \$111,290 (plus burden)
Approval – Complete		
<div style="border: 1px solid black; padding: 5px;"> <p>X [REDACTED] XD Operations</p> </div>		
<div style="border: 1px solid black; padding: 5px;"> <p>X [REDACTED] XD Mission Support</p> </div>		

▼	Description ▼	Approval Status ▼	Item Status ▼	Next Step ▼	Notes ▼
00	AS350 crash resistant fuel system prototype. Quotes received from Airbus Helicopters and Standard Aero with cost estimates and installation details that were requested thru PAE under Tasker 20-002. Looking for AMO	Cancelled	Cancelled		Closed per [REDACTED] via phonecon with FJ dtd 1/27/2021 (according to [REDACTED])
00	AS350 crash resistant fuel system prototype. Quotes received from Airbus Helicopters and Standard Aero with cost estimates and installation details that were requested thru PAE under Tasker 20-002. Looking for AMO				
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00	AS350 crash resistant fuel system prototype. Quotes received from Airbus Helicopters and Standard Aero with cost estimates and				



Office of Air and Marine

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Aircraft Configuration Change Request (non-P3)

Branch	Requester	Date	Phone	Email Address
TSS - Safety Dir	SAIA [REDACTED]	11/14/2016	[REDACTED]	[REDACTED]

Recommendation

Equip Affected:	AS350 Fuel Systems			
Priority:	<input type="checkbox"/> Time-Sensitive (decision needed by date:)		<input checked="" type="checkbox"/> Routine	
Area Affected:	<input checked="" type="checkbox"/> Safety		<input type="checkbox"/> Maintenance	
	<input checked="" type="checkbox"/> Operations			

Existing Condition / Reason for Change

This issue has been on the NTSB's most wanted list since the early 1980s with support of the FAA rule makers. In 1994 the FAA issued regulatory guidance requiring the installation of crashworthy fuel systems in aircraft manufactured after 1994. Since then there have been a large number of accidents where post-crash fires contributed to fatalities. This trend was also prevalent within the current Air and Marine Operations as well as the legacy agency (U.S. Customs and Border Patrol) air operations from 1990-present. Since the creation of AMO in 2005, the organization has experienced five LEH accidents which resulted in fuel system compromise due to impact forces in which there was a substantial fuel release. Fortunately, only one of the five accidents resulted in a post-crash fire, yet the fire threat potential was clearly evident in the other four accidents due to fuel cell rupture.

In light of numerous EMS and General Aviation accidents the past three years the NTSB has produced several recommendations that require, "for all newly manufactured rotorcraft regardless of the design's original certification date, that the fuel systems meet the crashworthiness requirements of 14 Code of Federal Regulations 27.952 or 29.952, "Fuel System Crash Resistance."

Currently there are no existing AS350/EC120 in the AMO fleet that have received the Fuel Tank Retrofit Kit modification as of the date of this report. Additionally, none of the AS350E that have been delivered or are projected to be delivered with crashworthy fuel systems installed. Therefore it is proposed that all AS350/EC120 aircraft in the AMO fleet be equipped with fuel systems rated as crashworthy/ Crash Resistant in accordance with the FAA regulatory requirements 14 CFR §27.952 and 14 CFR §29.952.

This issue represents a direct threat to survivability in the event of an LEH accident, and since it is a known hazard, is also an organizational liability in the event someone is injured due to a post mishap fire.

Ref. TSS - Safety Directorate Decision Paper dated 11/01/2016 and supporting documents.

Recommended Solution

Installation of Crashworthy Fuel Tank Retrofit Kits in accordance with 14 CFR §27.952 and 14 CFR §29.952 for the entire AS350/EC120 fleet by the end of FY2020



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Aircraft Configuration Change Request (non-P3)

Concurrence Processing

<i>Position</i>	<i>Concurrence</i>	<i>Name</i>	<i>Signature</i>	<i>Recv Date</i>	<i>Fwd Date</i>
Branch SAMO:	<input type="checkbox"/> Concur <input type="checkbox"/> Do not concur				
Comments:					
Branch Safety / Tng:	<input type="checkbox"/> Concur <input type="checkbox"/> Do not concur				
Comments:					
Branch SFE:	<input type="checkbox"/> Concur <input type="checkbox"/> Do not concur				
Comments:					
Branch DAO:	<input type="checkbox"/> Concur <input type="checkbox"/> Do not concur				
Comments:					
Dir, Border Ops:	<input type="checkbox"/> Concur <input type="checkbox"/> Do not concur				
Comments:					

HQ Receipt

<i>Receive Date</i>	<i>Control # Assigned</i>	<i>Received By Name</i>	<i>Initials</i>

§ 27.952 Fuel system crash resistance.

Unless other means acceptable to the Administrator are employed to minimize the hazard of fuel fires to occupants following an otherwise survivable impact (crash landing), the fuel systems must incorporate the design features of this section. These systems must be shown to be capable of sustaining the static and dynamic deceleration loads of this section, considered as ultimate loads acting alone, measured at the system component's center of gravity, without structural damage to system components, fuel tanks, or their attachments that would leak fuel to an ignition source.

(a) *Drop test requirements.* Each tank, or the most critical tank, must be drop-tested as follows:

- (1) The drop height must be at least 50 feet.
- (2) The drop impact surface must be non-deforming.
- (3) The tank must be filled with water to 80 percent of the normal, full capacity.
- (4) The tank must be enclosed in a surrounding structure representative of the installation unless it can be established that the surrounding structure is free of projections or other design features likely to contribute to rupture of the tank.
- (5) The tank must drop freely and impact in a horizontal position $\pm 10^\circ$.
- (6) After the drop test, there must be no leakage.

(b) *Fuel tank load factors.* Except for fuel tanks located so that tank rupture with fuel release to either significant ignition sources, such as engines, heaters, and auxiliary power units, or occupants is extremely remote, each fuel tank must be designed and installed to retain its contents under the following ultimate inertial load factors, acting alone.

(1) For fuel tanks in the cabin:

- (i) Upward - 4g.
- (ii) Forward - 16g.
- (iii) Sideward - 8g.
- (iv) Downward - 20g.

(2) For fuel tanks located above or behind the crew or passenger compartment that, if loosened, could injure an occupant in an emergency landing:

- (i) Upward - 1.5g.
- (ii) Forward - 8g.
- (iii) Sideward - 2g.
- (iv) Downward - 4g.

(3) For fuel tanks in other areas:

- (i) Upward - 1.5g.
- (ii) Forward - 4g.
- (iii) Sideward - 2g.
- (iv) Downward - 4g.

(c) *Fuel line self-sealing breakaway couplings.* Self-sealing breakaway couplings must be installed unless hazardous relative motion of fuel system components to each other or to local rotorcraft structure is demonstrated to be extremely improbable or unless other means are provided. The couplings or equivalent devices must be installed at all fuel tank-to-fuel line connections, tank-to-tank interconnects, and at other points in the fuel system where local structural deformation could lead to the release of fuel.

(1) The design and construction of self-sealing breakaway couplings must incorporate the following design features:

(i) The load necessary to separate a breakaway coupling must be between 25 to 50 percent of the minimum ultimate failure load (ultimate strength) of the weakest component in the fluid-carrying line. The separation load must in no case be less than 300 pounds, regardless of the size of the fluid line.

(ii) A breakaway coupling must separate whenever its ultimate load (as defined in [paragraph \(c\)\(1\)\(i\)](#) of this section) is applied in the failure modes most likely to occur.

(iii) All breakaway couplings must incorporate design provisions to visually ascertain that the coupling is locked together (leak-free) and is open during normal installation and service.

(iv) All breakaway couplings must incorporate design provisions to prevent uncoupling or unintended closing due to operational shocks, vibrations, or accelerations.

(v) No breakaway coupling design may allow the release of fuel once the coupling has performed its intended function.

(2) All individual breakaway couplings, coupling fuel feed systems, or equivalent means must be designed, tested, installed, and maintained so that inadvertent fuel shutoff in flight is improbable in accordance with § 27.955(a) and must comply with the fatigue evaluation requirements of § 27.571 without leaking.

(3) Alternate, equivalent means to the use of breakaway couplings must not create a survivable impact-induced load on the fuel line to which it is installed greater than 25 to 50 percent of the ultimate load (strength) of the weakest component in the line and must comply with the fatigue requirements of § 27.571 without leaking.

(d) *Frangible or deformable structural attachments.* Unless hazardous relative motion of fuel tanks and fuel system components to local rotorcraft structure is demonstrated to be extremely improbable in an otherwise survivable impact, frangible or locally deformable attachments of fuel tanks and fuel system components to local rotorcraft structure must be used. The attachment of fuel tanks and fuel system components to local rotorcraft structure, whether frangible or locally deformable, must be designed such that its separation or relative local deformation will occur without rupture or local tear-out of the fuel tank or fuel system components that will cause fuel leakage. The ultimate strength of frangible or deformable attachments must be as follows:

(1) The load required to separate a frangible attachment from its support structure, or deform a locally deformable attachment relative to its support structure, must be between 25 and 50 percent of the minimum ultimate load (ultimate strength) of the weakest component in the attached system. In no case may the load be less than 300 pounds.

(2) A frangible or locally deformable attachment must separate or locally deform as intended whenever its ultimate load (as defined in [paragraph \(d\)\(1\)](#) of this section) is applied in the modes most likely to occur.

(3) All frangible or locally deformable attachments must comply with the fatigue requirements of § 27.571.

(e) *Separation of fuel and ignition sources.* To provide maximum crash resistance, fuel must be located as far as practicable from all occupiable areas and from all potential ignition sources.

(f) *Other basic mechanical design criteria.* Fuel tanks, fuel lines, electrical wires, and electrical devices must be designed, constructed, and installed, as far as practicable, to be crash resistant.

(g) *Rigid or semi-rigid fuel tanks.* Rigid or semi-rigid fuel tank or bladder walls must be impact and tear resistant.

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 17

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
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O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 17
NTSB Safety Recommendation
for CRFT
March 23, 2016



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation Report

Crash-Resistant Fuel Systems on Airbus Helicopters

Accident Numbers:	CEN15FA164, CEN15MA290
Operator/Flight Number:	Air Methods Corporation
Aircraft and Registration:	Airbus Helicopters EC130 B4, N356AM; Airbus Helicopters AS350 B3e, N390LG
Locations:	St. Louis, Missouri; Frisco, Colorado
Dates:	March 6 and July 3, 2015
Adopted:	March 23, 2016

The National Transportation Safety Board (NTSB) is providing the following information to urge the Federal Aviation Administration (FAA) and the European Aviation Safety Agency (EASA) to take action on the safety recommendations in this report. These recommendations address the need for owners and operators of existing AS350 B3e helicopters and similarly designed variants to incorporate a crash-resistant fuel system into their rotorcraft. These recommendations are derived from two 2015 accidents in which the impact forces were survivable for occupants but fatal and serious injuries occurred because of postcrash fires that resulted from an impact-related breach in the fuel tanks. As a result of these investigations, the NTSB is issuing three safety recommendations to the FAA and one safety recommendation to EASA.

Background and Analysis

On March 6, 2015, about 2310 central standard time, an Airbus Helicopters EC130 B4 helicopter, N356AM, operated by Air Methods Corporation, doing business as ARCH, struck the edge of a hospital building and impacted its parking lot near St. Louis, Missouri, during approach to an elevated rooftop helipad. The helicopter was destroyed by impact forces and a postcrash fire. The pilot was the sole occupant and sustained fatal thermal injuries. Night visual meteorological conditions prevailed for the flight conducted under the provisions of 14 *Code of Federal Regulations (CFR)* Part 135. The NTSB's ongoing investigation determined that the accident was immediately survivable in the absence of a postcrash fire.¹

On July 3, 2015, about 1339 mountain daylight time, an Airbus Helicopters AS350 B3e helicopter, N390LG, operated by Air Methods Corporation, partially impacted a parked recreational vehicle in a parking lot near Summit Medical Center in Frisco, Colorado, after

¹ More information about this accident, NTSB case number CEN15MA164, is available on the NTSB [website](#).

takeoff from a ground-based hospital helipad. The helicopter was destroyed by impact forces and a postcrash fire. Visual meteorological conditions prevailed for the flight conducted under the provisions of 14 *CFR* Part 135. Video footage from a parking lot surveillance camera revealed a postcrash fire initiating a few seconds after ground impact concurrent with large quantities of fuel flowing from the helicopter wreckage. The pilot and two flight nurses survived the initial ground impact. One flight nurse sustained a back injury and the other sustained serious thermal injuries. A medical staff member on the ground near the crash site also sustained thermal injuries while attempting to rescue the pilot from the helicopter wreckage. The pilot ultimately died from his injuries.² The NTSB's investigation of this accident is ongoing.

Neither the AS350 B3e nor the EC130 B4 helicopter was equipped with a crash-resistant fuel system, which if installed, may have prevented or reduced the risk of thermal injuries.

On October 3, 1994, the FAA revised the airworthiness standards for newly certificated rotorcraft to add "comprehensive crash resistant fuel system design and test criteria." The revisions included two new regulations, 14 *CFR* 27.952 and 29.952, "Fuel System Crash Resistance," which state, "to minimize the hazard of fuel fires to occupants following an otherwise survivable impact (crash landing), the fuel systems must incorporate design features of this section."³ However, the fuel systems on newly manufactured rotorcraft with type certificates approved before October 1994, such as the accident helicopters, are not subject to these regulations and, as a result, may pose a hazard to occupants if the systems are breached during a crash.⁴

Between 1994 and 2013, the NTSB investigated at least 135 accidents in the United States involving certificated helicopters of various models that resulted in a postcrash fire. Only three of the accident helicopters that experienced postcrash fire had crash-resistant fuel systems and crashworthy fuel tanks. As of November 2014, the FAA aircraft registry included more than 5,600 helicopters manufactured since 1994. Of those, only about 850 (or 15%) are models with crash-resistant fuel systems that meet the 1994 requirements. These data led to the NTSB's issuance of Safety Recommendation A-15-12 to the FAA, asking that the fuel systems for all newly manufactured rotorcraft be required to meet the crashworthiness requirements of 14 *CFR* 27.952 or 29.952, regardless of the design's original certification date. In its September 28, 2015, response, the FAA agreed with the recommendation and reported that it had started the rulemaking process by sending a tasking statement to the Aviation Rulemaking Advisory Committee.⁵ We are pleased that the FAA is taking preliminary steps to address this

² More information about this accident, NTSB case number CEN15MA290, is available on the NTSB [website](#).

³ Title 14 *CFR* Part 27 and Part 29 address the airworthiness standards for normal-category and transport-category rotorcraft, respectively.

⁴ All versions of the AS350 that hold FAA-type design approvals are under Type Certificate Data Sheet H9EU; the first of the AS350 series, the AS350 C, received FAA type certificate design approval on December 20, 1977, and subsequent type designs adhere to the then-prevailing airworthiness standards. The Airbus Helicopters EC130 B4 and EC130 T2 were certified under the same type certificate as AS350-series helicopters due to design similarities.

⁵ This recommendation is currently classified "Open—Acceptable Response." More information about the accident that prompted the recommendation, NTSB case number CEN15FA003, can be found on the NTSB's [website](#).

safety issue for newly manufactured rotorcraft. However, in-service rotorcraft such as AS350 B3e and similarly designed variants continue to operate with fuel systems that do not meet current crashworthiness requirements.

Approval to Retrofit In-Service Rotorcraft with Crash-Resistant Fuel Systems

Airbus Helicopters has included crash-resistant fuel systems as standard equipment for EC130 T2 helicopters delivered in the United States since the type certificate was approved on July 30, 2012. As of March 2015, Airbus Helicopters decided to do the same for newly manufactured AS350 B3e helicopters delivered in the United States.⁶ The manufacturer is also developing a retrofit kit for existing AS350 B3e and EC130 B4 helicopters already in operation, with completion and availability to owners and operators planned for early 2016.⁷ A retrofit kit for similarly designed variants, including the AS350 B2 and AS350 B3, is also being developed with completion of the AS350 B2 retrofit kit planned for early 2016. The NTSB is pleased that Airbus Helicopters is taking steps to improve the crash-resistance of helicopter fuel tank systems, both in and post production, but is concerned that the FAA's and EASA's approval for retrofit kit installation would not be prioritized because it is outside the scope of airworthiness.

The NTSB concludes that the availability of an approved retrofit kit to install a crash-resistant fuel system into existing AS350 B3e and EC130 B4 helicopters would assist owners and operators in mitigating the demonstrated safety risk of postcrash fires in survivable accidents. Therefore, the NTSB recommends that, once Airbus Helicopters completes development of a retrofit kit to incorporate a crash-resistant fuel system into AS350 B3e and similarly designed variants, the FAA and EASA prioritize its approval to accelerate its availability to operators. The NTSB also recommends that, after a retrofit kit has been developed and approved, the FAA issue a special airworthiness information bulletin (SAIB) informing all owners and operators of AS350 B3e and similarly designed variants of the availability of the retrofit kit and urging that it be installed as soon as practicable. To encourage helicopter owners and operators to retrofit existing helicopters with a crash-resistant fuel system, the SAIB should also discuss the helicopter accidents cited in this report.

Method to Notify Owners and Operators of Available Modifications

Our investigations and discussions with owners and operators at a helicopter safety committee meeting found that, in general, it may be difficult for them to determine if any modifications are available to improve fuel system crash-resistance for their particular helicopter models. In part, such difficulty is due to whether a modification is produced by the helicopter manufacturer or a third-party manufacturer, which would likely affect how comprehensively owners and operators are notified of such changes; helicopter manufacturers are likely to have a more complete contact list than third-party manufacturers. Another complicating factor is that while the FAA's database of supplemental type certificates (STC) is publically available, its

⁶ Among the family of Airbus Helicopters models, only the EC130 T2 and the AS350 B3e are currently in production and delivered in the United States.

⁷ Because few AS350 D1, D, and C variants operate in the United States, Airbus Helicopters does not plan to develop a retrofit for these helicopters.

search function is not easy to use unless users know what they are looking for.⁸ Adding to the difficulty, a modification could be announced via a service bulletin, which would not be included in the STC database.

The NTSB is concerned that owners and operators of other Part 27 and Part 29 helicopter models without a crash-resistant fuel system may not know of the existence of an available retrofit for improving their fuel system crashworthiness. Therefore, the NTSB recommends that the FAA issue an SAIB that is periodically updated to inform all helicopter owners and operators about available modifications to improve fuel system crashworthiness and urge that they be installed as soon as practicable. To encourage helicopter owners and operators to retrofit existing helicopters with a crash-resistant fuel system, the SAIB should also discuss the helicopter accidents cited in this report.

Recommendations

To the Federal Aviation Administration:

Once Airbus Helicopters completes development of a retrofit kit to incorporate a crash-resistant fuel system into AS350 B3e and similarly designed variants, prioritize its approval to accelerate its availability to operators. (A-16-8)

Issue a special airworthiness information bulletin (SAIB) informing all owners and operators of AS350 B3e and similarly designed variants of the availability of a crash-resistant fuel system retrofit kit and urging that it be installed as soon as practicable. To encourage helicopter owners and operators to retrofit existing helicopters with a crash-resistant fuel system, the SAIB should also discuss the helicopter accidents cited in this report. (A-16-9)

Issue a special airworthiness information bulletin that is periodically updated to inform all helicopter owners and operators about available modifications to improve fuel system crashworthiness and urge that they be installed as soon as practicable. To encourage helicopter owners and operators to retrofit existing helicopters with a crash-resistant fuel system, the SAIB should also discuss the helicopter accidents cited in this report. (A-16-10)

To the European Aviation Safety Agency:

Once Airbus Helicopters completes development of a retrofit kit to incorporate a crash-resistant fuel system into AS350 B3e and similarly designed variants, prioritize its approval to accelerate its availability to operators. (A-16-11)

⁸ An STC authorizes alteration of an aircraft component or system that is operated under an approved type certificate.

O F F I C I A L U S E O N L Y
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EXHIBIT 18

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 18
FAA Email & Agent Affidavit
September 23, 2022

**Department of Homeland Security
U.S. Customs and Border Protection
Office of Professional Responsibility**

A F F I D A V I T

DISTRICT OF COLUMBIA

CITY OF WASHINGTON

I, [REDACTED] being duly sworn do hereby depose and say:

I am a Senior Special Agent (SSA) currently assigned to the U.S. Customs and Border Protection (CBP) Office of Professional Responsibility (OPR), Investigative Operations Division (IOD), Special Agent in Charge Washington office (SACW), Washington, D.C.

I have been assigned Office of Special Counsel Case # DI-22-000519 and JICMS Cases # 202209078, 202009245 & 202209182. These cases involve a CBP Air and Marine Operations (AMO) Aircraft Mishap Report for AMO Helicopter N841BP that occurred on May 12, 2021, in Oklahoma City, OK. The events being investigated mainly stem from various actions that occurred post mishap.

On September 27, 2022, I spoke with Federal Aviation Administration (FAA), Senior Accident Investigator [REDACTED]. I was referred to Mr. [REDACTED] by the National Transportation Safety Board (NTSB). Mr. [REDACTED] has an FAA background in helicopter certifications and accident investigation.

Mr. [REDACTED] said crash resistant fuel tanks (CRFT) do not apply to the AS 350 helicopters because the design was approved in 1977. He said the 1994 regulations for CRFT do not apply to this design unless the rules were retroactively applied, which was not the case with the AS 350.

Mr. [REDACTED] said he is a major proponent of installing CRFTs in helicopters. He said the US military has used CRFTs since the 1960's.

Mr. [REDACTED] said whether a helicopter has a CRFT or not is a factual piece of information that must be included in an accident report.

Mr. [REDACTED] said the purpose of a safety investigation is to learn from the incident. He said the safety investigation process cannot be punitive.

The contents of this statement are true and correct to the best of my knowledge and belief.

Subscribed and sworn to by:

[REDACTED]

Before me this day, March 15, 2023

[Redacted]

U.S. Customs and Border Protection
Office of Professional Responsibility

[Redacted]

Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

From: [REDACTED] (FAA)
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: FAA Helicopter Requirements
Date: Monday, September 26, 2022 8:45:58 PM
Attachments: [H9EU_Rev26 \(1\).pdf](#)

[REDACTED] it will be tomorrow ... I just realized your DC I am in seattle for an investigation .. how about say 11:30 am DC time work for you??

1. CBP currently has about 83 AS350's in the fleet. 75 were manufactured post 1994. In 2016, there was push within CBP to retrofit the helicopters. But CBP mgt did not want to spent the \$9 million to retrofit and therefore did not fund the request. From my basic understanding, if a helicopter design was certified prior to 1994, it would not be required to have a CRFT. Is CBP in violation of federal regulation since we currently have 75 AS350s, without CRFT, that were manufactured post 1994? If CBP, is/is not, in violation I need to be able to explain it intelligibly and at the most basic level so a non-aviation person can understand it. [REDACTED]

Short answer is NO.. CBP is not in regulatory violation.

The manufacturing date for the AS350 regulatory wise, is a moot point, Regulatory wise the aircraft is tied to the Type certificate Data Sheet date.. which is in 1977, the TCDS is attached, As crazy as it sounds, that is the approved design for the AS350 and the requirements that must be met, even if is, being built today or tomorrow. In order for the 1994 crash resistant requirements to take effect, the FAA would have to make a retroactive rule requirement. Not easy.. the FAA did this with seat belts and shoulder harnesses. I can explain on the phone. I call it Crash Resistant Fuel System (CRFS) because it is more than just a tank bladder that is installed

2. Is the manufacture date and certification design date the same thing? No, the design basis, is 1977 and it complied with the rules on the books at that time.

3. The helicopter that crashed did not have a CRFT. It was manufactured in 1987. At impact it had about 60% of its fuel capacity. After impact it caught fire and approximately 85% of the helicopter was destroyed. The CBP investigator annotated in his report that the helicopter did not contain a CRFT. The investigator was pressured to remove this item from his report. He felt it was a fact and refused to remove it. However as the report was reviewing by senior CBP official it was removed. The final report is still pending final review by CBP management. The NTSB report listed that the helicopter did not contain a CRFT. Since CBP removed it from their report, I believe there is an appearance that senior officials are attempting to hide the lack of a CRFT in their report. This could be very problematic when attempting to report investigative findings. The statement from your investigator is FACTUALLY correct, it's like being a little bit pregnant, you are or not, and with CRFS you have it or you don't.

Hope this helps..

Best Regards,

[REDACTED]
Sr. Accident Investigator
FAA Office of Accident Investigation, AVP-100

[REDACTED] [faa.gov](#)

[REDACTED]
10101 Hillwood Parkway

Fort Worth, TX 76177

Please feel free to provide Feedback:

http://www.faa.gov/about/office_org/headquarters_offices/avs/stakeholder_feedback/avp/

From: [REDACTED]

Sent: Monday, September 26, 2022 12:05 PM

To: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Subject: RE: FAA Helicopter Requirements

Haha. That works as well.

Thanks and Have a Safe Day

[REDACTED]

Special Agent

US Customs and Border Protection

Office of Professional Responsibility

Investigative Operations Division

Washington, D.C.

[REDACTED]

[REDACTED]

NON-DISCLOSURE: This information is part of an Official Investigation and should not be disclosed to anyone outside of CBP or anyone within CBP, besides the person indicated on this email chain. In addition, the employee to which this request pertains should not be informed in any way; including, but not limited to, placing the requestors name in the employee's file, making notation that a request was made in employee's file, information must not be disclosed in writing or verbally to the employee.

From: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Sent: Monday, September 26, 2022 1:04 PM

To: [REDACTED] <[REDACTED]@cbp.dhs.gov>

Subject: Re: FAA Helicopter Requirements

Dang phones. Not sure how tomorrow got in there? Here in a couple of hours

From: [REDACTED] B (OPR) <[REDACTED]@cbp.dhs.gov>

Sent: Monday, September 26, 2022 12:02:34 PM

To: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Subject: RE: FAA Helicopter Requirements

Awesome. Thanks!!!!

Thanks and Have a Safe Day

[REDACTED]

Special Agent

US Customs and Border Protection

Office of Professional Responsibility

Investigative Operations Division

Washington, D.C.

[REDACTED]

[REDACTED]

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From: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Sent: Monday, September 26, 2022 1:02 PM

To: [REDACTED] <[REDACTED]@cbp.dhs.gov>

Cc: [REDACTED] <[REDACTED]@cbp.dhs.gov>

Subject: Re: FAA Helicopter Requirements

[REDACTED] I will call you tomorrow be I am on the ground and able.

[REDACTED]

From: [REDACTED] <[REDACTED]@cbp.dhs.gov>

Sent: Monday, September 26, 2022 11:50:26 AM

To: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Cc: [REDACTED] <[REDACTED]@cbp.dhs.gov>

Subject: RE: FAA Helicopter Requirements

Mr. [REDACTED]

Good Morning.

I am working an Office of Special Counsel investigation related to a helicopter mishap in Oklahoma City, OK on May 12, 2021. The matters we are investigating are not directly related to the mishap itself. But to some actions by CBP officials afterwards. Since I am a non-aviation guy, I am having to get up to speed on some things.

The helicopters in question are AS350s. Yes they would need to be retrofitted with the CRFT. Some of the questions that I am trying to answer in my investigation are below:

1. CBP currently has about 83 AS350's in the fleet. 75 were manufactured post 1994. In 2016, there was push within CBP to retrofit the helicopters. But CBP mgt did not want to spent the \$9 million to retrofit and therefore did not fund the request. From my basic understanding, if a helicopter design was certified prior to 1994, it would not be required to have a CRFT. Is CBP in violation of federal regulation since we currently have 75 AS350s, without CRFT, that were manufactured post 1994? If CBP, is/is not, in violation I need to be able to explain it intelligibly and at the most basic level so a non-aviation person can understand it.
2. Is the manufacture date and certification design date the same thing?
3. The helicopter that crashed did not have a CRFT. It was manufactured in 1987. At impact it had about 60% of its fuel capacity. After impact it caught fire and approximately 85% of the helicopter was destroyed. The CBP investigator annotated in his report that the helicopter did not contain a CRFT. The investigator was pressured to remove this item from his report. He felt it was a fact and refused to remove it. However as the report was reviewing by senior CBP official it was removed. The final report is still pending final review by CBP management. The NTSB report listed that the helicopter did not contain a CRFT. Since CBP removed it from their report, I believe there is an appearance that senior officials are attempting to hide the lack of a CRFT in their report. This could be very problematic when attempting to report investigative findings.

I have more I can share in this case. But now you see exactly what I am dealing with and why I am seeking an SME outside of CBP.

Thanks and Have a Safe Day

[REDACTED] [REDACTED]
Special Agent
US Customs and Border Protection
Office of Professional Responsibility
Investigative Operations Division
Washington, D.C.

[REDACTED]
[REDACTED]
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From: [REDACTED] (FAA) <[REDACTED]@faa.gov>

Sent: Monday, September 26, 2022 11:52 AM

To: [REDACTED] [REDACTED] [REDACTED] [REDACTED]
<[REDACTED]@cbp.dhs.gov>

Subject: RE: FAA Helicopter Requirements

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. If you feel this is a suspicious-looking email, please report by using the Report Phish button option.

[REDACTED] and [REDACTED], I am on my way to Seattle currently, I can talk in a few hours. I am a HUGE proponent of the CRFS in aircraft.. it DOES make a difference!!

Johnathan I assume you are flying either the EC-120s, which I believe does have the CRFS as standard equip, or the AS350 which has it available through STC.

Any questions I can answer??

Best Regards,

[REDACTED] [REDACTED]
Sr. Accident Investigator
FAA Office of Accident Investigation, AVP-100
[REDACTED]@faa.gov

[REDACTED]
[REDACTED]

10101 Hillwood Parkway
Fort Worth, TX 76177

Please feel free to provide Feedback:

http://www.faa.gov/about/office_org/headquarters_offices/avs/stakeholder_feedback/avp/

From: [REDACTED] >

Sent: Monday, September 26, 2022 10:26 AM

To: [REDACTED] [REDACTED] [REDACTED] [REDACTED]@cbp.dhs.gov; [REDACTED] [REDACTED] (FAA)
<[REDACTED]@faa.gov>

Subject: RE: FAA Helicopter Requirements

[REDACTED] enjoyed talking with you this morning. I'm forwarding your information to [REDACTED] [REDACTED]

who may be able to answer your questions or refer you to someone within the FAA that can better assist.

[REDACTED] can you please contact [REDACTED] and provide assistance?

[REDACTED]

[REDACTED]

Enforcement Standards & Policy Division (AXE-900)

[REDACTED]

From: [REDACTED] [REDACTED] [REDACTED] [REDACTED] [cbp.dhs.gov](mailto:[REDACTED]@cbp.dhs.gov)>

Sent: Monday, September 26, 2022 9:46 AM

To: [REDACTED]

Cc: [REDACTED] [REDACTED] [REDACTED] [REDACTED] [cbp.dhs.gov](mailto:[REDACTED]@cbp.dhs.gov)>

Subject: FAA Helicopter Requirements

Mr. [REDACTED],

Good Morning. I appreciate you taking my call. As we discussed, I am in need of assistance in reference to crash resistance fuel tanks in Light Enforcement Helicopters used by US Customs and Border Protection. Below is my contact information. I thank you for any direction you can provide. Thanks and Have a Safe Day

[REDACTED] [REDACTED]

Special Agent

US Customs and Border Protection

Office of Professional Responsibility

Investigative Operations Division

Washington, D.C.

[REDACTED]

[REDACTED] [cbp.dhs.gov](mailto:[REDACTED]@cbp.dhs.gov)

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EXHIBIT 19

DEPARTMENT OF HOMELAND SECURITY
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EXHIBIT 19
AMO CRFT Cost Estimate
December 12, 2022

From: [REDACTED]
To: [REDACTED]
Subject: Fwd: Follow up to Question 3
Date: Monday, December 12, 2022 1:31:07 PM

[REDACTED]
See below quote.

Regards,

[REDACTED]
Executive Director
Training, Safety and Standards

[REDACTED]
[REDACTED] CBP.DHS.GOV

From: [REDACTED] >
Sent: Monday, December 12, 2022 12:43:47 PM
To: [REDACTED] CBP.DHS.GOV >
Subject: RE: Follow up to Question 3

Sir,

After discussing with Mr. [REDACTED] our AS-350 SME. He is comfortable utilizing the airbus quote with a 3% yearly increase for inflation. Each kit is 45K + 3% = 46,300 per kit per year. We could do 7 installs a year so it would take us over eight years to complete.

1st year 46,300 x7 = 324,100
2nd year 47,689 x7 = 333,823
3rd year 49,120 x7 = 343,840
4th year 50,593 x7 = 354,151
5th year 52,111 x7 = 364,777
6th year 53,674 x7 = 375,718
7th year 55,284 x7 = 389,718
8th year 56,943 x7 = 398,601
9th year 58,651 x5 = 293,255

Total = \$3,159,983.00

Very respectfully,

[REDACTED]
Chief Readiness Officer
Air and Marine Operations H.Q.

U.S. Customs and Border Protection
1300 Pennsylvania Ave, NW
Washington, DC 20229

[REDACTED]

From: [REDACTED] T <[REDACTED]@CBP.DHS.GOV>
Sent: Sunday, December 11, 2022 8:00 AM
To: [REDACTED]
Cc: [REDACTED] <[REDACTED]@cbp.dhs.gov>
Subject: FW: Follow up to Question 3

[REDACTED],

I need a hard quote for the CRFT for fleet. I believe when we spoke a few months ago on this you had reached out to the vendors. If you can validate the below #s are accurate or need to be refined please advise Mr. [REDACTED] and myself.

Thank you for your help.

[REDACTED]

[REDACTED]

Executive Director
Training, Safety and Standards

[REDACTED]

[REDACTED] [\[REDACTED\]@CBP.DHS.GOV](mailto:[REDACTED]@CBP.DHS.GOV)

From: [REDACTED] <[REDACTED]@cbp.dhs.gov>
Sent: Friday, December 9, 2022 5:22 PM
To: [REDACTED] <[REDACTED]@CBP.DHS.GOV>
Subject: Re: Follow up to Question 3

[REDACTED]

Question- just want to make sure this quote of \$4+ million is accurate? I now need a hard number. Really makes no different if it's 4, 5, or 6 million. Just need a hard number.

Get [Outlook for iOS](#)

From: [REDACTED] <[REDACTED]@CBP.DHS.GOV>
Sent: Thursday, September 29, 2022 2:23:51 PM
To: [REDACTED] <[REDACTED]@cbp.dhs.gov>
Subject: Re: Follow up to Question 3

Sir,

Please see attached, this came from our Safety Files, and I am still waiting to see if Mission Support can provide any further documentation.

Here is a current look at costs. This does not include the B2 with the intent to phase them out shortly:

61 aircraft need the install with some technical considerations that will need to be worked out later. No B2 aircraft are included here. Two Vendors AB and Vector/Standard Aero.

Price for one kit last Oct was-	Air Bus AB) \$43K	STD Aero \$98K
Plus 5% (guess)	AB \$45K	STD Aero \$102K
61 Aircraft	AB \$2.745M*	STD Aero
\$6.222M		

The AB ROM does not include our costs from our contract mx to install, so the ROM # would be more likely closer to \$4.5M

There is still lots to work out as both offer credits for upgrade and/or training with purchase. Last report from AB was a 4 week install. STD Aero was about 3 Days. AB doesn't have an STC for aircraft with cargo hook, STD Aero does but there are caveats for both.

This would have to be a phased approach to installing these if at all. Most likely at the 600 inspection point for each airframe. But still this is not a mandatory requirement to retro fit these machines.

█

█ █

Executive Director

Training, Safety and Standards

█

█ CBP.DHS.GOV

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EXHIBIT 20

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EXHIBIT 20
SAEA [REDACTED] Email
May 27, 2021

[REDACTED]

From: [REDACTED]
Sent: Thursday, May 27, 2021 9:38 AM
To: [REDACTED]
Subject: FW: Director Notes for 841BP
Attachments: Management Inquiries (3).pdf; POL-31001-Safety-Sensitive-Information(1) (12).pdf

From: [REDACTED]
Sent: Wednesday, May 26, 2021 11:15 AM
To: [REDACTED]
Subject: Director Notes for 841BP

Sir,

The following reasons were listed as supporting the TSS recommendation for a Crewmember Evaluation Board is recommended to be held for the PUI:

1. PUI Failed army flight school by admission
2. PUI Failed NATC initial assessment several years ago, prior to this accession
3. PUI accrued flight time without established syllabus
4. PUI made a statement that he "panicked" during the mishap

The CEB is directly above the Management Inquiry section in the AOH, both pasted below:

Crewmember Evaluation Board

The Crewmember Evaluation Board may convene at the discretion of the Executive Director, Operations, at the request of a DAMO if, at any time, the professional competency of a crewmember is in question. If the Crewmember Evaluation Board recommends suspension of the crewmember's qualifications, the crewmember shall be placed on an Employee Performance Plan (EPP) immediately and provided appropriate training.

A. Upon successful completion of the EPP, the employee's qualifications will be reinstated.

B. Upon unsuccessful completion of the EPP, the employee may be removed from AMO.

3.10 Management Inquiries

Refer to AMO Management Inquiries Policy Number 400.10 for guidelines and procedures.

The Management Inquiry and Safety Sensitive Policies are both attached, and both available on the AMO Policy Page: <https://cbpgov.sharepoint.com/sites/AMO/rl/Pages/AMO-Policies.aspx>

[REDACTED]
Supervisory Air Enforcement Agent
Air Safety Program Manager
U.S. Customs and Border Protection
Air and Marine Operations HQ
Training, Safety, and Standards
Washington, DC

[REDACTED]@cbp.dhs.gov

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EXHIBIT 21

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EXHIBIT 21
[REDACTED] CEB
September 14, 2021

Crewmember Evaluation Board

AIA [REDACTED]

Headquarters
Operations

September 2021



U.S. Customs and
Border Protection



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EXECUTIVE SUMMARY

On 5-12-2021, an Air and Marine Operations (AMO) helicopter (AS350B2) crewed by Instructor Pilot (IP) [REDACTED] and Pilot Under Instruction (PUI) [REDACTED] crashed at Clarence E. Page Municipal Airport near Oklahoma City, OK while performing a Simulated Tail Rotor Control Failure maneuver. The IP and PUI managed to exit the aircraft, sustaining minor injuries, but the aircraft caught fire after the crew exited and was a total loss. On June 7, 2021, in accordance with AOH v4.2, Chapter Three, Section 3.10, the Executive Director, Operations, convened a Crewmember Evaluation Board to review the professional competency of the PUI, Air Interdiction Agent (AIA) [REDACTED]

BACKGROUND

U.S ARMY AVIATION TRAINING

AIA [REDACTED] successfully completed U.S. Army Initial Entry Rotary -Wing (IERW) training in October 2005 at Fort Rucker, Alabama and started the AH-64 Apache Aircraft Qualification Course (AQC) in November 2005. After approximately 40 hours of flight training, he failed the required emergency procedure test twice and performed below standard during Closed Cockpit “Bag” Flight Training and was subsequently removed from the program.

ENTRY INTO CBP

AIA [REDACTED] joined CBP in 2007 and started his career as a U.S. Border Patrol (USBP) agent. He served as a Supplemental Aircrew Member (SAM) at the Tucson Air Branch from 2011 to 2013. In January 2013, AIA [REDACTED] applied for an AIA position with the Office of Air and Marine (OAM), but failed the flight evaluation portion of the New Hire Pilot Assessment. The IP that administered the flight evaluation graded him unsatisfactory on autorotations, slope landings, quick stops, and the non-precision instrument approach. The IP also annotated in the comments, “Overall: Poor aircraft control and weak radio calls. Inexperienced pilot”.

AIA [REDACTED] returned to service with the USBP until 2016, when he was selected again to serve as a SAM, this time at NASOC-Sierra Vista. In 2017 he accepted an Aviation Enforcement Agent (AEA) position with AMO at NASOC-Sierra Vista. On December 10, 2019, Mr. [REDACTED] successfully completed the New Hire Pilot Assessment at NATC, including a Federal Aviation Regulation (FAR) Part 91 oral evaluation, a structured interview, and a flight evaluation. In early 2020, AEA [REDACTED] was non-competitively reassigned to the AIA occupation and assigned to NASOC-Sierra Vista to serve as an MQ-9 pilot. On August 6, 2020, he successfully completed the MQ9 (UAS) Mission Control Element (MCE) Initial Qualification Course and was designated as an MQ-9 MCE Pilot in Command (PIC) upon his return to NASOC-Sierra Vista. After successfully completing his Initial Operating Experience (IOE), he continued to gain recency by flying with other AMO Instructor Pilots (IP).

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AEA to AIA PROCESS

To be non-competitively reassigned to the AIA occupation, Mr. [REDACTED] had to possess an FAA Commercial Pilot Certificate with Rotorcraft-Helicopter, Instrument Helicopter ratings and have 1500 hours of flight time. In 2000, Mr. [REDACTED] received his Private Pilot Certificate with an Airplane Single Engine Land Rating. While doing so, he accrued approximately 75 hours, of which approximately 58 hours were flown with an IP and 17 hours were solo flight. In 2005 Mr. [REDACTED] attended U.S. Army Initial Entry Rotor Wing (IERW) training and part of the AH-64 Aircraft Qualification Course (AQC) where he accrued approximately 183 hours of flight time, nearly all of which were flown with an IP.

In 2006-2007, he trained with Quantum Helicopters in Chandler, AZ where he accrued approximately 158 hours of flight time, of which approximately 136.0 hours were flown with an IP and 22.0 hours were solo flight. In 2007, he received his FAA Commercial Pilot Certificate with Rotorcraft-Helicopter, Instrument Helicopter ratings. In 2011, Mr. [REDACTED] began accruing flight time in AMO AS-350 helicopters, while serving as a SAM and AEA. Between 2011 and 2019, he accrued 671 total flight hours in AMO AS-350 helicopters, of which 264.3 hours were logged as "Pilot in Command," when he was the sole manipulator of the flight controls but not ultimately responsible for aeronautical decision making or the overall safety of the aircraft. The remaining 406.7 hours were logged as "total duration of flight," when he was in the aircraft at a position to take the controls, but once again was not responsible for aeronautical decision making or the overall safety of the aircraft. Mr. [REDACTED] was given two waivers totaling 500 hours that reduced the total number of required flight hours from 1500 down to 1000: one waiver for 300 hours for previous Night Vision Goggle (NVG) experience and another waiver for 200 hours for prior flight time in a multi-engine complex aircraft.

There are several significant points to be drawn out of the information above. First, AMO allowed Mr. [REDACTED] to count 406.7 hours flown in an AMO AS350 toward the 1500-hour requirement. During those hours he was serving as a SAM or AEA, he was not the PIC of the aircraft, nor was he on the flight controls. In short, he was present in the left front seat of the aircraft where he had access to the flight controls but was in no way responsible for aeronautical decision making or the overall safety of the aircraft.

Second, Mr. [REDACTED] was given a 200-hour waiver based on approximately 40 flight hours he accrued while attending the U.S. Army AH-64 AQC, a course he failed out of at least in part due to his inability to pass an emergency procedure test.

Third, he was given a 300-hour waiver based on prior NVG experience he gained while attending U.S. Army IERW and flying in an AMO AS350 as a SAM and AEA. In both cases, he was never the PIC of the aircraft and there was either a highly experienced U.S. Army or Department of the Army Civilian IP or AMO PIC that was ultimately responsible for the flight.

Finally, at the time he was non-competitively re-assigned to the AIA position, Mr. [REDACTED] had approximately 1087.0 hours. However, the number of flight hours is significantly less if you subtract the hours he flew with IPs and AMO pilots along with the hours he was just present in

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the aircraft. As a result, Mr. [REDACTED] had less than 40 hours of flight time during which he was solely responsible for the aircraft and all aeronautical decisions made during the flight.

INCIDENT

On May 12, 2021, an AMO AS350B2 helicopter assigned to the National Air Training Center (NATC) crashed at Clarence E. Page Municipal Airport near Oklahoma City, OK while performing flight training. The aircraft was crewed by Instructor Pilot (IP) [REDACTED] [REDACTED] and Pilot Under Instruction (PUI) [REDACTED] and the incident occurred during the performance of the Simulated Tail Rotor Control Failure maneuver. The crew sustained non-life-threatening injuries and the aircraft was a total loss.

The PUI reported nothing unusual during pre-flight activities. The PUI reported that during aircraft run up, the hydraulic system took approximately five to six seconds to restore after the Hydraulic Pressure Isolation Switch was pressed at the conclusion of the Hydraulic Pressure Isolation Check.

The PUI reported nothing unusual occurred during the training flight prior to the incident and that he was performing the Quick Stop maneuver on Runway 35 Left (35L) immediately prior to performing the maneuver that led to the incident. At the completion of the Quick Stop maneuver, with the aircraft sitting on 35L, the IP began instructing the PUI on “how to complete a quick stop with a stuck pedal.” The term “stuck pedal” is the common term used to refer to the Simulated Tail Rotor Control Failure task.

During the conversation/instruction, another aircraft announced their intentions to land on 35L and inquired as to the helicopter’s intentions. The IP responded to the aircraft by announcing over the radio that the helicopter would “*be out of the way shortly.*” Immediately thereafter, the IP directed the PUI to get “*on the go.*” The PUI applied collective, picked the aircraft up to a three-foot hover, did not notice any controllability issues, and adjusted the flight controls to start a normal takeoff from a hover. After the aircraft passed through effective translational lift (ETL), the PUI adjusted the flight controls to start a climbing left turn to enter the traffic pattern. At approximately 30 to 35 feet above ground level (AGL), the PUI perceived the aircraft to be an “un-commanded left yaw” that he could not control with right pedal application. The PUI applied forward cyclic and reduced collective to increase forward airspeed and attempted to achieve forward flight, but the aircraft continued to yaw. In his statement, the PUI stated “*As the aircraft continued through its first horizontal rotation, I began to panic that the aircraft was not responding to my inputs. This feeling caused me to increase my grip on the controls. Inadvertently, while gripping the collective, I felt my thumb pressure in on the hydraulic cut-off switch, which is located on the end of the collective in that model AS350 B2. This inadvertent pressure was enough to cut-off the hydraulics system.*”

As the PUI was inadvertently cutting off the hydraulic boost to the flight controls, the IP got on the flight controls and attempted to regain control of the aircraft. As soon as the IP attempted to manipulate the flight controls, he said to the PUI, “*don’t fight me on this.*” A moment later,

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having realized there was no hydraulic boost to the flight controls, the IP told the PUI to “*get the hydraulics back on.*” The PUI responded by pressing the hydraulic isolation switch on the end of his collective, but when the hydraulics were not immediately restored, the PUI proceeded to push the hydraulic isolation switch three or four times in quick succession, never giving the hydraulic system time to reset and restore hydraulic boost to the flight controls. The aircraft, now without hydraulically boosted flight controls, continued to yaw to the left, out of control, until crashed approximately 100 yards West of 35L.

Findings:

1. The PUI’s piloting and aeronautical decision-making abilities were not commensurate with his total flight time.
2. The PUI failed to properly identify the simulated malfunction given, which was a Simulated Tail Rotor Control Failure (Stuck Left Pedal).
3. The PUI failed to follow the proper procedure for the simulated malfunction given.
4. Lack of aeronautical maturity caused the pilot to “panic” and inadvertently press the hydraulic isolation switch.
5. When told by the IP to turn the hydraulics back on, the PUI pressed the hydraulic button four or five times in rapid succession, which did not allow the hydraulic system sufficient time to restore pressure to the flight control.
6. The lack of hydraulically boosted flight controls significantly contributed to the IP’s inability to regain control of the aircraft.

Contributing Factors:

1. The PUI lacked aeronautical maturity due to the manner and conditions under which he built his flight time.
2. When the PUI was non-competitively re-assigned to the AIA position, he had approximately 626 actual flight hours, well short of the 1000 hours required.
3. There was not a thorough and discriminating review of the pilot’s logbook during the hiring process at NATC.
4. The AEA to AIA process was a self-guided informal program during the time the employee was accumulating hours.
5. The candidate was seeking hours during a transition of Branch leadership, creating inconsistency and clarity in the process.
6. AIA met AMO requirements but had minimal operational experience and proficiency.
7. Unlike the vast majority of the AMO AS-350B2 fleet, the hydraulic isolation switch in the training aircraft was located on the end of the collective and without a guard limiting access.
8. The IP’s collective did not have a hydraulic isolation switch; therefore, the IP did not have direct access to the button that would have restored hydraulic pressure to the flight controls.

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Probable Cause:

The conditions under which the PUI accrued flight time, produced a pilot with decision making and piloting skills that are not commensurate with his flight hours.

Employee Recommendations:

1. Allow AIA [REDACTED] to continue to serve as an AIA and leave him designated as an MQ-9 PIC.
2. If the agency chooses to pursue developing AIA [REDACTED] as a helicopter pilot:
 - a. Send him to a third-party vendor for 25 hours of helicopter flight evaluation to determine his ability to perform all PIC duties, properly employ the aeronautical decision-making process, and display sound judgement.
 - b. If, based on the results of the vendor's evaluation, the agency chooses to continue developing AIA [REDACTED] as a helicopter pilot, send him back to NATC to complete the AS-350 Initial Qualification Course.

Agency Recommendations:

1. Develop and implement a formal AEA to AIA training program with milestones and evaluations to confirm pilot proficiency prior to progression and conversion to AIA.
2. Allow AEAs accruing "bootleg" flight time in AMO aircraft to only count the time they are the sole manipulator of the flight controls towards the 1500-hour requirement to make applications as an AIA.
3. Establish a board of experienced IPs to scrutinize AEA to AIA applicant's qualifications prior to allowing them to participate in the new hire process at NATC.
4. Reassess pilot hiring and assignment policy to match pilot experience with Air Branch mission requirements.
5. Immediately stop conducting AMO AS350B2 Initial Pilot Training in non-standard aircraft that have an unguarded hydraulic isolation switch located on the end of the collective.
6. Remove all non-standard AS350B2 helicopters that have an unguarded hydraulic isolation switch located on the end of the collective from the AMO fleet.
7. Upgrade and standardize the aforementioned helicopters by installing the collective that has a guarded hydraulic isolation switch on top collective, like those found in the rest of AMO's AS350B2 fleet.

[REDACTED]
 Director Air and Marine Operations
 McAllen Air and Marine Branch

[REDACTED]
 Supervisor, Aviation Standardization and Evaluation Section
 Headquarters, Training, Safety, and Standards

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EXHIBIT 22

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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 22
AIA 
Flight Time
Memorandum



U.S. Customs and Border Protection

MEMORANDUM FOR: [REDACTED]
Deputy Executive Director
CBP Air and Marine Operations

THROUGH: [REDACTED] [REDACTED]
Director, Training, Safety, Standards
CBP Air and Marine Operations

FROM: [REDACTED] [REDACTED]
Director Air and Marine Operations
McAllen Air and Marine Branch

SUBJECT: AIA [REDACTED] Flight Time

To be non-competitively reassigned to the AIA occupation, Mr. [REDACTED] had to possess an FAA Commercial Pilot Certificate with Rotorcraft-Helicopter, Instrument Helicopter ratings and have 1500 hours of flight time.

Following a Class A Incident that resulted in the total loss of an AS-350 Helicopter, AIA [REDACTED] underwent a Crewmember Evaluation Board (CEB). During the CEB, it was determined that AIA [REDACTED] reported he had approximately 1087.0 and two waivers totaling 500 hours when he completed the new hire assessment process at the National Air Training Center on December 10, 2019. Through further review of his logbook and interviews conducted with AIA [REDACTED] it was determined the flight hours AIA [REDACTED] reported broke down as follows:

- Pilot in Command (Sole Manipulator of the Flight Controls): 307 Hours
- Pilot in Command (Duel Received): 374 Hours
- Present in the left seat of an AMO AS-350 (Not Manipulating the Flight Controls): 406 Hours
- Waiver for previous Night Vision Goggle (NVG) experience: 300 hours
- Waiver for prior flight time in a multi engine complex aircraft: 200 hours

AIA [REDACTED] logged 1087 flight hours and received a waiver for an additional 500 hours totaling 1587 flight hours. Of the 1587 hours, he received credit for 406 logged hours where he was not at the flight controls or responsible for aeronautical decision making and overall safety of the aircraft. The additional accounted hours and allowed waivers lead to an inaccurate reflection of the candidates' qualifications and actual experience level. The candidate did not qualify for consideration for the AIA position without the two waivers totaling 500 hours and the logged 406 hours.

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EXHIBIT 23
AIA [REDACTED] Hiring
Documentation



• [REDACTED] • Phone: [REDACTED] • E-Mail: [REDACTED]@cbp.dhs.gov

Objective

To demonstrate that I possess the Knowledge, Skills, Abilities, and Experience to be selected as the most qualified candidate for the Aviation Enforcement Agent to Air Interdiction Agent transition program.

Experience

Aviation Enforcement Agent

SEPTEMBER 2017 TO PRESENT

- AEA GS-13 (promoted Nov 2018)
- 14 months Clearance Authority Duty Officer (CDO)
- Sensor Operator with 700+ hours operating MTS-B and VaDER.
- Primary Less Lethal instructor for NASOC-Sierra Vista
- Tactics instructor for NASOC-Sierra Vista
- Public Affairs Liaison for NASOC-Sierra Vista
- Ground Tactical Air Coordinator (GTAC) trained with live mission experience serving warrants.

Supplemental Aircrew Member 2017

JUNE 2011 TO JULY 2013, MARCH 2016 TO SEPTEMBER 2017

- Three+ years' experience as a Supplemental Air Crew Member GS-1896-12
- 350+ hours MQ-9 Sensor Operator, and 120+ hours Vehicle and Dismount Radar Operator
- 2 years' experience Tactical Flight Crew Member
- CBP Certified Less Lethal/Use of Force Instructor
- Research, Production, and Delivery of video evidence for Tucson Sector Prosecutions
- Implementation of Tracking Signcutting Module for use in intelligence gathering and exploitation
- Over 300 hours Pilot in Command experience with 1008 hours rotor and 81 hours fixed wing total time logged

Border Patrol Agent

DECEMBER 13, 2007 TO PRESENT

- Nine years' experience interdiction of human and narcotics smuggling working directly with OAM aircraft
- Five years' experience National Registry and Arizona State certified Emergency Medical Technician
- Six months experience Acting Supervisory Border Patrol Agent GS-1896-13
- Certified expert with Pistol, Rifle, Shotgun, Taser, Pepperball Launch System, FN-303
- Certified and experienced Nogales Horse Patrol Unit, ATV, MRAP, and Mobile Surveillance Camera certified

Military

JUNE 20, 1994 TO DECEMBER 2013

- Fourteen years' experience between 2nd Battalion 23rd Marine Regiment and 1/158 In Arizona Army National Guard
- Over ten years' experience in small unit leadership positions and training to include squad leader and platoon sergeant
- Successful combat tour in Iraq in 2003 as a team leader resulting in bringing all my Marines home alive and ousting regime
- Graduated from Marine Corps Officer Candidate School in 2000
- Honor Graduate from Army Warrant Officer Candidate School in 2005
- Completed Army Initial Entry Rotor Wing School in 2005
- Current member of 162nd Wing Arizona Air National Guard Public Affairs Office training in Broadcast Journalist AFSC

Education

Utah Valley University

DECEMBER 17, 2007

- Bachelor of Science Professional Pilot. Dean's List fall 2006 to fall 2007. Private Pilot Fixed and Rotor wing, Commercial Instrument Rotor wing.



Military Education

- Marine Corps Officer Candidate School Graduate,
- Army Warrant Officer Candidate School,
- Army Initial Entry Rotor Wing, Marine Corps Boot Camp,
- Marine Corps Infantry School.

Skills

- **Commercial/Instrument Rotorcraft Pilot with 1100 hours**
- **Private Pilot Fixed Wing with 81 hours**
- First Responder and CPR/AED Instructor. Infantry combat experience during Operation Iraqi Freedom.
- Certified MQ-9 Sensor Operator with over 500 hours. Certified VaDER Operator with over 120 hours.
- 75 hours Night Vision Goggle flying time and 96.5 hours as FLIR operator aboard Office of Air and Marine Aircraft.
- Use of Force/Less Lethal Instructor
- Certified Operations Duty Officer for NASOC-SV
- 8 years as head wrestling coach Continental Middle School
- 2 years assistant Football coach Continental Middle School
- Chief Cook for NASOC-SV

I UNITED STATES OF AMERICA XI

DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION
IV NAME

[REDACTED]
V ADDRESS

VI NATIONALITY USA

IVa D.O.B.

SEX HEIGHT WEIGHT HAIR EYES

IX HAS BEEN FOUND PROPERLY QUALIFIED TO EXERCISE THE PRIVILEGES OF

II COMMERCIAL PILOT

III CERTIFICATE NUMBER

X DATE OF ISSUE

[REDACTED]
3 JUN 2022

XIV

VIII ACTING ADMINISTRATOR



[REDACTED]

COMMERCIAL PILOT

AIRPLANE SINGLE & MULTIENGINE LAND; ROTORCRAFT-HELICOPTER;
INSTRUMENT AIRPLANE AND HELICOPTER

ENGLISH PROFICIENT.

XIII RATINGS

XIII LIMITATIONS



VII SIGNATURE
OF HOLDER

[REDACTED]

9241 06/21

CBP Air Interdiction Agent (AIA) Applicant Certification Checklist

The following items are required to be placed into the pre-employment process for the Air and Marine Operations, Air Interdiction Agent (pilot) position. By signing below, you are certifying that you meet the initial qualifications, and will be able to provide supporting documentation to support your answers as requested during the hiring process. The Office of Personnel Management requires that all certification be obtained prior to entry upon duty. This document is a supplemental, but does not replace, an individual's resume for qualifications purposes.

1. I have an FAA Commercial or ATP pilot certificate # [redacted] dated 10/06/2011 (MM/DD/YYYY).
Airplane _____ x Rotorcraft Helicopter _____
Instrument Y/N _____ x Instrument Y/N _____

2. I have logbook records showing a total of (select only one)
_____ 1,500 Flight hours or more
x _____ 1,000 flight hours to 1,499 flight hours (you must complete the flight hour waiver request form)
_____ 750 Flight hours to 999 flight hours (you must complete the flight hour waiver request form)
I understand that I must accrue an additional 1250 flight hours at my own expense. I will request a flight hour waiver once I reach 1,000 flight hours.

3. I have logbook records showing 250 Pilot in Command hours, 75 night hours, an 75 instrument hours (actual and/or simulated/hood). Yes No

4. I have a current FAA Class 1 or FAA Class 2 medical dated 08/01/2019 (MM/DD/YYYY)
*Must be dated within the last 12 months to be considered valid.

5. I have been employed as a full-time professional pilot for a minimum of 1 year. Yes No
I have been employed as a part-time professional pilot for a minimum of 2 years. Yes No
*If part-time please indicate number of hours worked per week ²⁻³ _____

6. I certify that I have the experience of flying as a Pilot in Command or sole manipulator in an airplane or helicopter, in all environments of flight, including night, poor weather, unfavorable terrain and low altitudes or airspeeds.
Yes No

7. I have served or currently serve as a member of the U.S. Armed Forces. Yes No
If, yes was selected, please include a scanned Member 4 copy of your DD214 and/or if active duty, a Statement of Service (SOS) indicating your dates of service, your rank, medals you have been awarded and confirmation that you will be separated under honorable conditions.

8. Please provide your Date of Birth (MM/DD/YYYY) [redacted]

9. Are you a US Citizen? Yes No

10. Have you resided in the U.S. for 3 out of the last 5 years? Yes No

11. If you are a male born after December 31, 1959, have you registered with the Selective Service System? Yes No
**If you answered "Yes" additional information will be required before a qualification determination can be made

I certify the information on this document to be true and accurate. I will provide the supporting documentation to confirm this information upon request. I further understand that false information may be grounds for removal from the pre-employment process at any time.

Signed by me on the 26th day of September 2019.

[redacted]
Printed- First Name, Last Name


Signature

REQUEST FOR FLIGHT HOUR WAIVER

The information in this form will be used by AMO to determine flight time waivers for Air Interdiction Agent (pilot) applicants that do not meet the prescribed flight experience minimums for the position.

Initial

• I have _____ flight hours as a flight instructor. _____

• I have 40 flight hours flying a multi-engine aircraft. 

• I have 350 flight hours flying with night vision devices. 

• I have _____ flown in areas the US Government has considered imminent danger zones. Yes No _____

• I have experience flying over difficult/dangerous terrain and/or over water. Yes No _____

I certify the information provided on this document to be true and accurate. I will provide supporting documentation to confirm this information upon request at any time during the hiring process. I further understand that false information may be grounds for removal from the pre-employment process at any time.

Signed by me on this 26 day of Sept 20 .



Printed- First Name, Last Name

Signature

VRA

Direct Hire

USAJOBS

New Hire Flight Hour Waiver

Subject Matter Expert Evaluator(s): _____

Applicant Name: _____

Applicant Series and Grade Applied for:

Position Location: Air Interdiction Agent GS-1881-11

Flight Skills and Experience	Waiver Amount	Notes
1. Complex Aircraft Flight Instructor Experience: Applicant has experience as an instructor in the operation of complex aircraft. May waive up to 20%	300	
2. Multi-Engine Aircraft Time: Applicant has experience flying multi-engine aircraft. May waive up to 20%	200	
3. Night Vision Device: Applicant has flown under night vision device operations. May waive up to 20%		
4. Imminent Danger: Applicant has flown in U.S. zones that are considered imminent danger zones. May waive up to 10%		
5. Terrain and/or Over Water Operations: Applicant has experience flying over terrain and over water operations. May waive 10%		
Total Waiver Amount Considered		

Total Waiver Amount (cannot exceed 500 Hours) = 500

Evaluator Signature: _____ **Print** _____

Evaluator Signature: _____ **Print** _____

NATC Evaluator Signature: _____ **Print** _____

UNITED STATES OF AMERICA Department of Transportation Federal Aviation Administration MEDICAL CERTIFICATE FIRST CLASS					
This certifies that <i>(Full name and address):</i> <div style="background-color: black; width: 100%; height: 20px;"></div>					
Date of Birth	Height	Weight	Hair	Eyes	Sex
<div style="background-color: black; width: 100%; height: 15px;"></div>					
has met the medical standards prescribed in part 67, Federal Aviation Regulations, for this class of Medical Certificate.					
Limitations	Must wear corrective lenses.				
Date of Examination 12/19/2019			Examiner's Designation No. 000020649		
Examiner	Sig <div style="background-color: black; width: 100%; height: 15px;"></div>				
	Typed Name <i>[Signature]</i> <div style="background-color: black; width: 100%; height: 15px;"></div>				
AIRMAN'S SIGNATUR <div style="background-color: black; width: 100%; height: 15px;"></div>					
Applicant ID: 1999134997			Control No.: 200008941774		

CONDITIONS OF ISSUE

The holder of this certificate must:

- Have it in his or her personal possession at all times while exercising privileges of an airman certificate. (14CFR § 61.3)
- Understand that the issuance of a medical certificate by an Aviation Medical Examiner may be reversed by the FAA within 60 days. (14CFR § 67.407)
- Comply with validity standards specified for first-, second-, and third-class medical certificates. (14CFR § 61.23)
- Comply with any statement of functional, operational, and/or time limitation issued as a condition of certification. (14CFR § 67.401)
- Comply with the standards relating to prohibitions on operation during medical deficiency. (14CFR §§ 61.53, 63.19, and 65.49)

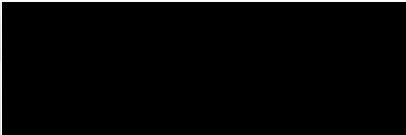
For International Operations Only: Some holders may be affected by certain international medical standards. Consult the U.S. Aeronautical Information Publication for U.S. differences with ICAO Annex 1 medical standards.

Fold Here

(Cut on dashed line)



Aviation Safety
Office of Aerospace Medicine
Aerospace Medical Certification Division, AAM-300
 P.O. Box 25082
 Oklahoma City, OK 73125-9867



Dear Airman:

Above is your new medical certificate. It supersedes any previous one you may have been issued.

To validate this certificate, it is necessary that you sign it in the space provided (Airman's Signature).

This certificate must be in your possession at all times while exercising your pilot privileges.



AMO New Hire Pilot Assessment SUMMARY OF APPLICANT EVALUATION



APPLICANT NAME: _____

FAA CERTIFICATE NUMBER: _____

OVERALL PERFORMANCE (Pass/Fail): PASS

DATE OF EVALUATION: 10 Dec 19 LOCATION(S): ELP - region
NATC - Oklahoma City, OK

Review of Flight Log Book: Meets Requirements Does Not Meet Requirements

Evaluator: _____ Title: SAIA SIGNATURE: _____

Assessment 1: STRUCTURED INTERVIEW (Test 761):

	Pass	Fail	NA
Overall Structured Interview Result:	<input checked="" type="checkbox"/>		

Competency	Rating (2=Sat/ 1=Unsat)
1. Judgment/Decision Making	2
2. Teamwork/Interpersonal Skills	2
3. Integrity	2
4. Flexibility	2
5. Oral Communication	2

Interviewer: _____ Title: SAIA SIGNATURE: _____

Interviewer: _____ Title: SAIA SIGNATURE: _____

Interviewer: _____ Title: SAIA SIGNATURE: _____

Assessment 2: ORAL EVALUATION:

	Pass	Fail	NA
Oral Evaluation Result:	<input checked="" type="checkbox"/>		

Score: 84% (passing score is 70%)

Evaluator: _____ Title: SAIA SIGNATURE: _____

Assessment 3: FLIGHT CHECK PRACTICAL EVALUATION:

	Pass	Fail	NA
R/W Flight Check Evaluation:	<input checked="" type="checkbox"/>		
F/W Flight Check Evaluation:			

Evaluator: _____ Title: AIA SIGNATURE: _____

Evaluator: _____ Title: IP SIGNATURE: _____

Personnel Request Justification Form



ENTER DATE:

02/12/20

TO SELECTEE INFORMATION

VACANCY OR SOLICITATION NUMBER:

AEA to AIA

SELECTEE NAME: [REDACTED]

CURRENT AMO EMPLOYEE: Yes

TITLE, SERIES GRADE & STEP: Air Interdiction Agent, GS-1881-12

OVERTIME PREMIUM PAY: LEAP

DUTY LOCATION (Branch, City & State): NASOC-Sierra Vista, Fort Huachuca, AZ

PAY TABLE: REST OF UNITED STATES

GAINING DIRECTOR SIGNATURE:

[REDACTED]

COMMENTS: THERE MUST BE BOTH GAINING DIRECTOR AND EXECUTIVE DIRECTOR SIGNATURES.

GAINING EXECUTIVE SIGNATURE:

[REDACTED]

COMMENTS:

THERE MUST BE BOTH GAINING DIRECTOR AND EXECUTIVE DIRECTOR SIGNATURES.

FROM SELECTEE INFORMATION

TITLE, SERIES GRADE & STEP: Aviation Enforcement Agent, GS-1801-13/03

OVERTIME PREMIUM PAY: LEAP

DATE ENTERED PRIMARY LE POSITION: 12/13/2007

DUTY LOCATION (Branch, City & State): NASOC-Sierra Vista, Fort Huachuca, AZ

PAY TABLE: REST OF UNITED STATES

[REDACTED]

COMMENTS: THERE MUST BE BOTH LOSING DIRECTOR AND EXECUTIVE DIRECTOR SIGNATURES.

LOSING EXECUTIVE SIGNATURE:

[REDACTED]

COMMENTS:

THERE MUST BE BOTH LOSING DIRECTOR AND EXECUTIVE DIRECTOR SIGNATURES.

Selection Justification

Justification:

■■■■ IPN 1P29KKH8

Air Enforcement Agent ■■■■ entered service at NASOC-SV on September 17, 2017. He has consistently and successfully contributed significantly to NASOC-SV by providing outstanding operational expertise not only as a former Border Patrol Agent, but also as a Sensor Operator. In addition he has managed the Less Lethal Instruction program at our office and is the only current and qualified GTAC member at NASO. He has an uncanny initiative to develop innovative processes for the benefit of the organization and also professional development. He completed all the necessary requirements to qualify for the position of Air Interdiction Agent and based on his flawless work ethic, excellent track record and commitment to excellence, I select him for the position of Air Interdiction Agent at NASOC-SV. His success will improve NASOC-SV mission sets and culture.

AIR AND MARINE OPERATIONS
HUMAN CAPITAL AUTOMATED WORKFLOW (HCAW)

INITIATED BY... [REDACTED]	DATE CREATED February 18, 2020	REGION REVIEW [REDACTED]	DATE REVIEWED February 19, 2020
AEA to AIA		Mr. [REDACTED] passed the new hire pilot structured interview in OKC.	

PERSONNEL REQUEST: Position Change

REQUIRE BUDGET REVIEW: Yes

EMPLOYEE NAME: [REDACTED]

TITLE, PP, SERIES, GRADE: AIA GS-1881-12

DUTY LOCATION TO: NASOC-Sierra Vista

DUTY LOCATION FROM: NASOC-Sierra Vista

DATE ENTERED PRIMARY LE POSITION: December 13, 2007 N/A

DATE COMPLETED 3 YRS. PRIMARY LE: December 13, 2010 N/A

VICE/IPN: CNEISU29

NEW POSITION: Yes

RELOCATION FUNDING: None

VETTING: N/A

VETTING CLEARED: [REDACTED]

CERTIFICATE EXPIRES ON: [REDACTED]

CERTIFICATE ISSUED ON: [REDACTED]

[REDACTED] AIA Personnel Action Justification.pdf 808.42 KB

[REDACTED] AEA to AIA Resume.docx 38.4 KB

[REDACTED] FAA 1st class 122019.pdf 554.6 KB

Please indicate your decision by typing in your HASH ID on Approve or Reject fields below. If you reject the Personnel Request, please provide a comment/direction to resolve the outstanding issue.

OPERATIONS (RESEARCHER)

February 20, 2020

OPS NOTES:

This selection is IAW the staffing requirements of NASOC SV and is IAW

EXECUTIVE DIRECTOR, OPERATIONS

[REDACTED] **Approved** March 25, 2020

BUDGET (RESEARCHER)

March 11, 2020

RESEARCHER NOTES:

3/11/2020 - \$4,382 full year cost to move a GS 13/03 RUS LEO to a GS

DIRECTOR, BUDGET EXECUTION

Recommend Approval March 18, 2020

HUMAN CAPITAL (RESEARCHER)

[REDACTED] February 19, 2020

DIRECTOR, HUMAN CAPITAL

Approved March 10, 2020

[REDACTED]

reviewed kc

EXECUTIVE DIRECTOR, MS

EXECUTIVE DIRECTOR, TSS

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

AMO EXECUTIVE ASSISTANT COMMISSIONER

(Supervisory Positions Only)

Process Reviewed

March 27, 2020

AMO DEPUTY EXECUTIVE ASSISTANT COMMISSIONER

[REDACTED] **Approved**

March 25, 2020



OAM Pilot Assessment SUMMARY OF APPLICANT EVALUATION



APPLICANT NAME: _____

APPLICANT SSN: _____

OVERALL PERFORMANCE (Pass/Fail): FAIL

DATE OF EVALUATION: 1/24/13 LOCATION(S): NATC-Oklahoma City, OK

Review of Flight Log Book: Meets Requirements Does Not Meet Requirements

Evaluator: _____ Title: SAIA SIGNATURE: _____

Assessment 1: STRUCTURED INTERVIEW (Test 761):

	Pass	Fail	NA
Overall Structured Interview Result:	<u>X</u>		

Competency	Rating (2=Sat/ 1=Unsat)
1. Judgment/Decision Making	<u>2</u>
2. Teamwork/Interpersonal Skills	<u>2</u>
3. Integrity	<u>2</u>
4. Flexibility	<u>2</u>
5. Oral Communication	<u>2</u>

Interviewer: _____ Title: SAIA SIGNATURE: _____

Interviewer: _____ Title: AIA SIGNATURE: _____

Interviewer: _____ Title: SAIA SIGNATURE: _____

Assessment 2: ORAL EVALUATION:

	Pass	Fail	NA
Oral Evaluation Result:	<u>✓</u>		

Score 84 Passing score is 70%

Evaluator: _____ Title: AIA SIGNATURE: _____

Assessment 3: FLIGHT CHECK PRACTICAL EVALUATION:

	Pass	Fail	NA
Flight Check Evaluation Result:		<u>✓</u>	

Evaluator: _____ Title: IP SIGNATURE: _____

At the end of each day, please fax all completed assessment forms to:
Minneapolis Hiring Center, attention: OAM Staffing Services Unit, 612-725-3234



2013 New Hire Records Review

Name: [Redacted]

Date: 1/24/13

Reviewed By: [Redacted]

Records must be reviewed prior to Flight event.

- Verify identity with picture ID
- Less than 40 years of age Check if within 6 months of 40th birthday
- Current FAA Class I Medical Certificate (dated within the past 12 months)
- Certificate No. [Redacted]

DUAL RATED PILOTS (MUST MEET BOTH FIXED WING AND ROTARY WING QUALIFICATIONS)

FIXED WING PILOTS

Must have at least a Commercial Single AND/OR Multi-Engine Land Airplane certificate AND Airplane Instrument rating.

Airline Transport Pilot: (ATP includes Instrument Airplane privileges)

- Single Engine Land, and/or
- Multi-Engine Land

-OR-

Commercial Privileges:

- Single Engine Land, and/or
- Multi-Engine Land

-AND-

- Instrument Airplane

ROTARY WING PILOTS

Must have at least a Commercial Helicopter certificate AND Helicopter Instrument rating.

- Airline Transport Pilot Rotorcraft - Helicopter: (ATP includes Instrument privileges)

-OR-

- Commercial Rotorcraft - Helicopter

-AND-

- Instrument Rotorcraft - Helicopter

FLIGHT HOUR REVIEW

- 1500 Hours Total Yes _____ No Total number of flight hours 970

OR

Waiver authorizing less flight time (Not less than 750 flight hours)
Yes No _____ Total number of flight hours 970

- 250 Hours PIC Yes _____ No _____
- 75 Hours Instrument Yes _____ No _____
- 75 Hours Night Yes _____ No _____
- 100 Hours flown in the last 12 months (Airplane and/or Helicopter) Yes _____ No _____

NOTE: Simulator flight hours do not count!!

896
TO
10



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: [Redacted]

Date: 1-24-13

SAT	UNSAT	QUESTION
-----	-------	----------

Oral administered by: [Redacted]

missed: 8 (circled) pass fail

SAT	UNSAT	Question	Reference
✓		1. What does a steady red light from the tower mean to you if you are approaching an airport for landing? <ul style="list-style-type: none"> Give way to other aircraft and continue circling. 	AIM Table 4-3-13
	✓	2. What are the different types of NOTAMS? Explain. <ul style="list-style-type: none"> NOTAM-D (includes distant and local) NOTAM-FDC (flight data center) 	AIM 5-1-3
✓		3. What is the definition of a Minimum Reception Altitude? (identify on chart) <ul style="list-style-type: none"> Lowest Altitude at which an intersection can be determined. 	AIM Pilot/Controller Glossary
✓		4. What type of precipitation will produce the most hazardous icing conditions? <ul style="list-style-type: none"> Freezing rain produces the most hazardous icing conditions 	Aviation Weather AC 00-6A
	✓	5. Where and what is Class G airspace? Explain. <ul style="list-style-type: none"> That portion of airspace that has not been designated as Class A, B, C, D, or E airspace Identify on the Sectional – See Sectional legend reference to Class E (Below 1200 ft AGL unless otherwise designated) 	AIM 3-3-1, Sectional Legend
	✓	6. When is a transponder required? <ul style="list-style-type: none"> Class A, B, and C Within 30 nautical miles of Class B Below Class B or C Above 10,000 feet MSL excluding 2500ft above surface 	FAR 91.215
✓		7. How can one tell if there is water in the fuel? <ul style="list-style-type: none"> Take fuel sample and check for contamination. 	FAA-H-8083-3
✓		8. How should one recover from a nose low unusual attitude? <ul style="list-style-type: none"> Reduce power Correct for bank then pitch 	FAA-H-8083-15A-5-28
✓		9. How does higher density altitude affect an aircraft's performance? <ul style="list-style-type: none"> Reduces performance 	FAA-H-8083-25A pg 3-3



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: [REDACTED]

Date: 1-24-13

SAT	UNSAT	QUESTION	
✓		<p>10. When planning an instrument approach, landing minima are established for six categories. In the absence of Copter Minima, what published minimums will helicopters use?</p> <ul style="list-style-type: none"> • Helicopters are Category A 	<p>IFR Terms/Landing Data (IFR Landing Data). Located in front section of U.S. Terminal Procedures (approach plates)</p>
✓		<p>11. While flying the S-LOC RWY 17L approach to Oklahoma City Wiley Post Airport you planned on category A approach minimums from DIRGE OM inbound, but just prior to DIRGE ATC asks you to increase and maintain 130 knots from DIRGE inbound for a Heavy Jet 3 miles in trail. What is your approach category based on your new speed and how does it effect your MDA?</p> <ul style="list-style-type: none"> • Category C (121-140 knots) • Remains the same at 1660 feet 	<p>Terminal Procedures (approach plates) front section. Terms/Landing Minima Data for maneuvering table, approach categories. Wiley Post approach plate procedure for MDA</p>
✓		<p>12. What does MOCA represent on IFR En Route charts?</p> <ul style="list-style-type: none"> • The lowest Published altitude in effect between radio fixes on VOR airways, off-airway routes, or route segments which meets obstacle clearance requirements for the entire route segment and which assures acceptable navigational signal coverage only within 25 statute (22 nautical) miles of a VOR 	<p>AIM Pilot/Controller Glossary</p>
✓		<p>13. During your IFR flight you want to check for any automated weather that might be available for your area. Using your IFR En Route chart, how would you determine which Flight Service facilities have automated weather available?</p> <ul style="list-style-type: none"> • Shaded T (TWEB), H (HWAS), or A (ASOS) inside the top right side of the shaded flight service station box 	<p>IFR En Route Low Altitude Chart (Legend)</p>
✓		<p>14. What documents and certificates are required to be on board the aircraft?</p> <ul style="list-style-type: none"> ✓• Airworthiness ✓• Registration ✓• Operating handbook ✓• Weight and balance 	<p>FAR 91.203 91.103</p>
✓		<p>15. Determine if applicant can analyze and decipher current weather.</p> <ul style="list-style-type: none"> • Use METAR Printout 	<p>METAR</p>
✓		<p>16. What is a runway incursion?</p> <ul style="list-style-type: none"> • "Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take off of aircraft." 	<p>FAA new adoption of ICAO definition of Runway Incursion</p>



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: [REDACTED]

Date: 1-24-13

SAT	UNSAT	QUESTION	
✓		17. Examiner reviews airport signage flash cards with examinee. (Use attached flash cards) <ul style="list-style-type: none">• Answer is WRONG if misses 2 or more	
✓		18. What airspace is Waco Regional located in? <ul style="list-style-type: none">• Class D	Reference Sectional
✓		19. What are the VFR cloud clearances and visibility requirements for this airspace? <ul style="list-style-type: none">• 3 miles-visibility• 500 feet below• 1000 feet above• 2000 feet horizontal	AIM TABLE 3-1-1
✓		20. What, if any pilot certification is required to enter this airspace? <ul style="list-style-type: none">• No specific pilot certification is required	AIM 3-2-5
✓		21. What on board equipment is required to enter this airspace? <ul style="list-style-type: none">• Two-way radio	AIM 3-2-5
✓		22. What is required to arrive or flyt through this airspace? <ul style="list-style-type: none">• Two-way radio communication	AIM 3-2-5
✓		23. What airspace is Austin-Bergstrom International located in? <ul style="list-style-type: none">• Class C	
✓		24. What are the VFR cloud clearances and visibility requirements for this airspace? <ul style="list-style-type: none">• 3 miles-visibility• 500 feet below• 1000 feet above• 2000 feet horizontal	AIM table 3-1-1
✓		25. What, if any pilot certification is required to enter this airspace? <ul style="list-style-type: none">• No specific pilot certification is required	AIM 3-2-4
✓		26. What on board equipment is required to enter this airspace? <ul style="list-style-type: none">• Two-way radio• Unless otherwise authorized, transponder with mode C	AIM 3-2-4
✓		27. What are day and night VFR fuel requirements for rotor wing? <ul style="list-style-type: none">• Both DAY and NIGHT-to intended landing at normal cruise at least 20 minutes there after	FAR 91-151



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: [Redacted]

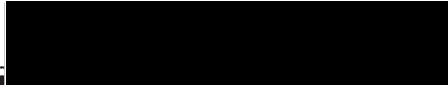
Date: 1-24-13

SAT	UNSAT	QUESTION	
✓		28. What are the minimum safe operating altitudes for rotor wing? <ul style="list-style-type: none"> • Less than the minimums prescribed in FAR 91.119 if the operation is conducted without hazard to persons or property on the ground 	FAR 91.119
✓		29. How and where can one find out information about destination airport? <ul style="list-style-type: none"> • Airport Facility Directory • IFR or VFR SUP. • AccuQuick 	
✓		30. What are the two types of drag commonly considered in figuring aircraft performance? <ul style="list-style-type: none"> • Parasitic and Induced • 	FAA-H-8083-25A 4-4 & 4-5
✓		31. What is the formula to compute the moment of a given weight on an aircraft? <ul style="list-style-type: none"> • Weight x Arm = moment 	FAA-H-8083-25A 9-7
✓		32. Explain the helicopter fuel requirements for IFR flight. <ul style="list-style-type: none"> • No person may operate in IFR conditions unless it carries enough fuel to: <ol style="list-style-type: none"> 1) Complete flight to first intended landing airport 2) Fly to alternate airport 3) Fly for 30 minutes at normal cruise 	FAR 91.167
[scribble]	✓	33. When do you execute a missed approach procedure? <ul style="list-style-type: none"> • 1) Whenever the aircraft is below MDA the requirements for operating below DA / DH or MDA are not met. • 2) Upon arrival at the DH / MAP and at anytime after that until touchdown, whenever the requirements for operating below DA / DH or MDA are not met. • 3) Whenever an identifiable part of the airport is not visible to the pilot during a circling maneuver at or above MDA; 	FAR 91.175



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: _____



Date: 1-24-13

SAT	UNSAT	QUESTION
	✓	<p>34. When can you descend below DH or MDA on an approach?</p> <ul style="list-style-type: none"> • 1) Aircraft is in position which a normal descent and landing can be made • 2) Visibility is not less than that prescribed for approach • At least one of the following: • May not descend below 100 ft above touchdown zone elevation using the approach lights as a reference unless the red terminating bars or red side bars are visible • Threshold • Threshold markings • Threshold lights • REILS • VASI • Touchdown zone markings • Touchdown zone lights • Runway or runway markings • Runway lights <p style="text-align: right;">FAR 91.175</p>
		<p>35. If an IFR alternate is required, what are the weather minimum requirements for a precision approach?</p> <ul style="list-style-type: none"> • Ceiling 200 feet and 1 SM visibility <p style="text-align: right;">? +200</p> <p style="text-align: right;">FAR 91.169(ii)</p>
↙		<p>36. What is the definition of a MEA?</p> <ul style="list-style-type: none"> • Lowest published altitude between radio fixes, which assures acceptable navigational signal coverage and meets obstacle clearance requirements <p style="text-align: right;">AIM Pilot/Controller Glossary</p>
✓		<p>37. Under IFR conditions when are alternate airports required for helicopters?</p> <ul style="list-style-type: none"> • At ETA to 1 hour after the ETA the ceiling is less than 1000 feet above airport elevation, or less than 400 feet above the lowest applicable approach minima, which ever is higher and the visibility is less than 2 statute miles <p style="text-align: right;">FAR 91.169</p>
✓		<p>38. Explain two-way radio communication failures under IFR conditions, in reference to altitude.</p> <ul style="list-style-type: none"> • Highest altitude of following: • Last assigned • MEA • Last advised to expect by ATC <p style="text-align: right;">FAR 91.185</p>



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: [REDACTED]

Date: 1-24-13

SAT	UNSAT	QUESTION	
✓		39. Explain two-way radio communication failures under IFR conditions in reference to route. In the following order: <ul style="list-style-type: none">• 1) Route assigned by ATC• 2) Being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance• 3) Last route advised to expect in further clearance• 4) Route filed in flight plan	FAR 91.185
✓		40. Explain two-way radio communication failures in reference to leaving a clearance fix from which an approach begins. <ul style="list-style-type: none">• When clearance limit is fix from which an approach begins, commence descent or descent and approach as close as possible to the EFC time if one has been received, or if one has not been received, as close as possible to the estimated time of arrival.	FAR 91.185
	✓	41. What are the helicopter visibility requirements for special VFR during daytime? <ul style="list-style-type: none">• Clear of clouds• ATC clearance	FAR 91.157
✓		42. What minimum navigation equipment is required for IFR flight? <ul style="list-style-type: none">• Navigation equipment appropriate for the route to be flown	FAR 91.205
✓		43. What does MSA represent on an approach procedure? <ul style="list-style-type: none">• Minimum Safe Altitude	FAR 97.3
✓		44. What clearance does MSA provide? <ul style="list-style-type: none">• Emergency clearance 1000 feet over all obstructions in that sector within 25 miles of the facility on which the procedure is based. (I.E. LOM for ILS procedure).	FAR 97.3
✓		45. Does the term "MINIMUM FUEL" indicate an emergency to ATC? <ul style="list-style-type: none">• Merely an advisory that indicates an emergency situation is possible should any undue delay occur	AIM 5-5-15 Page A-313 Minimum Fuel Advisory



FY 2013 New Hire Helicopter Only Oral Evaluation

Name: _____

Date: 1-24-13

SAT	UNSAT	QUESTION	
✓		46. What is hypoxia? How can one overcome it? <ul style="list-style-type: none">• State of oxygen deficiency in the body sufficient to impair functions in the brain and other organs• Cure- breath oxygen, reduce altitude, etc.	AIM 8-1-2
✓		47. What is translating tendency? <ul style="list-style-type: none">• During hovering flight, a single main rotor helicopter tends to drift in the same direction as anti-torque rotor thrust	FAA-H-8083-21A 2-14
✓		48. A vertical descent of at least 300 feet per minute, Rotor system using at least 20 to 100 percent of engine power, and a horizontal velocity slower than effective translational lift, will most likely result in what aerodynamic state? <ul style="list-style-type: none">• Settling with power (Vortex Ring State)	FAA-H-8083-21A 11-9
✓		49. What control input is first in the recovery of re-treating blade stall? <ul style="list-style-type: none">• Reduction of collective pitch	FAA-H-8083-21A 11-11
✓		50. What control inputs are required to recover from vortex ring state/ settling with power? <ul style="list-style-type: none">• Apply cyclic to increase airspeed and simultaneously reducing collective	FAA-H-8083-21A 11-9
✓		51. Describe the conditions required for dynamic rollover? <ul style="list-style-type: none">• A pivot point, a rolling moment and exceeding the critical angle	FAA-H-8083-21A 11-12

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 24

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 24
NTSB Final Report
Mishap N841BP
January 4, 2023

Project Summary: Aviation Investigation - 11 Docket Items - CEN21LA216

Description:

Mode: Aviation NTSB Number: CEN21LA216 Date of Accident: 05/12/2021
 City: Yukon State/Region: OK Country: United States
 Project Type: Investigation

Docket Information

Creation Date: 10/06/2021

Last Modified: 12/22/2022 4:08 PM

Public Release Date & Time: 01/04/2023 12:00 AM

[Docket Table of Contents](#)

[Docket Items: 11](#)

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1	PILOT/OPERATOR AIRCRAFT ACCIDENT REPORT, NTSB FORM 6120.1	11	0	Text/Image	View
2	FLIGHT INSTRUCTOR STATEMENT	3	0	Text/Image	View
3	PILOT STATEMENT	3	0	Text/Image	View
4	PHOTOS	3	0	Text/Image	View
5	STATEMENT OF PARTY REPRESENTATIVES TO NTSB INVESTIGATION	8	0	Text/Image	View
6	ACCREDITED REPRESENTATIVE	1	0	Text/Image	View
7	EXAM SUMMARY (FIELD)	1	0	Text/Image	View
8	RELEASE OF AIRCRAFT WRECKAGE, NTSB FORM 6120.15	1	0	Text/Image	View
9	EXCERPT FROM FLIGHT MANUAL	1	0	Text/Image	View
10	E-MAIL, CUSTOMS AND BORDER PROTECTION	2	0	Text/Image	View
11	CUSTOMS AND BORDER PROTECTION ADDITIONS TO THE FACTUAL REPORT	2	0	Text/Image	View

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NATIONAL TRANSPORTATION SAFETY BOARD
NTSB Form 6120.1
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT

Email the pilot/operator aircraft accident/incident report to the investigator-in-charge of your accident/incident. If email is not available, mail the report per the instructions below.

If your accident/incident occurred in Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, New York, New Jersey, Pennsylvania, Maryland, Delaware, Virginia, West Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, the District of Columbia, Puerto Rico, or the US Virgin Islands, send the form to: NTSB, ERA, 45065 Riverside Parkway, Ashburn, VA 20147.

If your accident/incident occurred in Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, Arkansas, Louisiana, North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, Texas, Colorado, or New Mexico, send the form to: NTSB, CEN, 4760 Oakland Street, Suite 500, Denver, CO 80239.

If your accident/incident occurred in Montana, Wyoming, Idaho, Utah, Arizona, Nevada, Washington, Oregon, California, Hawaii, or the territories of Guam or American Samoa, send the form to: NTSB, WPR, 505 South 336th Street, Suite 540, Federal Way, WA 98003.

If your accident/incident occurred in Alaska, send the form to: NTSB, ANC, 222 West 7th Avenue, Room 216, Box 11, Anchorage, AK 99513.

Rules pertaining to notification of aircraft accidents and incidents, as well as overdue aircraft are found in 49 *Code of Federal Regulations* (CFR) Part 830 http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&tpl=/ecfrbrowse/Title49/49cfr830_main_02.tpl. These rules state the authority of the NTSB, define accidents, incidents, injuries, and other terms, and provide procedures for initial and immediate notification of accidents and incidents by aircraft pilots/operators.

A. APPLICABILITY

The pilot/operator of an aircraft shall send a report to the office listed above, based on accident/incident location; immediate notification is required by 49 CFR 830.5(a). **The report shall be filed within 10 days after an accident for which notification is required by Section 830.5, or after 7 days if an overdue aircraft is still missing.**

An aircraft accident, as defined in 49 CFR 830.2, is determined as an occurrence that involves a fatality or serious injury, or substantial damage to the aircraft. For occurrences that do not involve a fatality, the determination that the occurrence is an accident can be appealed by writing to the Director, Office of Aviation Safety, NTSB, 490 L'Enfant Plaza, S.W., Washington, D.C. 20594.

INSTRUCTIONS TO PILOTS/OPERATORS FOR COMPLETING THIS FORM

It is necessary that ALL questions on this report be answered completely and accurately.

If more space is needed, continue on a blank sheet of paper.

Nearest City/Place: Use the name of the nearest community in the state where the accident/incident occurred.

Date/Time: Indicate the date and local time of the event. Be sure to indicate the time zone.

Phase of Operation: Indicate the phase of operation during which the accident/incident occurred.

Aircraft Information: Enter aircraft make and model information as indicated on the aircraft registration certificate, including series. If the involved aircraft is certified as "amateur-built," include the name of the producer of the kit or plans, unless an NTSB employee instructs otherwise.

Maximum Gross Weight: Enter the certificated maximum gross weight for the aircraft involved in the occurrence. This should be the same as the maximum gross weight indicated on the aircraft weight and balance documents.

Engine: Enter engine make and model information as indicated on the engine data plate.

The NTSB uses this form for aircraft accident prevention activities and for statistical purposes. NTSB regulations (49 CFR Part 830) require that **ALL** questions be answered completely and accurately. Completion of this form will take approximately 60 minutes. The NTSB does not guarantee the privacy of any information provided in this form. You need not complete this form unless it displays a valid OMB control number, in accordance with 5 C.F.R. § 1320.5(b), which applies to this collection of information.

B. DEFINITIONS

1. "Aircraft Accident" means an occurrence associated with the operation of an aircraft that takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death, or serious injury, or in which the aircraft receives substantial damage. For purposes of this form, the definition of "aircraft accident" includes "unmanned aircraft accident," as defined at 49 CFR 830.2.

2. "Substantial Damage" means damage or failure that adversely affects the structural strength, performance or flight characteristics of the aircraft, and that would normally require major repair or replacement of the affected component. NOTE: Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairing or cowling, dented skin, small puncture holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wing tips are not considered "substantial damage" for purposes of this report.

3. "Operator" means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft.

4. "Fatal Injury" means any injury that results in death within thirty (30) days of the accident.

5. "Serious Injury" means any injury that (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received; (2) results in a fracture of any bone (except simple fracture of fingers, toes, or nose); (3) causes severe hemorrhages, nerve, muscle, or tendon damage; (4) involves injury to any internal organ; or (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

Type of Fire Extinguishing System: If a fire extinguishing system was used to fight an aircraft fire, specify the type(s) of extinguishing system(s) used. Examples include handheld extinguisher, engine fire bottle, cargo/baggage compartment fire suppression system, or airport emergency ground equipment.

Owner/Operator Information: Enter the owner information as shown on the registration certificate. Commercial operators, enter the operator information, including "doing business as" when applicable, as shown on the operator certificate.

Revenue Sightseeing Flight: Indicate whether the accident aircraft was conducting **revenue** sightseeing operations under 14 CFR Part 91 at the time of the accident.

Air Medical Flight: Indicate whether the accident flight was being conducted for the purpose of carrying medical personnel, patient(s), or organs.

Public Aircraft: Federal, state or local government flight operations such as official travel, law-enforcement, low-level observation, aerial application, firefighting, search and rescue, biological or geological resource management, or aeronautical research. Indicate whether the flight was conducted by the armed forces, federal, state, or local government.

Purpose of Flight: 14 CFR Parts 91, 103, 133, 136, and 137: Indicate the type of operation that was being conducted at the time of the occurrence using the following definitions:

AERIAL APPLICATION--Operations using an aircraft to perform aerial application or dispersion of any substance. Examples include agricultural, health, forestry, cloud seeding, firefighting, insect control, etc.

AERIAL OBSERVATION--These flights include aerial mapping/photography, patrol, search and rescue, hunting, highway traffic advisory, ranching, surveillance, oil and mineral exploration, criminal pursuit, fish spotting, etc.

AIR DROP--Aerial operations, other than aerial application, that are intended to release items in flight.

AIR RACE/SHOW--Includes any flight operations conducted as part of an organized air race or public demonstration.

BUSINESS--includes all personal flying without a paid professional crew for reasons associated with furthering a business, including transportation to and from business meetings or work. This does not include corporate/executive operations, air taxi, or commuter operations.

EXECUTIVE/CORPORATE--Company flying with a paid, professional crew.

FERRY--Non-revenue flight under a special flight or "ferry" permit. Refer to 14 CFR 21.197 for details of special flight permit issuance.

FLIGHT TEST--Flight for the purpose of investigating the flight characteristics of an aircraft/aircraft component or evaluating an applicant for a pilot certificate or rating.

INSTRUCTIONAL--Flying while under the supervision of a flight instructor or receiving air carrier training. Personal proficiency flight operations and personal flight reviews, as required by federal air regulations, are excluded.

OTHER WORK USE--Miscellaneous flight operations conducted for compensation or hire such as construction work (not 14 CFR Part 135 operation), parachuting, aerial advertising, towing gliders, etc.

PERSONAL--Flying for personal reasons (excludes business transportation) including pleasure or personal transportation. This also includes practice or proficiency flights performed under flight instructor supervision and not part of an approved flight training program.

POSITIONING--Non-revenue flight conducted for the primary purpose of relocating the aircraft. Examples include moving the aircraft to a maintenance facility or to load passengers or cargo etc.

UNKNOWN--Use only if the primary purpose of flight is not known.

Other Aircraft--Collision: For all accidents involving a collision with another aircraft, including parked aircraft, check "Collision with other aircraft" under Basic Information and complete this section indicating details about the OTHER aircraft involved in the collision.

Airport Information: Complete this section if the accident/incident occurred on approach, landing, takeoff, departure, or within 3 statute miles of an airport. Please refer to the FAA Airport/Facility Directory or other official source for airport information.

Airport Identifier: Provide the official 3 or 4 character airport identifier number.

Runway: Indicate the number of the runway used, including L, R, or C if applicable.

Runway/Landing Surface: Indicate the type of intended runway/landing surface (do not indicate surface conditions). If the surface type was mixed, check all that apply.

Condition of Runway/Landing Surface: Indicate the condition of the intended runway/landing surface. If multiple conditions existed at the time of the accident, check all that apply.

Weather Information at the Accident/Incident Site: Indicate the weather conditions reported at the accident/incident site at the time of occurrence. If no weather reporting was available for the accident/incident site, indicate the reported conditions at the nearest reporting site. Specify the weather reporting site identifier, the observation time, and distance from the accident/incident.

Sky/Lowest Cloud Condition: Indicate the height above ground level of the lowest cloud condition present at the time of the accident/incident and whether coverage was reported as few, scattered, broken or overcast. Also indicate the height above ground level and coverage of the lowest cloud ceiling present at the time of the accident/incident (reported as broken or overcast).

NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs: Describe all NOTAMs (distant (D) or Flight Data Center (FDC), if known), AIRMETs, SIGMETs, and PIREPs in effect near the accident/incident.

Flight Crewmember Information: Indicate the category that best describes the capacity served by this flight crewmember at the time of the accident. The designators "Flight Crewmember 1" and "Flight Crewmember 2" do not refer to a specific pilot position or responsibility. If more than one pilot is aboard, they may be entered in any order and their capacity entered as appropriate.

Degree of Injury: See Definitions on the top half of Page 1 of the instructions. Minor injury is not defined. If an injury does not meet the criteria for another injury category, select Minor.

Date of Last Flight Review or Equivalent: Enter the date of the most recent flight review, or equivalent, completed by this pilot. Refer to 14 CFR 61.56 for accepted equivalents.

Type Ratings: List all type ratings on the pilot certificate. If the pilot holds no type ratings indicate "none." If the pilot holds a pilot certificate other than student and was flying an aircraft requiring an endorsement, enter the type and date of any logbook endorsement(s) for that aircraft. See 14 CFR 61 for examples of required endorsements.

Student Endorsements: If the pilot holds a student pilot certificate, enter all solo endorsements and dates on the student pilot certificate.

Flight Time: Complete the flight time matrix. Solo flight time should be included as "Pilot-in-Command (PIC)" and all dual flight instruction given should be included as "Time as Instructor."

Additional Flight Crewmembers: Complete this section if there were more than two required flight crewmembers on the aircraft. This also includes a check airman performing official duties but does not include cabin crew. State the capacity served by each included crewmember at the time of the accident.

Passenger(s)/Other Personnel: Enter identification and injury severity information for all passengers, cabin crew, and other personnel involved in the accident. See Page 1 of the instructions for the official definition of injury levels.

Several questions throughout the form allow for multiple responses; when appropriate, choose all responses that apply.

These instructions only pertain to major issue areas covered by NTSB Form 6120.1 Pilot/Operator Aircraft Accident/Incident Report. For additional definitions of questions and responses, please refer to www.nts.gov.

**NATIONAL TRANSPORTATION SAFETY BOARD
PILOT/OPERATOR AIRCRAFT ACCIDENT/INCIDENT REPORT**

This form to be used for reporting civil and public aircraft accidents and incidents

BASIC INFORMATION

Accident/Incident Location
 Nearest City/Place: Oklahoma City State: OK
 ZIP: 73099 Country: USA
 Latitude: 35deg 29min 32.5 s Longitude: 097deg 49 min 34.0 :
(Enter in decimal degrees or degrees:minutes:seconds)

Accident/Incident Date/Time
 Date: 05/12/2021 Local Time: 15:30
mm/dd/yyyy Time Zone: Central Time
Collision with Other Aircraft: Midair On-ground None

AIRCRAFT INFORMATION

Registration Number: N841BP
Manufacturer: Airbus/ American Eurocopter
Model: AS350 B2
Serial Number: 2036
Year of Manufacture: 1987
Amateur-Built: Yes No *If Yes:* Kit/Plans Original Design *Make:* _____

IFR-Equipped and Certified
 Commercial Space Flight
 Unmanned Aircraft
Maximum Gross Weight: 4,961 lbs
Weight at Time of Accident/Incident: _____ lbs
Number of Seats: 6 Flight Crew Seats: _____
 Cabin Crew Seats: _____ Passenger Seats: _____
Number of Engines: 1

Category of Aircraft
 Airplane
 Balloon
 Blimp/Dirigible
 Glider
 Gyroplane
 Helicopter
 Powered Lift
 Rocket
 Ultralight
 Unknown

Type of Airworthiness Certificate
(Check all that apply)
Standard **Special**
 Normal Restricted
 Aerobatic Limited
 Balloon Provisional
 Commuter Special Flight
 Transport Experimental
 Utility Special Light-Sport
 Experimental Light-Sport
 Certificate of Authorization or Waiver (COA)
 None Unknown

Landing Gear
(Check all that apply)
 Retractable
 Tricycle Tailwheel
 Amphibian High Skid
 Emergency Float Skid
 Float Ski
 Hull Ski/Wheel
 Other Launch/Recovery System
 None Unknown

Engine Type *(Select one)*
 Reciprocating Liquid Rocket
 Turbo Shaft Solid Rocket
 Turbo Prop Hybrid Rocket
 Turbo Jet None
 Turbo Fan Unknown
 Electric
Fuel System Type *(Reciprocating)*
 Carburetor Fuel-Injected

Engine	Engine Manufacturer	Engine Model/Series	Manufacturer's Serial Number	Date of Mfg. mm/dd/yyyy	Rated Power <input type="radio"/> Horsepower or <input type="radio"/> lbs of Thrust	Total Time (hours)	Time Since: Inspection (hours)	Overhaul (hours)
Eng. 1	Safran/Turbomeca	Ariel 1 D 1	9524	1987	732 shp	6069 Cy	7.9 Hrs	3931 Cy
Eng. 2								
Eng. 3								
Eng. 4								

Last Inspection Type
 100-Hour Continuous Airworthiness
 AAIP Conditional Inspection
 Annual Unknown
Date Last Inspection: 05/07/2021
mm/dd/yyyy
Airframe Total Time: 15261.6 hrs
 hours measured at *(Select one)*
 Last Inspection Time of Accident/Incident

Propeller 1 Fixed Pitch
 Controllable Pitch
 Ground Adjustable
 Manufacturer: _____
 Model: _____

Propeller 2 Fixed Pitch
 Controllable Pitch
 Ground Adjustable
 Manufacturer: _____
 Model: _____

Type of Maintenance Program *(Select one)*
 Annual
 Conditional (Amateur-built only)
 Manufacturer's Inspection Program
 Other Approved Inspection Program (AAIP)
 Continuous Airworthiness
 Other, specify: _____

ELT Installed: Yes No
If Yes:
ELT Manufacturer: Artex
Model or Part No.: 05963
TSO No.: C91 (121.5 MHz) C91a (121.5 MHz)
 C126 (406 MHz)
Was ELT still mounted in aircraft? Yes No
Was ELT still connected to antenna? Yes No
Did ELT Activate? Yes No
If activated:
Did ELT Aid in Locating Aircraft? Yes No
If not activated:
Indicate Reason: Impact Damage
 Fire Damage
 Battery Expired/Damaged
 Unknown

Additional Equipment *(Check all that apply)*
 ADS-B
 Airframe Parachute
 Angle of Attack Indicator
 Autopilot
 Data Recorder
 Electronic Flight Bag or Handheld Device
 Electronic Multifunction Display
 Electronic Primary Flight Display
 Handheld GPS
 Heads Up Display
 Onboard Weather
 Satellite Tracking Device
 Stall Warning System
 Video Recording Device
 Other, Specify: SX-5 Search Light.

Description of Fire Extinguishing System
 None
 Specify: Portable Fire Extinguisher

OWNER/OPERATOR INFORMATION

Registered Aircraft Owner

Name: U.S Department of Homeland Security

City: Washington

State: DC ZIP: 20019

Fractional Ownership Aircraft: Yes No

Country: USA

Operator of Aircraft

Same As Registered Owner

Same Address as Registered Owner

Name: _____

City: _____

Doing Business As: _____

State: _____ ZIP: _____

Air Carrier/Operator Designator (4 Character Code): _____

Country: _____

Operating Certificates Held

(Check all that apply)

- None
- Flag Carrier Operating Certificate (FAR 121)
- Supplemental
- Air Cargo
- Foreign Air Carriers (FAR 129)
- Rotorcraft External Load (FAR 133)
- Commuter Air Carrier (FAR 135)
- On-Demand Air Taxi (FAR 135)
- Commercial Air Tour (FAR 136)
- Agricultural Aircraft (FAR 137)
- Pilot School (FAR 141)
- Certificate of Authorization or Waiver (COA)
- Commercial Space Transportation Experimental Permit
- Commercial Space Transportation License
- Other Operator of Large Aircraft

Regulation Flight Conducted Under

- FAR 91 FAR 129 FAR 415
- FAR 103 FAR 133 FAR 431
- FAR 121 FAR 135 FAR 435
- FAR 125 FAR 137 FAR 437
- FAR 91 Special Flight
- Non-US, Commercial
- Non-US, Non-commercial
- Public Aircraft (Select one)
 - Armed Forces
 - Federal
 - State
 - Local
- Unknown

Revenue Operation for FAR 121, 125, 129, 135

(Select one for each group)

- Scheduled or Commuter Domestic
- Non-Scheduled or Air Taxi International
- Passenger
- Cargo
- Mail Contract Only

Purpose of Flight for FAR 91, 103, 133, 137

(Select one)

- Aerial Application Firefighting Unknown
- Aerial Observation Flight Test
- Air Drop Glider Tow
- Air Race/Show Instructional
- Banner Tow Other Work Use
- Business Personal
- Executive/Corporate Positioning
- External Load Skydiving
- Ferry

Revenue Sightseeing Flight

Yes No

Air Medical Flight

Yes No

AIRPORT INFORMATION (Fill in if accident/incident occurred on approach, landing, takeoff, departure, or within 3 miles of an airport)

Airport Name: Clarence E. Page Municipal

Distance From Airport Center: 100 Yards sm

Airport Identifier: KRCE

Direction From Airport: West Direction degrees true

Proximity to Airport: Off Airport/Airstrip On Airport/Airstrip N/A

Airport Elevation: 1343 ft. msl

Runway Information

Runway ID: 35 Left (L/R/C) Length: 6014 ft Width: 100 ft

Condition of Runway/Landing Surface (Check all that apply)

Runway/Landing Surface (Check all that apply)

- Asphalt Grass/Turf Macadam Water
- Concrete Gravel Metal/Wood
- Dirt Ice Snow Unknown

- Dry Snow-Compacted Water-Calm
- Holes Snow-Crusted Water-Choppy
- Ice Covered Snow-Dry Water-Glassy
- Rough Snow-Wet Wet
- Rubber Deposits Soft
- Slush-Covered Vegetation Unknown

Approach/Departure Segment (Select one)

- Taxi VFR Departure On Instrument Approach Downwind Low Approach
- Takeoff IFR Departure Procedure/Clearance Landing Base Go Around
- Initial Climb Final Crosswind Aborted Landing (after touchdown) Unknown

IFR Approach (Check all that apply)

- None
- ADF/NDB PAR MLS Practice
- SDF Sidestep LDA GPS
- VOR/TVOR ILS ASR
- VOR/DME Localizer Only Visual
- TACAN LOC-back course Contact
- RNAV Circling
- Unknown

VFR Approach (Check all that apply)

- None
- Traffic Pattern Stop and Go
- Straight-In Touch and Go
- Valley/Terrain Following Simulated Forced Landing
- Go Around Forced Landing
- Full Stop Precautionary Landing
- Unknown

“FLIGHT CREWMEMBER 1” INFORMATION

“Flight Crewmember 1” Responsibilities at the Time of Accident/Incident

Pilot Co-Pilot Student Pilot Flight Instructor Check Pilot Flight Engineer Other Flight Crew

“Flight Crewmember 1” was pilot flying Yes No

“Flight Crewmember 1” Identification

First Name: _____ City of Residence: _____
 Middle Initial: _____ State: _____ ZIP: _____
 Last Name: _____ Country: United States
 Age at time of Accident/Incident: _____ Date of Birth: _____ mm/dd/yyyy
 Certificate Number: _____

Degree of Injury <input type="radio"/> None <input type="radio"/> Fatal <input checked="" type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	Seat Occupied <input checked="" type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Unknown <input type="radio"/> Right <input type="radio"/> Rear <input type="radio"/> Center <input type="radio"/> Single	Restraint Type Available <input type="radio"/> None <input type="radio"/> Lap only <input type="radio"/> 3-point <input checked="" type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown Used <input type="radio"/> None <input type="radio"/> Lap only <input type="radio"/> 3-point <input checked="" type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Inflatable Restraints <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
Pilot Certificate(s) (Check all that apply) <input type="checkbox"/> None <input checked="" type="checkbox"/> Flight Instructor <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> US Military <input type="checkbox"/> Private <input type="checkbox"/> Recreational <input type="checkbox"/> Airline Transport <input type="checkbox"/> Foreign <input type="checkbox"/> Student <input type="checkbox"/> Sport <input type="checkbox"/> Flight Engineer			

Principal Occupation <input checked="" type="radio"/> Pilot <input type="radio"/> Other <input type="radio"/> Unknown	Medical Certificate <input type="radio"/> None <input type="radio"/> Class 3 <input type="radio"/> Class 1 <input type="radio"/> Driver’s License (Sport Pilot only) <input checked="" type="radio"/> Class 2 <input type="radio"/> Unknown	Medical Certificate Validity <input type="radio"/> Without limitations/waivers <input type="radio"/> Unknown <input checked="" type="radio"/> With limitations/waivers <input type="radio"/> N/A <input type="radio"/> Special Issuance	Date of Last Medical <u>09/29/2020</u> mm/dd/yyyy
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Medical Certificate Limitations

Must wear corrective lenses.

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>12/17/2020</u> mm/dd/yyyy	Flight Review Aircraft Make: <u>AS-350</u> Model: <u>B2 and B3</u>
----------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------

Airplane Rating(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Single-Engine Land <input type="checkbox"/> Single-Engine Sea <input type="checkbox"/> Multiengine Land <input type="checkbox"/> Multiengine Sea	Other Aircraft Rating(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Airship <input type="checkbox"/> Balloon <input type="checkbox"/> Glider <input type="checkbox"/> Gyroplane <input checked="" type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instrument Rating(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Airplane <input checked="" type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instructor Rating(s) (Check all that apply) <input type="checkbox"/> None <input type="checkbox"/> Airplane Single-Engine <input type="checkbox"/> Airplane Multi-Engine <input type="checkbox"/> Gyroplane <input type="checkbox"/> Powered Lift <input type="checkbox"/> Instrument Airplane <input checked="" type="checkbox"/> Instrument Helicopter <input checked="" type="checkbox"/> Helicopter <input type="checkbox"/> Glider <input type="checkbox"/> Sport
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Type Ratings	Student Endorsements (Include dates)
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Flight Time (Enter appropriate number of hours in each box)	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	6,000	1,000								
Pilot in Command (PIC)	5,500	750						5,500		
Time as Instructor	500	347						500		
This Make/Model										
Last 90 Days	68	68						68		
Last 30 Days	23	23						23		
Last 24 Hours	2	2								

"FLIGHT CREWMEMBER 2" INFORMATION

"Flight Crewmember 2" Responsibilities at the Time of Accident/Incident

Pilot
 Co-Pilot
 Student Pilot
 Flight Instructor
 Check Pilot
 Flight Engineer
 Other Flight Crew

"Flight Crewmember 2" was pilot flying Yes No

"Flight Crewmember 2" Identification

First Name: [REDACTED] City of Residence: [REDACTED]
 Middle Init: [REDACTED] State: [REDACTED] ZIP: [REDACTED]
 Last Name: [REDACTED] Country: United States
 Age at time of Accident/Incident: [REDACTED] Date of Birth: [REDACTED] *mm/dd/yyyy*
 Certificate Number: [REDACTED]

Degree of Injury <input checked="" type="radio"/> None <input type="radio"/> Fatal <input type="radio"/> Minor <input type="radio"/> Unknown <input type="radio"/> Serious	Seat Occupied <input type="radio"/> Left <input type="radio"/> Front <input type="radio"/> Unknown <input checked="" type="radio"/> Right <input type="radio"/> Rear <input type="radio"/> Center <input type="radio"/> Single	Restraint Type <table style="width: 100%;"> <tr> <th style="text-align: left;">Available</th> <th style="text-align: left;">Used</th> </tr> <tr> <td><input type="radio"/> None</td> <td><input type="radio"/> None</td> </tr> <tr> <td><input type="radio"/> Lap only</td> <td><input type="radio"/> Lap only</td> </tr> <tr> <td><input type="radio"/> 3-point</td> <td><input type="radio"/> 3-point</td> </tr> <tr> <td><input checked="" type="radio"/> 4-point</td> <td><input type="radio"/> 4-point</td> </tr> <tr> <td><input type="radio"/> 5-point</td> <td><input type="radio"/> 5-point</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td><input type="radio"/> Unknown</td> </tr> </table>	Available	Used	<input type="radio"/> None	<input type="radio"/> None	<input type="radio"/> Lap only	<input type="radio"/> Lap only	<input type="radio"/> 3-point	<input type="radio"/> 3-point	<input checked="" type="radio"/> 4-point	<input type="radio"/> 4-point	<input type="radio"/> 5-point	<input type="radio"/> 5-point	<input type="radio"/> Unknown	<input type="radio"/> Unknown	Inflatable Restraints <input checked="" type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
Available	Used																
<input type="radio"/> None	<input type="radio"/> None																
<input type="radio"/> Lap only	<input type="radio"/> Lap only																
<input type="radio"/> 3-point	<input type="radio"/> 3-point																
<input checked="" type="radio"/> 4-point	<input type="radio"/> 4-point																
<input type="radio"/> 5-point	<input type="radio"/> 5-point																
<input type="radio"/> Unknown	<input type="radio"/> Unknown																

Pilot Certificate(s) *(Check all that apply)*

<input type="checkbox"/> None	<input type="checkbox"/> Flight Instructor	<input checked="" type="checkbox"/> Commercial	<input type="checkbox"/> US Military
<input type="checkbox"/> Private	<input type="checkbox"/> Recreational	<input type="checkbox"/> Airline Transport	<input type="checkbox"/> Foreign
<input type="checkbox"/> Student	<input type="checkbox"/> Sport	<input type="checkbox"/> Flight Engineer	

Principal Occupation <input checked="" type="radio"/> Pilot <input type="radio"/> Other <input type="radio"/> Unknown	Medical Certificate <input type="radio"/> None <input type="radio"/> Class 3 <input type="radio"/> Class 1 <input type="radio"/> Driver's License (Sport Pilot only) <input checked="" type="radio"/> Class 2 <input type="radio"/> Unknown	Medical Certificate Validity <input type="radio"/> Without limitations/waivers <input type="radio"/> Unknown <input checked="" type="radio"/> With limitations/waivers <input type="radio"/> N/A <input type="radio"/> Special Issuance	Date of Last Medical <u>01/05/2021</u> <i>mm/dd/yyyy</i>
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Medical Certificate Limitations

Must wear corrective lenses.

Medical Certificate Special Issuance

Date of Last Flight Review or Equivalent, Including FAR 121/135 Checks: <u>06/29/2020</u> <i>mm/dd/yyyy</i>	Flight Review Aircraft Make: <u>AS-350</u> Model: <u>B2</u>
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Airplane Rating(s) <i>(Check all that apply)</i> <input type="checkbox"/> None <input checked="" type="checkbox"/> Single-Engine Land <input type="checkbox"/> Single-Engine Sea <input type="checkbox"/> Multiengine Land <input type="checkbox"/> Multiengine Sea	Other Aircraft Rating(s) <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Airship <input type="checkbox"/> Balloon <input type="checkbox"/> Glider <input type="checkbox"/> Gyroplane <input checked="" type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instrument Rating(s) <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Airplane <input checked="" type="checkbox"/> Helicopter <input type="checkbox"/> Powered Lift	Instructor Rating(s) <i>(Check all that apply)</i> <input type="checkbox"/> None <input type="checkbox"/> Airplane Single-Engine <input type="checkbox"/> Airplane Multi-Engine <input type="checkbox"/> Gyroplane <input type="checkbox"/> Powered Lift <input type="checkbox"/> Instrument Airplane <input type="checkbox"/> Instrument Helicopter <input type="checkbox"/> Helicopter <input type="checkbox"/> Glider <input type="checkbox"/> Sport
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Type Ratings **Student Endorsements** *(Include dates)*

Flight Time <i>(Enter appropriate number of hours in each box)</i>	All Aircraft	This Make & Model	Airplane Single Engine	Airplane Multiengine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air
						Actual	Simulated			
Total Time	1,200	620	29					1,119		
Pilot in Command (PIC)	474	309						442		
Time as Instructor										
This Make/Model										
Last 90 Days	12	12						12		
Last 30 Days	12	12						12		
Last 24 Hours	0	0								

ADDITIONAL FLIGHT CREWMEMBERS (Exclusive of cabin crew, complete the following information)

Crew Name and Address		Seat Occupied	Injury
First Name: _____	City of Residence: _____	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown
Middle Initial: _____	State: _____ ZIP: _____	<input type="radio"/> Front <input type="radio"/> Rear <input type="radio"/> Single <input type="radio"/> Unknown	
Last Name: _____	Country: _____		
Pilot Certificate(s) (Check all that apply)		Restraint Type:	Inflatable Restraints
<input type="checkbox"/> None	<input type="checkbox"/> Flight Instructor	Available	Used
<input type="checkbox"/> Private	<input type="checkbox"/> Recreational	<input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown
<input type="checkbox"/> Student	<input type="checkbox"/> Sport		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Flight Time at the Time of this Accident/Incident: _____ hrs	

Crew Name and Address		Seat Occupied	Injury
First Name: _____	City of Residence: _____	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown
Middle Initial: _____	State: _____ ZIP: _____	<input type="radio"/> Front <input type="radio"/> Rear <input type="radio"/> Single <input checked="" type="radio"/> Unknown	
Last Name: _____	Country: _____		
Pilot Certificate(s) (Check all that apply)		Restraint Type:	Inflatable Restraints
<input type="checkbox"/> None	<input type="checkbox"/> Flight Instructor	Available	Used
<input type="checkbox"/> Private	<input type="checkbox"/> Recreational	<input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown
<input type="checkbox"/> Student	<input type="checkbox"/> Sport		<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown
Type Rating/Endorsement for Accident/Incident Aircraft? <input type="checkbox"/> Yes <input type="checkbox"/> No		Total Flight Time at the Time of this Accident/Incident: _____ hrs	

PASSENGER(S) / OTHER PERSONNEL (Include cabin crew; continue on separate sheet if necessary)

Name and Address	Seat	Injury	Restraint Type	Inflatable Restraints	Age	
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years <i>If Under 5,</i> <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years <i>If Under 5,</i> <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years <i>If Under 5,</i> <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown
First Name: _____ City : _____ Middle Initial: _____ State: _____ ZIP: _____ Last Name: _____ Country: _____ <input type="radio"/> Crew <input type="radio"/> Passenger <input type="radio"/> Other	<input type="radio"/> Left <input type="radio"/> Center <input type="radio"/> Right <input type="radio"/> Unknown Row: _____	<input type="radio"/> None <input type="radio"/> Minor <input type="radio"/> Serious <input type="radio"/> Fatal <input type="radio"/> Unknown	Available <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	Used <input type="radio"/> None <input type="radio"/> Lap Only <input type="radio"/> 3-point <input type="radio"/> 4-point <input type="radio"/> 5-point <input type="radio"/> Unknown	<input type="checkbox"/> Not Installed <input type="checkbox"/> Installed <input type="checkbox"/> Not Deployed <input type="checkbox"/> Deployed <input type="checkbox"/> Unknown	<input type="checkbox"/> Under 5 years <i>If Under 5,</i> <input type="radio"/> Child Restraint <input type="radio"/> Lap-Held <input type="radio"/> Unknown

FLIGHT ITINERARY INFORMATION

Last Departure Point Airport ID: <u>KOKC</u> City: <u>Oklahoma City</u> State: <u>OK</u> Country: <u>USA</u>	Time of Departure Time: _____ Time Zone: _____	Destination Airport ID: _____ City: _____ State: _____ Country: _____	Type Flight Plan Filed <input checked="" type="radio"/> None <input type="radio"/> VFR/IFR <input type="radio"/> Company VFR <input type="radio"/> IFR <input type="radio"/> Military VFR <input type="radio"/> Unknown <input type="radio"/> VFR Activated? <input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Unknown
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Type of ATC Clearance/Service (Check all that apply)

<input type="checkbox"/> None	<input type="checkbox"/> Special VFR	<input type="checkbox"/> Special IFR	<input type="checkbox"/> VFR Flight Following	<input type="checkbox"/> Cruise
<input type="checkbox"/> VFR	<input type="checkbox"/> IFR	<input type="checkbox"/> VFR On Top	<input type="checkbox"/> Traffic Advisory	<input type="checkbox"/> Unknown / NA

Airspace where the accident/incident occurred (Check all that apply)

<input type="checkbox"/> Class A	<input checked="" type="checkbox"/> Class G	<input type="checkbox"/> Military Operations Area (MOA)	<input type="checkbox"/> Special
<input type="checkbox"/> Class B	<input type="checkbox"/> Demo Area	<input type="checkbox"/> Airport Advisory Area	<input type="checkbox"/> Air Traffic Control Area
<input type="checkbox"/> Class C	<input type="checkbox"/> Warning Area	<input type="checkbox"/> Jet Training Area	<input type="checkbox"/> Unknown
<input type="checkbox"/> Class D	<input type="checkbox"/> Prohibited Area	<input type="checkbox"/> TRSA	
<input type="checkbox"/> Class E	<input type="checkbox"/> Restricted Area	<input type="checkbox"/> FAR 93	

Altitude of In-Flight Occurrence: _____ ft msl

WEATHER INFORMATION AT THE ACCIDENT/INCIDENT SITE

Source of Pilot Weather Information (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> National Weather Service</td> <td><input type="checkbox"/> Company</td> </tr> <tr> <td><input type="checkbox"/> Flight Service Station</td> <td><input type="checkbox"/> Military</td> </tr> <tr> <td><input type="checkbox"/> TV/Radio</td> <td><input type="checkbox"/> Internet</td> </tr> <tr> <td><input type="checkbox"/> Automated Report</td> <td><input type="checkbox"/> None</td> </tr> <tr> <td><input type="checkbox"/> Commercial Weather Service (DUATS)</td> <td><input type="checkbox"/> Unknown</td> </tr> <tr> <td><input type="checkbox"/> On-Board Weather</td> <td></td> </tr> </table>	<input type="checkbox"/> National Weather Service	<input type="checkbox"/> Company	<input type="checkbox"/> Flight Service Station	<input type="checkbox"/> Military	<input type="checkbox"/> TV/Radio	<input type="checkbox"/> Internet	<input type="checkbox"/> Automated Report	<input type="checkbox"/> None	<input type="checkbox"/> Commercial Weather Service (DUATS)	<input type="checkbox"/> Unknown	<input type="checkbox"/> On-Board Weather		Weather Observation Facility Facility ID: _____ Observation Time: _____ Time Zone: _____ Distance from Accident Site: _____ nm Direction from Accident Site: _____ degrees true
<input type="checkbox"/> National Weather Service	<input type="checkbox"/> Company												
<input type="checkbox"/> Flight Service Station	<input type="checkbox"/> Military												
<input type="checkbox"/> TV/Radio	<input type="checkbox"/> Internet												
<input type="checkbox"/> Automated Report	<input type="checkbox"/> None												
<input type="checkbox"/> Commercial Weather Service (DUATS)	<input type="checkbox"/> Unknown												
<input type="checkbox"/> On-Board Weather													

Basic Conditions <input type="radio"/> VMC <input type="radio"/> IMC <input type="radio"/> Unknown	Light Condition <input type="radio"/> Dawn <input type="radio"/> Dusk <input type="radio"/> Dark Night <input type="radio"/> Unknown <input type="radio"/> Day <input type="radio"/> Night <input type="radio"/> Bright Night
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Sky/Lowest Cloud Condition <input type="radio"/> Clear <input type="radio"/> Thin Broken <input type="radio"/> Few <input type="radio"/> Thin Overcast <input type="radio"/> Partial Obscuration <input type="radio"/> Unknown <input type="radio"/> Scattered Lowest Cloud Condition Height _____ ft agl	Ceiling <input type="radio"/> None (Clear) <input type="radio"/> Obscured <input type="radio"/> Broken <input type="radio"/> Indefinite <input type="radio"/> Overcast <input type="radio"/> Unknown Ceiling Height _____ ft agl	Temperature: _____ (C) or _____ (F) Dew Point: _____ (C) or _____ (F) Altimeter Setting: _____ in. Hg or _____ MB
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Wind Direction <input type="checkbox"/> Variable -or- Direction: _____ degrees true	Wind Speed <input type="checkbox"/> Calm <input type="checkbox"/> Light and Variable -or- Speed: _____ kts	Wind Gusts <input type="checkbox"/> Not Gusting -or- Speed: _____ kts	Visibility _____ miles RVR: _____ feet RVV: _____ miles Density Altitude: _____ ft
-----------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------

Intensity of Precipitation <input type="radio"/> Light <input type="radio"/> Moderate <input type="radio"/> Heavy <input type="radio"/> N/A <input type="radio"/> Unknown	Type of Precipitation (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> None</td> <td><input type="checkbox"/> Drizzle</td> <td><input type="checkbox"/> Freezing Rain</td> </tr> <tr> <td><input type="checkbox"/> Rain</td> <td><input type="checkbox"/> Ice Pellets</td> <td><input type="checkbox"/> Snow Shower</td> </tr> <tr> <td><input type="checkbox"/> Snow</td> <td><input type="checkbox"/> Snow Pellets</td> <td><input type="checkbox"/> Ice Pellets Shower</td> </tr> <tr> <td><input type="checkbox"/> Hail</td> <td><input type="checkbox"/> Snow Grains</td> <td><input type="checkbox"/> Freezing Drizzle</td> </tr> <tr> <td><input type="checkbox"/> Rain Showers</td> <td><input type="checkbox"/> Ice Crystals</td> <td></td> </tr> </table>	<input type="checkbox"/> None	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Freezing Rain	<input type="checkbox"/> Rain	<input type="checkbox"/> Ice Pellets	<input type="checkbox"/> Snow Shower	<input type="checkbox"/> Snow	<input type="checkbox"/> Snow Pellets	<input type="checkbox"/> Ice Pellets Shower	<input type="checkbox"/> Hail	<input type="checkbox"/> Snow Grains	<input type="checkbox"/> Freezing Drizzle	<input type="checkbox"/> Rain Showers	<input type="checkbox"/> Ice Crystals		Restriction to Visibility (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> None</td> <td><input type="checkbox"/> Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Dust</td> <td><input type="checkbox"/> Ground Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Sand</td> <td><input type="checkbox"/> Haze</td> </tr> <tr> <td><input type="checkbox"/> Blowing Snow</td> <td><input type="checkbox"/> Ice Fog</td> </tr> <tr> <td><input type="checkbox"/> Blowing Spray</td> <td><input type="checkbox"/> Smoke</td> </tr> <tr> <td><input type="checkbox"/> Dust</td> <td><input type="checkbox"/> Unknown</td> </tr> </table>	<input type="checkbox"/> None	<input type="checkbox"/> Fog	<input type="checkbox"/> Blowing Dust	<input type="checkbox"/> Ground Fog	<input type="checkbox"/> Blowing Sand	<input type="checkbox"/> Haze	<input type="checkbox"/> Blowing Snow	<input type="checkbox"/> Ice Fog	<input type="checkbox"/> Blowing Spray	<input type="checkbox"/> Smoke	<input type="checkbox"/> Dust	<input type="checkbox"/> Unknown
<input type="checkbox"/> None	<input type="checkbox"/> Drizzle	<input type="checkbox"/> Freezing Rain																											
<input type="checkbox"/> Rain	<input type="checkbox"/> Ice Pellets	<input type="checkbox"/> Snow Shower																											
<input type="checkbox"/> Snow	<input type="checkbox"/> Snow Pellets	<input type="checkbox"/> Ice Pellets Shower																											
<input type="checkbox"/> Hail	<input type="checkbox"/> Snow Grains	<input type="checkbox"/> Freezing Drizzle																											
<input type="checkbox"/> Rain Showers	<input type="checkbox"/> Ice Crystals																												
<input type="checkbox"/> None	<input type="checkbox"/> Fog																												
<input type="checkbox"/> Blowing Dust	<input type="checkbox"/> Ground Fog																												
<input type="checkbox"/> Blowing Sand	<input type="checkbox"/> Haze																												
<input type="checkbox"/> Blowing Snow	<input type="checkbox"/> Ice Fog																												
<input type="checkbox"/> Blowing Spray	<input type="checkbox"/> Smoke																												
<input type="checkbox"/> Dust	<input type="checkbox"/> Unknown																												

Icing Forecast <table style="width: 100%;"> <tr> <td>Amount</td> <td>Type</td> </tr> <tr> <td><input type="radio"/> None</td> <td><input type="radio"/> N/A</td> </tr> <tr> <td><input type="radio"/> Trace</td> <td><input type="radio"/> Rime</td> </tr> <tr> <td><input type="radio"/> Light</td> <td><input type="radio"/> Clear</td> </tr> <tr> <td><input type="radio"/> Moderate</td> <td><input type="radio"/> Mixed</td> </tr> <tr> <td><input type="radio"/> Severe</td> <td><input type="radio"/> Unknown</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td></td> </tr> </table>	Amount	Type	<input type="radio"/> None	<input type="radio"/> N/A	<input type="radio"/> Trace	<input type="radio"/> Rime	<input type="radio"/> Light	<input type="radio"/> Clear	<input type="radio"/> Moderate	<input type="radio"/> Mixed	<input type="radio"/> Severe	<input type="radio"/> Unknown	<input type="radio"/> Unknown		Icing Actual <table style="width: 100%;"> <tr> <td>Amount</td> <td>Type</td> </tr> <tr> <td><input type="radio"/> None</td> <td><input type="radio"/> N/A</td> </tr> <tr> <td><input type="radio"/> Trace</td> <td><input type="radio"/> Rime</td> </tr> <tr> <td><input type="radio"/> Light</td> <td><input type="radio"/> Clear</td> </tr> <tr> <td><input type="radio"/> Moderate</td> <td><input type="radio"/> Mixed</td> </tr> <tr> <td><input type="radio"/> Severe</td> <td><input type="radio"/> Unknown</td> </tr> <tr> <td><input type="radio"/> Unknown</td> <td></td> </tr> </table>	Amount	Type	<input type="radio"/> None	<input type="radio"/> N/A	<input type="radio"/> Trace	<input type="radio"/> Rime	<input type="radio"/> Light	<input type="radio"/> Clear	<input type="radio"/> Moderate	<input type="radio"/> Mixed	<input type="radio"/> Severe	<input type="radio"/> Unknown	<input type="radio"/> Unknown		Turbulence Type (Check all that apply) <table style="width: 100%;"> <tr> <td><input type="checkbox"/> None</td> <td><input type="checkbox"/> Light</td> </tr> <tr> <td><input type="checkbox"/> Clear Air</td> <td><input type="checkbox"/> Moderate</td> </tr> <tr> <td><input type="checkbox"/> Terrain-Induced</td> <td><input type="checkbox"/> Severe</td> </tr> <tr> <td><input type="checkbox"/> Convective Turbulence</td> <td><input type="checkbox"/> Extreme</td> </tr> </table>	<input type="checkbox"/> None	<input type="checkbox"/> Light	<input type="checkbox"/> Clear Air	<input type="checkbox"/> Moderate	<input type="checkbox"/> Terrain-Induced	<input type="checkbox"/> Severe	<input type="checkbox"/> Convective Turbulence	<input type="checkbox"/> Extreme
Amount	Type																																					
<input type="radio"/> None	<input type="radio"/> N/A																																					
<input type="radio"/> Trace	<input type="radio"/> Rime																																					
<input type="radio"/> Light	<input type="radio"/> Clear																																					
<input type="radio"/> Moderate	<input type="radio"/> Mixed																																					
<input type="radio"/> Severe	<input type="radio"/> Unknown																																					
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<input type="radio"/> Severe	<input type="radio"/> Unknown																																					
<input type="radio"/> Unknown																																						
<input type="checkbox"/> None	<input type="checkbox"/> Light																																					
<input type="checkbox"/> Clear Air	<input type="checkbox"/> Moderate																																					
<input type="checkbox"/> Terrain-Induced	<input type="checkbox"/> Severe																																					
<input type="checkbox"/> Convective Turbulence	<input type="checkbox"/> Extreme																																					

NOTAMs (D and FDC), AIRMETs, SIGMETs, PIREPs in effect at the time of the accident/incident:

DAMAGE TO AIRCRAFT AND OTHER PROPERTY

Aircraft Damage

- None
- Substantial
- Minor
- Destroyed
- Unknown

Aircraft Fire

- None
- Both Ground and In-Flight
- In-Flight
- Fire at Unknown Time
- On-Ground
- Unknown

Aircraft Explosion

- None
- Both Ground and In-Flight
- In-Flight
- Explosion at Unknown Time
- On-Ground
- Unknown

Description of Damage to Aircraft and Other Property *(Use additional sheet if necessary)*

Aircraft was destroyed by fire upon impact to ground.

NARRATIVE HISTORY OF FLIGHT *(Please type or print in ink)*

Describe what occurred in chronological order, including circumstances leading to and nature of accident/incident. Describe terrain and include wreckage distribution sketch if pertinent. Attach extra sheets if needed. State departure time and and location, services obtained, and intended destination. Provide as much detail as possible.

RECOMMENDATION (How could this accident/incident have been prevented?)

Operator/Owner Safety Recommendation

MECHANICAL MALFUNCTION/FAILURE (If more space is needed, continue on separate sheet)Was there Mechanical Malfunction/Failure? Yes No
(If yes, list the name of the part, manufacturer, part no., serial no., and describe the failure.)**Total Time/Cycles
On Part**

_____ Hours

_____ Cycles

**Time Since This Part
Inspected/Overhauled**

_____ Hours

FUEL & SERVICES INFORMATION**Fuel on Board at Last Takeoff**

(Convert from pounds, as necessary)

80 _____ Gallons

Fuel Type 80/87 115/145 Jet B Other, specify _____ 100 Low Lead Jet A JP8 100/130 Jet A-1 Automotive**Other Services, if Any, Prior to Departure****EVACUATION OF AIRCRAFT**Was an emergency evacuation of the aircraft performed? Yes No**Method of Exit** – Describe how the occupants exited and how many occupants evacuated each location**OTHER AIRCRAFT – COLLISION (If air or ground collision occurred, complete this section for other aircraft)****Aircraft Registration Number****Manufacturer:** _____**Model:** _____**Damage to Other Aircraft** Destroyed Minor Substantial None**Registered Owner of Other Aircraft**

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

Pilot of Other Aircraft

Name: _____

City: _____

State: _____ ZIP: _____

Country: _____

ADDITIONAL INFORMATION (Please type or print in ink)

Use this space if additional space is needed for any answers.

I HEREBY CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE

Date of this Report _____ <i>mm/dd/yyyy</i>	Name of Pilot/Operator: _____ Signature: _____ <i>-- or --</i> <input type="checkbox"/> Check here to electronically sign this document
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If a Person Other than Pilot/Operator is Filing Report

Name: _____ **Title:** _____

Signature: _____

-- or -- Check here to electronically sign this document

FOR NTSB USE ONLY			
NTSB Accident/Incident No. CEN21LA216	Reviewed by NTSB Regional Office Denver, CO	Name of Investigator [REDACTED]	Date Report Received

CREW STATEMENT

AIA [REDACTED]

05/13/2021

On May 10 & 11, 2021 I, [REDACTED], was assigned a 1600-2400 shift for NVG training with a student. At approximately 1230 hours on May 11, 2021, I received a phone call from CDO [REDACTED] regarding the need for an instructor for [REDACTED] on May 12, 2021. It was determined by the CDO and myself that the best training plan for the student was to schedule 2 flights on May 12, 2021 and that I would flex my schedule to work a 1200-2000 shift to accommodate the training needs as required.

On May 12, 2021 I, [REDACTED], arrived at the hangar for duty at approximately 1130 hours for a 1200 – 2000 shift. At approximately 1200 hours, I researched weather and input my flights into the SMS and TOMIS systems. Weather was reporting northerly winds with ceilings of approximately 2300 feet. Shortly thereafter, I called the CDO, [REDACTED], and conducted a mission brief with him regarding my scheduled flights for the afternoon with my assigned student, [REDACTED]. 2 flights were scheduled. The first flight was intended to be focused on non-standard maneuvers (Emergency Procedures) and the second flight was intended to be focused on instrument flight and maneuvers.

At approximately 1230 hours I met with [REDACTED] in the classroom and began prepping for the flight with him. We started with general questions about fitness for flight and transitioned into some basic oral knowledge questions followed by some hypothetical scenario-based questions prior to the mission. At approximately 1330 hours we took a break and planned to meet at the aircraft at 1345 hours for pre-flight. I checked the aircraft forms and records and calculated the aircraft weight and balance and determined that the aircraft would remain within CG for the duration of flight.

At approximately 1345 hours, we conducted a pre-flight of the aircraft. After determining that the aircraft was airworthy, at approximately 1400 hours, we requested maintenance's assistance with towing the aircraft outside of the hangar to prepare for launch.

At approximately 1415 hours, we buckled in and performed a crew brief. The plan was to depart from KOKC – KRCE and conduct the training flight at KRCE. Once the flight was complete we would return to KOKC for re-fuel.

At approximately 1430 hours, we cranked the engine on N841BP. During the run-up I continued to ask [REDACTED] about applicable systems and limits that coordinated with the run-up prior to takeoff.

At approximately 1450 hours, we (N841BP) departed VFR from KOKC to KRCE.

At approximately 1500 hours, we (N841BP) arrived at KRCE and began training in the NE corner of the airfield to the confined area used for training. After executing the steep approach into the confined area, I requested a hover power check which was approximately 60% TQ. I then requested [REDACTED] to perform a simulated max performance takeoff to depart the confined area and reposition to the platform over the SE corner of the airfield (simulated pinnacle).

After executing the pinnacle landing, (termination to a hover), I demonstrated an iteration to explain the difference between arriving at the intended point of landing "short," thereby requiring more power to

affect an OGE hover prior to landing and expecting IGE Late by planning to arrive over the intended point of landing such that the aircraft arrives in an IGE Hover at the appropriate power setting. [REDACTED] is returning to Sierra Vista, AZ where there is a lot of mountainous terrain and power management needs to be a constant consideration). Prior to takeoff from the pinnacle, I reviewed the importance of accomplishing an altitude over airspeed type of takeoff so that the tail boom would clear the platform.

After the takeoff, and joining a right downwind for 35L, (no other aircraft were in the pattern) I simulated a tail rotor control failure with a high-power setting. [REDACTED] diagnosed the malfunction and executed the procedure appropriately. After landing the crew remained in L closed traffic for RWY 35L.

On the next traffic-pattern I simulated a main-servo-slide valve seizure. [REDACTED] again, responded appropriately and executed the maneuver to proper termination. While on the ground, and prepping the aircraft for takeoff, I noticed that the hydraulic pressure did not return and the HYDR light did not extinguish for approximately 10 secs. I recognized this as being a little delayed from normal, however, this has been an ongoing issue with the majority of our AS350 fleet at NATC. Our maintenance personnel have spent countless hours on the phone with Airbus and determining that this is not a cause for concern. Approximately 1 year ago, I had an issue with a similar type of AS350B2 aircraft where the push button for the HYD Cutoff Switch was sticky and I could not get the hydraulic pressure to return in the pre-takeoff checks. As a result, I felt that it was prudent to not plan on exercising the use of the HYD Cutoff Switch for the remainder of the flight.

The next maneuver that was conducted was quick stops. I explained the difference between a quick stop maneuver above ETL vs below ETL. We discussed which control input to lead with when below ETL and why to do so. We also discussed that when larger power inputs are made is when it is easier to identify a potential flight control malfunction (ie takeoff or landing). We conducted 3 quick stops (1-above ETL, 1-below ETL, and 1-above ETL). On the last quick stop, the aircraft began to slow as normal and then began to yaw to the left at about 25 feet AGL. I began to talk the student through the maneuver and announced, "forward cyclic we need airspeed". After the aircraft made it to approximately 30 degrees left of centerline, I pushed the cyclic forward and began to fly the aircraft out of the maneuver.

As the aircraft was recovering, the control loads instantly became excessive, and I noticed that the HYDR Light on the Caution Panel was illuminated. I announced, "DON'T FIGHT ME ON THE CONTROLS I HAVE THE AIRCRAFT! PUT THE HYDRAULICS BACK-ON!!!" [REDACTED] reached for the HYD Cutoff switch; however, the hydraulic pressure was never restored. After the first revolution in the left-hand spin, the cyclic was pushing against my control inputs with driving to the rear accompanied by a right roll causing erroneous pitch excursions and the collective dropped to the full-down position. It took all my strength to keep the aircraft from smacking into the ground and pedals had no affect on heading control. Despite my efforts for a successful landing the aircraft continued to build an elliptical left yaw until the point of impact. Just prior to impact I pulled all remaining collective that I had the strength for. From what I can recall, the aircraft touched down in a nose low attitude with a right lateral drift while yawing to the left. After impact I believe the aircraft rolled several times to the right until it came to rest on the right side of the aircraft. After coming to rest, I remember looking at [REDACTED] and asking, "Are you okay?" He replied that he was okay and asked me if I was okay. I saw smoke and smelled fumes and knew that

we needed to egress the aircraft. I wasn't sure if [REDACTED] was pinned or able to get out. I unbuckled and began to kick the windscreen on his side with minimal success. The only way out was up through my door which was missing and provided an egress point. I looked at [REDACTED] who was still buckled inside the aircraft and I said, "CUT OFF THE FUEL AND LET'S GET HER SHUT DOWN!!! FIRE WE ARE ON FIRE, WE GOTTA GET OUT OF HERE!" I asked him if he was pinned, and he assured me that he wasn't. He unbuckled and we both climbed out of the left side the aircraft which was the upright side. We were able to connect outside the aircraft and get upwind from smoke and fumes.

At approximately 1527 hours, I called the radio room and let them know that we were involved in an accident but were okay.

At approximately 1529 hours, I called [REDACTED] to advise him of the same.

At approximately 1531 hours, I called 911.

At approximately 1535 hours, I called my wife.

At approximately 1538 hours I called the [REDACTED].

At approximately 1603 hours, both crew members were transported via ambulance to OU Medical Center.

At approximately 1635 hours, both crew members arrived at OU Medical Center.

At approximately 1800 hours, both crew members were discharged from OU Medical Center.

Post-Crash Statement

N841PB

Occurred: May 12, 2021

Submitted: May 14, 2021

Air Interdiction Agent 

On May 12, 2017 at approximately 1525 hours local, while flying with Air Interdiction Agent [REDACTED] I was involved in a crash in Helicopter N841BP at the Clarence E. Page Municipal airport (KRCE) in Yukon, Oklahoma. Agent [REDACTED] and I were on a training flight as part of the ASTAR 350 B2 Initial Pilot Certification course for U.S Customs and Border Protection Office of Air and Marine. Agent [REDACTED] was the Instructor Pilot located in the left front seat. I was sitting in the right front seat in the role of Student Pilot. The sky was overcast at around 4,000 feet AGL, the temperature was approximately 15 C (59 F), winds were out of the Northeast (approx. 040 degrees approx. 10 knots). We launched from the lander at the U.S. Customs and Border Protection Hanger at Roy Rogers International Airport (KOKC) in Oklahoma City, Oklahoma at approximately 1500 hr. local time. From KOKC we flew directly to KRCE to conduct training in landings and emergency procedures. We intended on beginning with pinnacle landings at the pinnacle area on the Southeast area of the airport. There was another helicopter already training on pinnacles when we arrived, so we maneuvered to the Northeast area of the field and flew two approaches and one landing in the confined area. Next, we moved to the pinnacle area and flew two approaches to the pinnacle. From the pinnacle we joined right traffic for runway 35L. We flew the first approach to 35L with a simulated yaw-servo control seizure with the hydraulics off (disengaged with the hydraulic cutoff switch/button on the end of the right seat pilot collective) to a shallow approach to a run-on landing. Once the helicopter was on the ground with the control locked, I re-engaged the hydraulics with the hydraulic cutoff switch/button. We launched and joined left traffic for runway 35L. This trip in the traffic pattern we practiced loss of tail rotor control during which I disengaged the hydraulics and tail rotor hydraulic accumulator for 5 sec per the emergency procedure with the hydraulic test switch then I reset with the same switch followed by a shallow approach to a run-on landing. The next trip in the pattern we practiced a simulated main hydraulic servo slide valve seizure during which I switched off the hydraulics with the hydraulic cutoff switch/button followed by a shallow approach to a run-on landing to the south end of runway 35L. Once the helicopter was on the ground and the collective was locked, I re-engaged the hydraulics with the same button. From that position we began a series of quick stop maneuvers down runway 35L. After the third quick stop I heard another airplane call final approach for 35L. AIA [REDACTED] indicated that we would expedite and clear the runway. We made one final quick stop and then just past mid field we launched with an immediate left turnout to clear the runway. After passing through ETL we began a climbing left turn. In the turn I noticed a left yaw and the pedals were not responding to correct the yaw. When I adjusted my grip on the collective to begin reducing it, I felt my thumb on the hydraulic cutoff switch button. As I tightened my grip on the collective the hydraulics came offline aggravating the left yaw into a hard left spin. I immediately felt AIA [REDACTED] on the controls attempting to help me out of the spin by attempting to help me reduce the collective and increase forward

airspeed. The controls were very stiff. AIA [REDACTED] yelled to get the hydraulics back on. I intentionally pressed the button but felt no effect. I pressed the button a second time attempting to re-engage the hydraulics while attempting to verify with the hydraulic light on the Caution Warning Panel. I noticed the hydraulic light still on and attempted to press the button a third time. By this time, I could see the ground approaching rapidly out my right-side door. We made impact in the grass approximately 75 yards west of runway 35L in the grass. I recall the rotor blades breaking as the helicopter came to rest on the right side. Once motion stopped AIA [REDACTED] asked multiple times if I was alright. I affirmed that I was and asked him if he was alright. He affirmed that he was and then unbuckled his seat belt. AIA [REDACTED] said we needed to get out and that we might be on fire. This seemed to stimulate me to action as I grabbed the fuel cutoff lever and pulled it to the rear. I then reached up and turned off the fuel boost pumps one and two. As I reached to turn off the generator, I decided to follow AIA [REDACTED] and unbuckled my seat belt instead and climbed out the left side door right behind him. I noticed AIA [REDACTED] looking at the aircraft logbook which landed on the ground near the base of the tail. He reached down to pick up what I thought was the helicopter logbook but instead grabbed his iPad from that same area. I noticed a small grass fire approximately 1 foot square approximately 10 feet off the nose of the helicopter. I also noticed what I initially thought was water coming out from under the helicopter. I bent over to investigate and could smell jet fuel. AIA [REDACTED] asked several more times if I was ok. After a moment to gather our wits AIA [REDACTED] suggested we should move away from the helicopter back toward the runway. After we began walking away, I first noticed smoke rising from the body of the helicopter near the area of the engine.



Photo 1 – Main rotor blade cuts in the grass

Photo: Airbus



Photo 2 – Wreckage with ground scars

Photo: Airbus



Photo 3 – Helicopter wreckage

Photo: Airbus

NATIONAL TRANSPORTATION SAFETY BOARD (NTSB)
WASHINGTON, D.C.

INFORMATION AND GUIDANCE FOR PARTIES
TO NTSB ACCIDENT AND INCIDENT INVESTIGATIONS

I. Introduction

This guidance is intended to familiarize participants in NTSB accident and incident investigations with the NTSB investigative process, and the NTSB's expectations regarding the roles and responsibilities of organizations and individual employees of those organizations assigned to work in support of an NTSB investigation.

The Independent Safety Board Act of 1974, as amended, sets forth the powers and responsibilities of the NTSB, and all participants are encouraged to review its provisions. A recent compilation of these statutory provisions can be reviewed on the NTSB's website: http://www.ntsb.gov/alj/2003_Statute.PDF.

In addition, participants should be familiar with the NTSB's regulations governing accident and incident investigation procedures: 49 C.F.R. Part 831. These and other NTSB regulations can be viewed on the Government Printing Office's website: http://www.access.gpo.gov/nara/cfr/waisidx_06/49cfr831_06.html.

II. The NTSB and the Investigative Process

The NTSB is an independent federal agency charged by Congress with investigating every civil aviation accident in the United States and significant accidents in the other modes of transportation—railroad, highway, marine, pipeline and hazardous materials—and issuing an official determination regarding probable cause and, as appropriate, safety recommendations to prevent future accidents. The NTSB also investigates certain incidents that present significant safety issues. The NTSB strives to accurately identify and report all relevant facts, conditions, and circumstances relating to each accident or incident it investigates.

Safety recommendations are the most important product of an NTSB investigation. NTSB safety recommendations are based on findings of the investigation and may address deficiencies that do not pertain directly to what is ultimately determined to be the probable cause of the accident. The NTSB may issue safety recommendations before the completion of a specific investigation and may designate some recommendations as "urgent."

For major accidents, the NTSB dispatches a "Go Team." The purpose of the NTSB Go Team is to deploy NTSB investigators to the accident scene as quickly as possible and assemble the broad spectrum of technical expertise that is needed to investigate complex transportation accidents.

The NTSB designates other organizations whose employees, functions, activities, or products were involved in the accident or incident as parties to the NTSB investigation to facilitate the rapid and complete acquisition of all relevant factual information. Except for the Federal Aviation Administration (FAA) and the Coast Guard, which by law are automatically designated a party to an NTSB investigation in their respective mode, the NTSB has complete discretion over which organizations it designates as parties to an investigation. Only those organizations that can provide technical expertise or knowledge to an NTSB investigation are granted party status, and only those persons who can provide the NTSB with needed technical expertise or specialized knowledge are permitted to participate in an investigation.

Parties, and party representatives or participants, to an NTSB investigation only participate directly in the fact-finding phase of an NTSB investigation. Although parties are encouraged to submit their own proposed findings and analysis regarding an accident, at the appropriate time, NTSB staff independently conducts its own analyses of the factual information developed during the investigation.

Persons occupying legal positions, pursuing litigation interests, or representing claimants or insurers, are not permitted to be involved in an NTSB investigation.

III. Role and Responsibilities of Parties to the Investigation

At the discretion of the investigator-in-charge (IIC), the NTSB may invite various qualified and interested organizations whose employees, functions, activities, or products were involved in the accident or incident, and who can provide suitable qualified technical personnel actively to assist in the investigation, to participate as parties to the fact-finding phase of the NTSB investigation. Participation as a party to an NTSB investigation is a privilege and confers no rights or benefits. The "party system" utilized by the NTSB to investigate accidents has been in use for decades, primarily because it is the most effective investigatory process for major transportation accidents. Parties are asked to participate in an NTSB investigation because the IIC believes they have unique knowledge or technical expertise, relevant to the investigation, that will assist NTSB staff in developing the most complete and accurate factual record. Only those party employees who have suitable and needed technical qualifications will be permitted to work on the NTSB investigation.

There are other, ancillary advantages to the "party system." In addition to the synergistic and cooperative effects that arise from use of the "party system," a collateral purpose is to ensure that, with appropriate coordination with the NTSB, responsible officials of party organizations whose products or services were involved in the accident or incident will have access to information necessary to expeditiously initiate any necessary preventive and/or corrective actions.

Parties and party participants may not withhold any information pertaining to the accident, or in any manner relevant to the investigation, from the NTSB.

Parties and party participants in the investigation shall be responsive to the direction of NTSB personnel and may lose party status if they conduct themselves in a manner prejudicial to the investigation or do not comply with NTSB instructions.

Each participating party will designate a party coordinator (spokesman) for its organization. The party coordinator will be the NTSB's direct and official point-of-contact for the party and should, therefore, be available to the IIC at all times during the on-scene investigation and periodically available on short notice during the post on-scene phase of the investigation. This party coordinator must have sufficient status and authority within his/her organization to effect a complete and timely response with minimal need for higher approval or coordination in response to a request of the IIC. During the on-scene phase of the investigation, and any additional field investigation activities, party coordinators are responsible for the behavior of their organization's employees or representatives.

All participants in an NTSB investigation (with the exception of representatives from federal regulatory agencies and law enforcement agencies, and Accredited Representatives of foreign governments and their foreign Technical Advisors) will be required to sign the "Certification of Party Representative," which is a statement of compliance with NTSB investigation procedures, rules, and restrictions. Party coordinators are responsible for ensuring that all group participants from their organization sign the NTSB statement of compliance.

IV. (Aviation and Marine Modes Only) The Role of the FAA or Coast Guard in the Investigation

Pursuant to statute, the FAA is automatically afforded party status to all NTSB aviation investigations, "[i]n order to assure the proper discharge by the Secretary of Transportation of his duties and responsibilities[.]"

Also pursuant to statute, the Secretary of the department in which the Coast Guard is operating, generally through the Commandant of the Coast Guard, is automatically afforded party status to all NTSB marine investigations.

V. (Aviation Mode Only) Accredited Representatives of Foreign Governments

The Accredited Representative of a foreign government and his or her properly designated advisors will be afforded the courtesies and rights as outlined in Annex 13 to the Convention of International Civil Aviation. The NTSB restriction on dissemination of accident information

applies to all those supporting an NTSB investigation as advisors to the NTSB on foreign-led accident investigations or to an Accredited Representative in NTSB-led accident investigations involving a non-U.S. State of Design/Manufacture, State of Operator, or State of Registration. [The Accredited Representative and foreign Technical Advisors are not required to sign the party form.]

VI. Assignment and Duties of Group Members

The IIC will assign and organize investigative groups to document specific aspects of the accident. Each group will be under the direction of an NTSB investigator who is designated as the Group Chairman. Individuals representing selected parties will be assigned to investigative groups as the IIC and Group Chairman deem necessary and for the duration of the investigation. Not all parties will have members on every group; only those parties who can provide needed specific expertise relevant to the focus of the group will be considered for group assignments. Because parties are invited to participate in an investigation on the basis of their specialized, technical, party-specific knowledge about their product or operations, the NTSB does not, except in extremely rare circumstances, allow the use of outside consultants as participants in investigative groups. Those selected as group members *must have expertise in their proposed area of investigation*. Those selected as group members must be prepared to remain with the investigation until completion of the on-scene investigation, as well as any additional field investigative work and the development of a factual report on the work of the group.

Additional restrictions apply concerning information obtained from on-board image or audio recording devices. Participants on NTSB investigative groups working with these recorders will be briefed on these additional restrictions and required to sign additional documents confirming their agreement to comply with these restrictions.

Under the direction of the Group Chairman, one or more sets of group notes, termed "field notes," will be developed by each investigative group. Preparation of the field notes is a collaborative effort by the investigative group but managed by the NTSB Group Chairman leading the group. Field notes should include all relevant factual information developed by the group and will typically also include appendices of supporting documentation, photographs, or other records collected by the group. It is the responsibility of the NTSB Group Chairman to ensure that an accurate and complete set of field notes is compiled while the group is on-scene, or, as applicable, during follow-on investigative activity, and that each group member signs the completed field notes before being released from their on-scene duties. In addition, the IIC must approve the field notes before group members may be released from their on-scene duties. Accordingly, each group member must participate in a complete review of the field notes for technical accuracy and adequacy of the scope of the investigation of the group and affirm agreement with the contents of the field notes by signing them. If there is disagreement over the accuracy of any information documented in the field notes, or their scope, the NTSB Group Chairman will make all reasonable efforts to focus the group on resolving any such issues to the collective satisfaction of the group members. In the rare case that a disagreement of one member cannot be resolved, that member is expected to sign the field notes verifying their general agreement with the notes and annotating their specific objections to the disputed content in the notes. The NTSB Group Chairman is responsible for providing a copy of the signed group field notes to the IIC, who will ensure that each party coordinator receives a copy of the field notes from each investigative group.

Each NTSB Group Chairman will later prepare a Group Chairman Factual Report, which will draw extensively on the information in the field notes. A copy of the Group Chairman's draft factual report will be provided to participating group members for comment. It should be understood, however, that the final factual report is the NTSB Group Chairman's responsibility and concurrence by the entire group is not required. Any dissent regarding the factual accuracy or completeness of the factual report should be communicated to the NTSB Group Chairman, and, if necessary, will be discussed formally during a technical review meeting later in the investigative process.

VII. Flow and Dissemination of Investigative Information

All information obtained by members of an investigative group will immediately be brought to the attention of the Group Chairman. All information obtained during the investigation by the various groups will be passed to the IIC by the Group Chairmen.

No information may be passed to others within the party's organization, beyond those individuals actually participating in the NTSB investigation, without the approval of the IIC. If necessary for public safety, and with the IIC's permission, party coordinators may release information to their respective organizations provided the information is factual, neutral and objective in tone, and without purported NTSB characterization of the matter's contribution to the underlying accident. If a party's organization has a need, in the interest of safety, to transmit information to operators utilizing their products regarding issues related to the investigation, they must first provide the IIC with a written draft of the proposed correspondence and obtain the IIC's permission before its release.

The limitations on the release of factual information (within the party's organization) obtained from participation in the investigation shall normally end once the fact-finding phase of the investigation is complete. Limitations on parties commenting publicly on possible findings of the investigation, including the probable cause of the accident, will remain in effect until after the Board adopts the final report.

VIII. Release of Information

Prior to the NTSB's adoption of the final report, only appropriate NTSB personnel are authorized to publicly disclose investigative findings, and, even then, the release shall be limited to verified factual information identified during the course of the investigation. In addition, party participants or their respective organizations must refrain from providing opinions or analysis of the accident outside of the participants in the investigation. Failure to abide by these requirements may lead to removal of a party from the investigation. Any questions on this policy may be directed to the NTSB's IIC on an investigation, or to the NTSB's Public Affairs Office at 202-314-6100.

IX. Proprietary, Commercially Sensitive, and Export-Controlled Information

The NTSB has rules published at 49 C.F.R. § 831.6 governing identification and treatment of proprietary and commercially sensitive records and information. All records provided to the NTSB must be clearly marked if they contain proprietary or commercially sensitive information.

Parties are also obligated to inform the NTSB, in writing, when materials and information provided to the NTSB, verbally or in writing, or in any other format, are subject to Export Administration Regulations (EAR), International Traffic in Arms Regulations (ITAR) and/or their participation in the investigation may be impacted by sanctions programs administered by the U.S. Department of the Treasury Office of Foreign Assets Control (OFAC) or other U.S. Government sanctions programs. All export-controlled records provided to the NTSB must be clearly and appropriately marked. All participants in the NTSB investigation who acquire or handle such materials must do so in compliance with the law and NTSB rules.

X. Organizational Meeting

The initial investigative meeting on-scene is designated as the "organizational meeting." It is during the organizational meeting that the IIC introduces him/herself, explains his/her expectations for the investigation and the participants working with the NTSB, and introduces the NTSB Group Chairmen who will lead the anticipated investigative groups. During the organizational meeting, the parties to the investigation will be formally named, party coordinators will be formally assigned, and various individual group members will be vetted and assigned to appropriate investigative groups.

An attendance roster will be circulated, and everyone in the room must sign the roster and provide the requested contact information.

At the beginning of the meeting, all persons present will be required to identify themselves, including their affiliation and routine role within

their organization. Persons responsible for managing litigation or insurance interests, members of the media, and, generally, corporate executives who will not be providing needed technical expertise as participants on an NTSB investigative group are not permitted to participate in an NTSB investigation.

XI. On-Scene Progress Meetings

A “progress meeting” is typically held at the end of each workday to review significant information obtained by each investigative group and to identify additional investigative activity to be pursued. These meetings also provide an opportunity to address investigative issues that require higher-level resolution or coordination, changes to the investigative plan, need for additional investigative support, or, possibly, an evaluation of whether urgent safety recommendations are needed.

Party coordinators must attend each progress meeting. For other participants in an NTSB investigation, attendance at each progress meeting is generally encouraged, but individual group members should communicate with their NTSB Group Chairman on a case-specific basis as to whether they are needed at the progress meeting, whether other group investigative activities will take precedence, or whether they have been released from further on-scene participation. No persons other than those specifically designated by the IIC during the organizational meeting may attend progress meetings.

Each investigative group may also hold daily meetings that include participation from all group members. The responsibility for arranging these meetings is that of the Group Chairmen. Each group member is expected to raise in a timely manner any concerns, facts, and suggestions for proper consideration by the entire group so as to ensure maximum precision and thoroughness of the group’s investigative efforts. In addition, group members may pass factual information to their respective party coordinators only after the information has been made known to the Group Chairman.

Finally, the IIC may meet daily with all of the NTSB Group Chairmen and, sometimes separately, with all of the party coordinators. These meetings are conducted as a means of encouraging open discussion and resolution of problems of concern to any party coordinator or Group Chairman.

XII. Safety Precautions During Investigations

Access to the site of an accident may be hazardous because of debris and hazardous or toxic materials. Participants are expected to arrive on-scene, or at field investigation activities, with appropriate personal protective equipment, supplied by their respective organizations. All participants must comply with safety procedures established by the on-scene incident command, the local organization(s) in charge of the accident site security and safety. Participants must exercise good judgment, use necessary personal protective equipment, and use caution in working at the site. All party participants should be instructed by their respective party coordinators to not exceed their physical limitations.

If you have questions concerning the existence of hazards, consult your Group Chairman. Any perceived hazards should be brought to the immediate attention of the appropriate Group Chairman and the IIC.

The NTSB does not assume responsibility for personal injuries received during the course of participation in an investigation.

The party coordinator or party participant will inform the IIC of any safety concerns regarding any on-scene activities, to include actions requested by the IIC, that the party coordinator or participant believes have material safety risks.

XIII. Dissemination of Information to Media

Contacts with news media concerning the investigation will be made **only** by the NTSB, through the Board Member if on-scene, the NTSB’s representative of its Office of Public Affairs, or the IIC. The guiding policy is that the NTSB is a public agency engaged in the public’s business and supported by public funds. The agency’s work is open for public review, and the Act under which it operates makes this mandatory. The NTSB believes that periodic factual briefings to the news me-

dia are a normal part of its investigation and that, for the public to perceive the investigation as credible, the investigation should speak with one voice, that being the independent agency conducting the investigation.

Therefore, the NTSB insists that it be the sole source of public information regarding the progress of an accident investigation.

Parties are encouraged to refer media inquiries to the NTSB’s Office of Public Affairs. In any case, release to the media of investigative information at any time is grounds for removal as a party.

XIV. Public Hearing

After completion of the on-scene phase of the investigation, formal depositions or a public hearing may be conducted. Parties to the on-scene investigation may be consulted for their views on the value of conducting a hearing and may also be requested to participate in these activities. Parties to a public hearing may be different than those participating during the on-scene phase of the investigation. A public hearing or formal depositions may be held prior to completion of all field work, such as component testing, simulator runs, etc.

XV. Party Recommendations as to Findings, Conclusions, and Recommendations

Any party to an investigation may, and is encouraged to, submit to the NTSB proposed findings of fact and conclusions that the party believes should be drawn from the evidence obtained during the investigation. A party may also propose safety recommendations for preventive action. All submissions should be made in writing and parties should serve copies of submissions on all other parties. The IIC will provide a date by which such submissions must be made.

Title 49. Transportation

Subtitle B. Other Regulations Relating to Transportation

 Chapter VIII. National Transportation Safety Board

➔ Part 831. Accident/Incident Investigation Procedures

➔ § 831.1 Applicability of part.

Unless otherwise specifically ordered by the National Transportation Safety Board (Board), the provisions of this part shall govern all accident or incident investigations, conducted under the authority of title VII of the Federal Aviation Act of 1958, as amended, and the Independent Safety Board Act of 1974. Rules applicable to accident hearings and reports are set forth in Part 845.

§ 831.2 Responsibility of Board.

(a) Aviation.

(1) The Board is responsible for the organization, conduct, and control of all accident and incident investigations (see [§ 830.2](#) of this chapter) within the United States, its territories and possessions, where the accident or incident involves any civil aircraft or certain public aircraft (as specified in [§ 830.5](#) of this chapter), including an investigation involving civil or public aircraft (as specified in [§ 830.5](#)) on the one hand, and an Armed Forces or intelligence agency aircraft on the other hand. It is also responsible for investigating accidents/incidents that occur outside the United States, and which involve civil aircraft and/or certain public aircraft, when the accident/incident is not in the territory of another country (i.e., in international waters).

(2) Certain aviation investigations may be conducted by the Federal Aviation Administration (FAA), pursuant to a "Request to the Secretary of the Department of Transportation to Investigate Certain Aircraft Accidents," effective February 10, 1977 (the text of the request is contained in the appendix to part 800 of this chapter), but the Board determines the probable cause of such accidents or incidents. Under no circumstances are aviation investigations where the portion of the investigation is so delegated to the FAA by the Board considered to be joint investigations in the sense of sharing responsibility. These investigations remain NTSB investigations.

¹ The authority of a representative of the FAA during such investigations is the same as that of a Board investigator under this part.

(3) The Board is the agency charged with fulfilling the obligations of the United States under Annex 13 to the Chicago Convention on International Civil Aviation (Eighth Edition, July 1994), and does so consistent with State Department requirements and in coordination with that department. Annex 13 contains specific requirements for the notification, investigation, and reporting of certain incidents and accidents involving international civil aviation. In the case of an accident or incident in a foreign state involving civil aircraft of U.S. registry or manufacture, where the foreign state is a signatory to Annex 13 to the Chicago Convention of the International Civil Aviation Organization, the state of occurrence is responsible for the investigation. If the accident or incident occurs in a foreign state not bound by the provisions of Annex 13 to the Chicago Convention, or if the accident or incident involves a public aircraft (Annex 13 applies only to civil aircraft), the conduct of the investigation shall be in consonance with any agreement entered into between the United States and the foreign state.

(b) Surface. The Board is responsible for the investigation of: railroad accidents in which there is a fatality, substantial property damage, or which involve a passenger train (see part 840 of this chapter); major marine casualties and marine accidents involving a public and non-public vessel or involving Coast Guard functions (see part 850 of this chapter); highway accidents, including railroad grade-crossing accidents, the investigation of which is selected in cooperation with the States; and pipeline accidents in which there is a fatality, significant injury to the environment, or substantial property damage.

² Part 850 also governs the conduct of certain investigations in which the Board and the Coast Guard participate jointly.

(c) Other Accidents/Incidents. The Board is also responsible for the investigation of an accident/incident that occurs in connection with the transportation of people or property which, in the judgment of the Board, is catastrophic, involves problems of a recurring character, or would otherwise carry out the policy of the Independent Safety Board Act of 1974. This authority includes, but is not limited to, marine and boating accidents and incidents not covered by part 850 of this chapter, and accidents/incidents selected by the Board involv-

ing transportation and/or release of hazardous materials.

§ 831.3 Authority of Directors.

The Directors, Office of Aviation Safety, Office of Railroad Safety, Office of Highway Safety, Office of Marine Safety, and Office of Pipeline and Hazardous Materials Safety, subject to the provisions of [§ 831.2](#) and part 800 of this chapter, may order an investigation into any accident or incident.

§ 831.4 Nature of investigation.

Accident and incident investigations are conducted by the Board to determine the facts, conditions, and circumstances relating to an accident or incident and the probable cause(s) thereof. These results are then used to ascertain measures that would best tend to prevent similar accidents or incidents in the future. The investigation includes the field investigation (on-scene at the accident, testing, teardown, etc.), report preparation, and, where ordered, a public hearing. The investigation results in Board conclusions issued in the form of a report or "brief" of the incident or accident. Accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties. They are not subject to the provisions of the Administrative Procedure Act ([5 U.S.C. 504 et seq.](#)), and are not conducted for the purpose of determining the rights or liabilities of any person.

§ 831.5 Priority of Board investigations.

Any investigation of an accident or incident conducted by the Safety Board directly or pursuant to the appendix to part 800 of this chapter (except major marine investigations conducted under [49 U.S.C. 1131\(a\)\(1\)\(E\)](#)) has priority over all other investigations of such accident or incident conducted by other Federal agencies. The Safety Board shall provide for the appropriate participation by other Federal agencies in any such investigation, except that such agencies may not participate in the Safety Board's determination of the probable cause of the accident or incident. Nothing in this section impairs the authority of other Federal agencies to conduct investigations of an accident or incident under applicable provisions of law or to obtain information directly from parties involved in, and witnesses to, the transportation accident or incident, provided they do so without interfering with the Safety Board's investigation. The Safety Board and other Federal agencies shall assure that appropriate information obtained or developed in the course of their investigations is exchanged in a timely manner.

§ 831.6 Request to withhold information.

(a) Trade Secrets Act ([18 U.S.C. 1905](#)), Exemption 4 of the Freedom of Information Act ([5 U.S.C. 552](#)) (FOIA), and The Independent Safety Board Act of 1974, as amended.

(1) General. The Trade Secrets Act provides criminal penalties for unauthorized government disclosure of trade secrets and other specified confidential commercial information. The Freedom of Information Act authorizes withholding of such information; however, the Independent Safety Board Act, at [49 U.S.C. 1114\(b\)](#), provides that the Board may, under certain circumstances, disclose information related to trade secrets.

(2) Procedures. Information submitted to the Board that the submitter believes qualifies as a trade secret or confidential commercial information subject either to the Trade Secrets Act or FOIA Exemption 4 shall be so identified by the submitter on each and every page of such document. The Board shall give the submitter of any information so identified, or information the Board has substantial reason to believe qualifies as a trade secret or confidential commercial information subject either to the Trade Secrets Act or FOIA Exemption 4, the opportunity to comment on any contemplated disclosure, pursuant to [49 U.S.C. 1114\(b\)](#). In all instances where the Board determines to disclose pursuant to [49 U.S.C. 1114\(b\)](#) and/or [5 U.S.C. 552](#), at least 10 days' notice will be provided the submitter. Notice may not be provided the submitter when disclosure is required by a law other than FOIA if the information is not identified by the submitter as qualifying for withholding, as is required by this paragraph, unless the Board has substantial reason to believe that disclosure would result in competitive harm.

(3) Voluntarily-provided safety information. It is the policy of the Safety Board that commercial, safety-related information provided to it voluntarily and not in the context of particular accident/incident investigations will not be disclosed. Reference to such information for the purposes of safety recommendations will be undertaken with consideration for the confidential nature of the underlying database(s).

(b) Other. Any person may make written objection to the public disclosure of any other information contained in any report or document filed, or otherwise obtained by the Board, stating the grounds for such objection. The Board, on its own initiative or if such objection is made, may order such information withheld from public disclosure when, in its judgment, the information may be withheld under the provisions of an exemption to the Freedom of Information Act ([5 U.S.C. 552](#), see part 801 of this chapter), and its release is found not to be in the public interest.

§ 831.7 Right to representation.

Any person interviewed by an authorized representative of the Board during the investigation, regardless of the form of the interview (sworn, unsworn, transcribed, not transcribed, etc.), has the right to be accompanied, represented, or advised by an attorney or non-attorney representative.

§ 831.8 Investigator-in-charge.

The designated investigator-in-charge (IIC) organizes, conducts, controls, and manages the field phase of the investigation, regardless of whether a Board Member is also on-scene at the accident or incident site. (The role of the Board member at the scene of an accident investigation is as the official spokesperson for the Safety Board.) The IIC has the responsibility and authority to supervise and coordinate all resources and activities of all personnel, both Board and non-Board, involved in the on-site investigation. The IIC continues to have considerable organizational and management responsibilities throughout later phases of the investigation, up to and including Board consideration and adoption of a report or brief of probable cause(s).

§ 831.9 Authority of Board representatives.

(a) General. Any employee of the Board, upon presenting appropriate credentials, is authorized to enter any property where an accident/incident subject to the Board's jurisdiction has occurred, or wreckage from any such accident/incident is located, and do all things considered necessary for proper investigation. Further, upon demand of an authorized representative of the Board and presentation of credentials, any Government agency, or person having possession or control of any transportation vehicle or component thereof, any facility, equipment, process or controls relevant to the investigation, or any pertinent records or memoranda, including all files, hospital records, and correspondence then or thereafter existing, and kept or required to be kept, shall forthwith permit inspection, photographing, or copying thereof by such authorized representative for the purpose of investigating an accident or incident, or preparing a study, or related to any special investigation pertaining to safety or the prevention of accidents. The Safety Board may issue a subpoena, enforceable in Federal district court, to obtain testimony or other evidence. Authorized representatives of the Board may question any person having knowledge relevant to an accident/incident, study, or special investigation. Authorized representatives of the Board also have exclusive authority, on behalf of the Board, to decide the way in which any testing will be conducted, including decisions on the person that will conduct the test, the type of test that will be conducted, and any individual who will witness the test.

(b) Aviation. Any employee of the Board, upon presenting appropriate credentials, is authorized to examine and test to the extent necessary any civil or public aircraft (as specified in [§ 830.5](#)), aircraft engine, propeller, appliance, or property aboard such aircraft involved in an accident in air commerce.

(c) Surface.

(1) Any employee of the Board, upon presenting appropriate credentials, is authorized to test or examine any vehicle, vessel, rolling stock, track, pipeline component, or any part of any such item when such examination or testing is determined to be required for purposes of such investigation.

(2) Any examination or testing shall be conducted in such a manner so as not to interfere with or obstruct unnecessarily the transportation services provided by the owner or operator of such vehicle, vessel, rolling stock, track, or pipeline component, and shall be conducted in such a manner so as to preserve, to the maximum extent feasible, any evidence relating to the transportation accident, consistent with the needs of the investigation and with the cooperation of such owner or operator.

§ 831.10 Autopsies.

The Board is authorized to obtain, with or without reimbursement, a copy of the report of autopsy performed by State or local officials on any person who dies as a result of having been involved in a transportation accident within the

jurisdiction of the Board. The investigator-in-charge, on behalf of the Board, may order an autopsy or seek other tests of such persons as may be necessary to the investigation, provided that to the extent consistent with the needs of the accident investigation, provisions of local law protecting religious beliefs with respect to autopsies shall be observed.

§ 831.11 Parties to the investigation.

(a) All Investigations, regardless of mode.

(1) The investigator-in-charge designates parties to participate in the investigation. Parties shall be limited to those persons, government agencies, companies, and associations whose employees, functions, activities, or products were involved in the accident or incident and who can provide suitable qualified technical personnel actively to assist in the investigation. Other than the FAA in aviation cases, no other entity is afforded the right to participate in Board investigations.

(2) Participants in the investigation (i.e., party representatives, party coordinators, and/or the larger party organization) shall be responsive to the direction of Board representatives and may lose party status if they do not comply with their assigned duties and activity proscriptions or instructions, or if they conduct themselves in a manner prejudicial to the investigation.

(3) No party to the investigation shall be represented in any aspect of the NTSB investigation by any person who also represents claimants or insurers. No party representative may occupy a legal position (see [§ 845.13](#) of this chapter). Failure to comply with these provisions may result in sanctions, including loss of status as a party.

(4) [Title 49, United States Code § 1132](#) provides for the appropriate participation of the FAA in Board investigations, and [§ 1131\(a\)\(2\)](#) provides for such participation by other departments, agencies, or instrumentalities. The FAA and those other entities that meet the requirements of paragraph (a)(1) of this section will be parties to the investigation with the same rights and privileges and subject to the same limitations as other parties, provided however that representatives of the FAA need not sign the "Statement of Party Representatives to NTSB Investigation" (see paragraph (b) of this section).

(b) Aviation investigations. In addition to compliance with the provisions of paragraph (a) of this section, and to assist in ensuring complete understanding of the requirements and limitations of party status, all party representatives in aviation investigations shall sign "Statement of Party Representatives to NTSB Investigation" immediately upon attaining party representative status. Failure timely to sign that statement may result in sanctions, including loss of status as a party.

§ 831.12 Access to and release of wreckage, records, mail, and cargo.

(a) Only the Board's accident investigation personnel, and persons authorized by the investigator-in-charge to participate in any particular investigation, examination or testing shall be permitted access to wreckage, records, mail, or cargo in the Board's custody.

(b) Wreckage, records, mail, and cargo in the Board's custody shall be released by an authorized representative of the Board when it is determined that the Board has no further need of such wreckage, mail, cargo, or records. When such material is released, Form 6120.15, "Release of Wreckage," will be completed, acknowledging receipt.

§ 831.13 Flow and dissemination of accident or incident information.

(a) Release of information during the field investigation, particularly at the accident scene, shall be limited to factual developments, and shall be made only through the Board Member present at the accident scene, the representative of the Board's Office of Public Affairs, or the investigator-in-charge.

(b) All information concerning the accident or incident obtained by any person or organization participating in the investigation shall be passed to the IIC through appropriate channels before being provided to any individual outside the investigation. Parties to the investigation may relay to their respective organizations information necessary for purposes of prevention or remedial action. However, no information concerning the accident or incident may be released to any person not a party representative to the investigation (including non-party representative employees of the party organization) before initial release by the Safety Board without prior consultation and approval of the IIC.

§ 831.14 Proposed findings.

(a) General. Any person, government agency, company, or association whose employees, functions, activities, or products were involved in an accident or incident under investigation may submit to the Board written proposed findings to be drawn from the evidence produced during the course of the investigation, a proposed probable cause, and/or proposed safety recommendations designed to prevent future accidents.

(b) Timing of submissions. To be considered, these submissions must be received before the matter is calendared for consideration at a Board meeting. All written submissions are expected to have been presented to staff in advance of the formal scheduling of the meeting. This procedure ensures orderly and thorough consideration of all views.

(c) Exception. This limitation does not apply to safety enforcement cases handled by the Board pursuant to part 821 of this chapter. Separate ex parte rules, at part 821, subpart J, apply to those proceedings.

Subject:

FW: Accident to the AEROSPATIALE - AS350 - B2 - N841BP on May 12, 2021 (location :
AD Clarence E. Page Municipal - Oklahoma)

[CAUTION] This email originated from outside of the organization. Do not click any links or open attachments unless you recognize the sender and know the content is safe.

Dear colleagues,

Thank you for the notification that you sent to the BEA concerning the aforementioned accident. In accordance with the provisions of ICAO Annex 13, we have appointed as accredited representative:

- Mr. [REDACTED] BEA investigator
E-mail : [REDACTED]
Cell phone: [REDACTED]

The accredited representative will be assisted by the following technical advisors:

- Mr. [REDACTED] European Union Aviation Safety Agency
- Mr. [REDACTED] AIRBUS HELICOPTERS
- Mr. [REDACTED] , AIRBUS HELICOPTERS
- Mr. [REDACTED] SAFRAN HELICOPTER ENGINES
- Mr. [REDACTED] SAFRAN HELICOPTER ENGINES

The BEA remains at your disposal for any assistance you may require.

Unless you instruct us otherwise, we will publish on our website the information that the NTSB is opening an investigation on this accident with the participation of the BEA.

This information will appear on our weekly list of newly opened investigations and will include the summary of circumstances that you provided in your notification.

Kind regards,

[REDACTED]
Enquêteur de sécurité
Safety investigator

[REDACTED]
Antenne Sud-Est
1, rue Vincent Auriol
13617 Aix-en-Provence cedex

NATIONAL TRANSPORTATIONS SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

SUMMARY OF ENGINE/AIRFRAME EXAMINATION

-- CEN21LA216

DETAILS OF EXAMINATION

An on-site examination was conducted at by technical representatives from Airbus Helicopter and Safran engines. The helicopter sustained significant fire/thermal damage, and large part of the helicopter was consumed by the post-crash fire.

Engine

- The engine an Arriel 1D1 sustained significant thermal/heat damage in the post-crash fire.
- The axial compressor had some slight FOD damage, and the gas generator could not be rotated by hand.
- The free turbine exhibited evidence of blade shedding with deformation of the containment shield.
 - The free turbine blade shedding is consistent with the overspeed resulting from the rupture of the engine-to-MGB coupling shaft caused by ground contact during the accident sequence while powered.
- Damage to the engine appeared to be the result of the impact of the aircraft with the ground, post crash fire, and over-speed protection blade shedding.

Airframe

- The helicopter was equipped with the “old” style collective; hydraulic cut-off switch was the unguarded push-button type.
- The helicopter did not have the crash-fire resistant fuel cell.
- Fire damage prevented a flight control continuity check from the collective and cyclic to the rotor system.
- Fire damage prevented a flight control continuity check to the anti-torque pedals; however, the pitch change mechanism at the tail rotor was intact and operated.
- No preimpact abnormalities were noted during the exam

----- *end of summary* -----

NATIONAL TRANSPORTATION SAFETY BOARD

ACCIDENT NUMBER:

RETENTION / RELEASE OF WRECKAGE RELATED TO ACCIDENT NUMBER ► **CEN21LA216**

For Use In All Modal Investigations

REGISTERED OWNER (name and address) US Dept of Homeland Security Washington, DC 20229		IDENTIFICATION NUMBER N841BP
		MAKE AEROSPATIALE
LOCATION Yukon, OK	DATE OF ACCIDENT 5/12/2021	MODEL AS350 B2 ECUREUIL
RETAINED BY NTSB REPRESENTATIVE [REDACTED]		TITLE Air Safety Investigator
		DATE
<p>The National Transportation Safety Board has <input checked="" type="checkbox"/> has not <input type="checkbox"/> completed its investigation of the wreckage described above. All recovered wreckage except that listed in the evidence control form(s) is hereby released.</p> <p><input checked="" type="checkbox"/> NO PARTS RETAINED</p>		
RELEASED BY NTSB REPRESENTATIVE [REDACTED]		TITLE Air Safety Investigator
		DATE 7/2/2021
<p>(This section may be acknowledged by a person, not the owner or owner's representative, who has knowledge of the disposition of the recovered wreckage and its parts. Such acknowledgement does not place responsibility for disposition of the wreckage upon that person.)</p> <p>I HEREBY ACKNOWLEDGE:</p> <p><input checked="" type="checkbox"/> Receipt of the above described wreckage.</p> <p><input checked="" type="checkbox"/> Removal of the parts, if any, listed in the evidence control form(s).</p>		
PERSON MAKING ACKNOWLEDGEMENT [REDACTED]		TITLE Aviation Maint. Officer
		DATE 07/21/2021
ADDRESS [REDACTED]		PHONE NUMBER & EMAIL [REDACTED]
REMARKS: None =====		

- Switch on "PITOT" heating * On centre console
- Switch on all necessary systems (VHF, lights, windshield wiper*, etc).

NOTE: Do not use the wiper on a dry windshield or in light rain.

- Carry out the hydraulic checks:

CAUTION: IF NOT LOCKED, THE COLLECTIVE LEVER WILL COME UP WHEN THE ACCUMULATORS ARE DEPLETED OR WHEN THE HYDRAULIC CUTOFF SWITCH IS SET TO "OFF".

Accumulators check:

- .Collective pitch Check correctly locked.
- ."HYD TEST" (TEST HYDR) pushbutton... Depress on centre console.
- .Warning-caution-advisory panel..... Check HYD flashes.
- .Collective and cyclic controls..... Hands on.
- .Move the cyclic control 2 or 3 times on each axis (+/- 10% of travel) and check for accumulator hydraulic assistance on pitch and roll (no control loads). Check that forces are felt on the pedals.
- ."HYD TEST" (TEST HYDR) pushbutton... Set back in up position.
- .Warning-caution-advisory panel..... Check HYD light goes off.

Hydraulic pressure isolation check:

- .Collective pitch..... Check correctly locked.
- .Hydraulic cut-off switch..... Set to OFF on collective lever.
- .Warning-caution-advisory panel..... Check HYD light is on.
- .Check that forces are immediately felt on the controls and that the cyclic stick can be displaced in pitch and roll with normal feedback force. Yaw pedals force should stay low (yaw load compensator effect).
- .Hydraulic cut-off switch..... Set to ON .
- .Warning-caution-advisory panel..... Check HYD light goes off after 3 to 4 sec.
Maintenance action must be performed prior to flight if this time is reduced to 1 second or less (at least one of the accumulators is defective).

NOTE: In strong wind, perform the hydraulic tests at the nominal power rating, apply a small cyclic input in the wind direction and accelerate the engine up to 300 rotor rpm, as fast as is compatible with t4 limitations, then follow the normal procedure

- Gradually increase the fuel flow, maintaining a constant rate of rotor acceleration:

* Optional

Approved

350 B2

A B

14-40

Page 5

R

4.1

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: NTSB CEN21LA216 Report Review
Date: Friday, December 16, 2022 12:16:16 PM
Attachments: [image002.png](#)
[image003.png](#)
[CEN21LA216 Yukon Oklahoma Factual Narrative Word Document \(008\).docx](#)

[CAUTION] This email originated from outside of the organization. Do not click any links or open attachments unless you recognize the sender and know the content is safe.

[REDACTED]

We approve of the language you proposed, and I've included it in the attachment. Our investigator also agrees with your recommended verbiage for the long report, so we will work on getting that incorporated.

We are interested in the presentation that you proposed, but we will have to wait on that for some time. There are external investigations that are being conducted into this event, and we need for those to conclude prior to any presentation.

Thank you for your assistance, and please let me know if you would like to speak further.

Respectfully,

[REDACTED] [REDACTED]
Supervisory Air Enforcement Agent
Safety and Risk Management Supervisor
U.S. Customs and Border Protection
Air and Marine Operations HQ
Training, Safety, and Standards
Washington, DC

[REDACTED]
[REDACTED]
[REDACTED]



[REDACTED] [REDACTED] [REDACTED]
Sent: Tuesday, December 13, 2022 9:49 AM

To: [REDACTED] [REDACTED] [REDACTED]

Subject: RE: NTSB CEN21LA216 Report Review

CAUTION: This email originated from outside of DHS. DO NOT click links or open attachments unless you recognize and/or trust the sender. If you feel this is a suspicious-looking email, please report by using the Report Phish button option.

Just following up with you. Is this language and approach acceptable? Also, I spoke with our folks in aviation engineering about a recommendation to CBP for crashworthy fuel tanks. They are reluctant to go that route because we'd have to address all AS 350 helicopters operating in the U.S. My understanding from them is after the Frisco, Colorado EMS accident, we went more the advocacy route to convince the EMS community flying the AS 350's that retrofitting the helicopters was right move. Our helicopter SME said we'd be willing to brief your leadership on the issue and our findings following accidents involving fuel tank fires to hopefully convince them to go that route.

I would like to complete this case by year's end if possible.

Let me know, and feel free to contact me.

Best regards,

Regional Chief
NTSB, Office of Aviation Safety
Central Region

From: [redacted]
Sent: Friday, November 18, 2022 10:17 AM
To: [redacted]
Cc: [redacted]
Subject: NTSB CEN21LA216 Report Review

I added some lines and a paragraph, both in blue text, to the factual report. And for our analysis report, I'll propose language that ties the hiring issue to factors contributing to the cause of the accident. Feel free to craft better language if these don't accurately reflect what I am trying to communicate.

As for information in the public docket that would support these statements, I'd need a memo from CBP that states the facts regarding the pilot's hiring into the AIA Program, mainly the information that's in section 2.1, pages 21-24, in your Aircraft Mishap Report. Also, I think it would be helpful to

the NTSB to have your report as an exhibit on the Official Use Only side That way, we can reference it in house as I get with our aviation engineers to help craft a recommendation to the CBP to install crashworthy fuel tanks in your AS-350 B2 helicopters.

Share this with your colleagues and let me know what you think. We can talk next week.

Have a great weekend and thank you for what you do at Customs and Border Protection.

Best regards,

[REDACTED]

[REDACTED]

Regional Chief
National Transportation Safety Board
Office of Aviation Safety, Central Region

[REDACTED]

Denver, Colorado 80239

[REDACTED]

[REDACTED]



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CEN21LA216 Factual Information

On May 12, 2021, about 1530 central daylight time, an Aerospatiale (Airbus) AS350 B2 helicopter, N841BP, was destroyed when it was involved in an accident near Yukon, Oklahoma. The pilot receiving instruction and the flight instructor were not injured. The helicopter was operated as a *14 CFR Part 91* public aircraft instructional flight.

According to the flight crew, the pilot receiving instruction (pilot) was enrolled in the US Customs and Border Protection Initial Pilot Certification course for the AS350 B2. The flight departed the Will Rogers International Airport (KOKC) and proceeded to the Clarence Page Municipal Airport (KRCE) to conduct training maneuvers. After arrival at KRCE, the flight crew conducted several approaches to the airport including confined area and pinnacle approaches. They then conducted several simulated emergencies, each of which required the helicopter's hydraulic system to be turned off and then turned back on at the conclusion of the procedure. The hydraulic system was turned off and on using the hydraulic cut-off switch, an unguarded push-button switch mounted on the end of the pilot's collective stick.

After the simulated emergencies, the flight crew proceeded to conduct a series of "quick stops." After the third quick stop, the pilot heard a radio call indicating an airplane was on final approach to land on the runway they were using, and the flight instructor indicated that they would clear the runway. The pilot added that he completed a final quick stop and immediately entered a climbing left turn.

The pilot stated that in the turn, he noticed the helicopter yawing left, and his pedal inputs were unable to correct the yaw. When the pilot adjusted his grip on the collective, he felt the hydraulic cut-off button with his thumb as he prepared to reduce collective. As he tightened his grip on the collective, "the hydraulics came offline aggravating the left yaw into a hard left spin." The controls were stiff, and the flight instructor told him to turn the hydraulics back on. The pilot "intentionally pressed the [hydraulic cut-off] button but felt no effect." He pressed the button a second time, but the hydraulic light on the caution warning panel remained illuminated, so he pressed the button a third time.

The flight instructor reported that on the last quick stop, the helicopter slowed normally but then started a left yaw about 25 ft above ground level. After the helicopter yawed about 30° left of centerline, he pushed forward on the cyclic to gain airspeed. The flight instructor stated that "as the aircraft was recovering, the control loads instantly became excessive," and he noticed the hydraulic light on the caution warning panel was illuminated. He told the pilot to turn on the hydraulics; however, the hydraulic pressure was never restored. **The flight instructor told the pilot that he was taking control of the helicopter. However, the pilot did not relinquish control.** The flight instructor attempted to regain control of the helicopter but was unable to overcome the high control loads.

The helicopter continued to spin, impacted the ground in a nose-down attitude, rolled over, and came to rest on its right side. Both occupants were able to exit the helicopter before a postimpact fire consumed most of the helicopter.

The US Customs and Border Protection Air and Marine Operations Division reported that the agency's selection process for the Air Interdiction Agent Program failed to properly identify that the pilot was not qualified for the program.

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 25

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 25
AIA 
Interview
September 14, 2022

Administrative Warning Acknowledgment for Non-Bargaining Unit Employees

Department of Homeland Security
U.S. Customs and Border Protection

I, [REDACTED], the undersigned employee of U.S. Customs and Border Protection, hereby acknowledge receipt of the Administrative Warning. I understand:

That Special Agent [REDACTED] has been charged with conducting an official investigation/inquiry. I have been informed this inquiry is solely administrative in nature.

Pursuant to the U.S. Customs and Border Protection, Standards of Conduct (CBP Directive No. 51735-13A), Section 6.4.2: "When directed by proper authority, employees must truthfully and fully testify, provide information, and respond to questions (under oath when required) concerning matters of official interest that are being pursued administratively".

I have been informed that I may be subject to disciplinary action, up to and including removal (termination of employment) for my failure or refusal to answer proper questions relating to the performance of my duties as an employee of U.S. Customs and Border Protection. I have been informed that I may also be subject to criminal prosecution and/or administrative disciplinary action for any false answer that I give to any questions.

Employee Name (Print): [REDACTED]

Signature of Employee: [REDACTED]

Date: 9-14-22 Time: 9:56 am

[REDACTED]
Special Agent
U.S. Customs and Border Protection
Office of Professional Responsibility

[REDACTED]
U.S. Customs and Border Protection
Office of Professional Responsibility

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 26

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 26
SAEA [REDACTED]
Interview
October 25, 2022

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 27

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY
O F F I C I A L U S E O N L Y

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 27
AEA 
Interview
February 2, 2022

O F F I C I A L U S E O N L Y
DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY



EXHIBIT 28

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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EXHIBIT 28
XD 
Check-Ride Email

From: [REDACTED]
To: [REDACTED] (OPR)
Subject: RE: Question for you
Date: Thursday, January 26, 2023 11:25:30 AM

Does this help?

It really is taking your driver's license written test and driving test every 12 months.

A check-ride is the practical evaluation used to determine a pilot's knowledge and proficiency in an aircraft they pilot. The evaluation would consist of oral knowledge about a particular aircraft, its limitations, performance, and emergency procedures. This will generally be followed by a flight (check ride) demonstrating proficiency in specified maneuvers in an aircraft that are required for its safe operation.

Give me a call if that doesn't work. Happy to help.

S


From: [REDACTED] <[REDACTED]@cbp.dhs.gov>
Sent: Thursday, January 26, 2023 11:14 AM
To: [REDACTED] CBP.DHS.GOV>
Subject: Question for you

[REDACTED]
Good Morning. To put what a check ride is in layman's term so the non-aviator can understand it.
Can I say:

A check ride is a type of practical evaluation used to determine a pilot's proficiency. The evaluation may consist of knowledge within a particular aircraft or conducting specified maneuvers in an aircraft.

Thanks and Have a Safe Day

[REDACTED]
Special Agent
US Customs and Border Protection
Office of Professional Responsibility
Investigative Operations Division
Washington, D.C.
[REDACTED]



NON-DISCLOSURE: This information is part of an Official Investigation and should not be disclosed to anyone outside of CBP or anyone within CBP, besides the person indicated on this email chain. In addition, the employee to which this request pertains should not be informed in any way; including, but not limited to, placing the requestors name in the employee's file, making notation that a request was made in employee's file, information must not be disclosed in writing or verbally to the employee.

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DEPARTMENT OF HOMELAND SECURITY
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EXHIBIT 29

DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
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DEPARTMENT OF HOMELAND SECURITY
U. S. CUSTOMS AND BORDER PROTECTION
OFFICE OF PROFESSIONAL RESPONSIBILITY

EXHIBIT 29
XD 
Email-Public
Use Aircraft

From: [REDACTED]
To: [REDACTED]
Subject: RE: Question
Date: Thursday, April 6, 2023 1:32:53 PM
Attachments: [AC_00-1.1B.pdf](#)
[Public Aircraft Operaitons Documents.docx](#)

Please call me to walk you through this documentation.

[REDACTED]

From: [REDACTED]@cbp.dhs.gov>
Sent: Thursday, April 6, 2023 12:26 PM
To: [REDACTED]@CBP.DHS.GOV>
Subject: Question

[REDACTED]

Good Afternoon. Do you have any type of document that would show AMO aircraft are considered public use aircraft?

Thanks and Have a Safe Day

[REDACTED]
[REDACTED]
Special Agent
US Customs and Border Protection
Office of Professional Responsibility
Investigative Operations Division
Washington, D.C.

[REDACTED]
[REDACTED]

NON-DISCLOSURE: This information is part of an Official Investigation and should not be disclosed to anyone outside of CBP or anyone within CBP, besides the person indicated on this email chain. In addition, the employee to which this request pertains should not be informed in any way; including, but not limited to, placing the requestors name in the employee's file, making notation that a request was made in employee's file, information must not be disclosed in writing or verbally to the employee.



Advisory Circular

Subject: Public Aircraft Operations—Manned and Unmanned **Date:** 9/21/18 **AC No:** 00-1.1B
Initiated by: AFS-800 **Change:**

- 1 PURPOSE OF THIS ADVISORY CIRCULAR (AC).** This AC provides information to assist in determining whether government-owned or government-contracted manned and unmanned aircraft operations conducted within the territory of the United States are public or civil aircraft operations under the statutory definition of “public aircraft” in Title 49 of the United States Code (49 U.S.C.) §§ [40102\(a\)\(41\)](#) and [40125](#) (the statute). Additionally, this AC contains Federal Aviation Administration (FAA) policy pertaining to civil aircraft operators that provide contract support to government entities. The intent of this material is to better define the responsibilities of the parties to these contracts. This AC is not mandatory and does not constitute a regulation. Nothing in this AC changes the legal requirement for public aircraft operators to comply with the statute.
 - 2 AUDIENCE.** This AC provides information for any person who engages in manned and unmanned public aircraft operations (PAO) as defined by the statute.
 - 3 WHERE YOU CAN FIND THIS AC.** You can find this AC on the FAA’s website at http://www.faa.gov/regulations_policies/advisory_circulars.
 - 4 WHAT THIS AC CANCELS.** AC 00-1.1A, Public Aircraft Operations, dated February 12, 2014, is canceled.
 - 5 RELATED REGULATIONS:**
 - Title 14 of the Code of Federal Regulations (14 CFR).
 - Title 49 U.S.C. §§ [40102\(a\)\(41\)](#) and [40125](#).
 - 6 RELATED MATERIAL (current editions).** AC [120-16](#), Air Carrier Maintenance Programs.
 - 7 BACKGROUND.**
 - 7.1 Statutory Criteria.** PAO are limited by the statute to certain government operations within U.S. airspace. Although these operations must continue to comply with certain general operating rules, including those applicable to all aircraft in the National Airspace System (NAS), other civil certification and safety oversight regulations do not apply to these operations. Accordingly, most aspects of PAO are not subject to FAA oversight.
-

- 7.2 Considerations.** Whether an operation qualifies as a PAO is determined on a flight-by-flight basis, under the terms of the statute. The considerations when determining PAO are the ownership or exclusive lease of the aircraft, the operator of the aircraft, the purpose of the flight, and the persons on board the aircraft.
- 7.3 Civil Aircraft Operation.** Any operation that does not meet the statutory criteria for a PAO is a civil aircraft operation and must be conducted in accordance with all FAA regulations applicable to the operation. The public aircraft statute sets forth criteria that determine whether a government operation qualifies as a PAO.
- 7.4 Statutory Provisions.** Title 49 U.S.C. § 40102(a)(41) provides the definition of “public aircraft” and § 40125 provides the qualifications for public aircraft status. These statutory provisions provide the legal basis for operation of public aircraft in the United States (see Appendix [A](#), Public Aircraft Statute). The FAA recognizes that these statutory provisions may be difficult to apply to aircraft operations conducted by civil contractors for government entities. This AC reiterates the FAA’s policy for civil operators contracting with government entities and defines the responsibilities of the parties affected by these contracts (see Figure [1](#), Decision Flowcharts for PAO). Unmanned Aircraft Systems (UAS) may qualify for a PAO Certificate of Waiver or Authorization (CoW/A) under the terms of the statute and other requirements for PAO UAS operating in the NAS. UAS operators should contact the Safety and Integration Division (AUS-400) regarding specific questions on operations of UAS as public aircraft that may not be addressed in this AC (see Appendix [B](#), Contact Information).
- 7.5 Format.** We are presenting the material in this AC in the format of Frequently Asked Questions (FAQ) regarding PAO. We are also including some simplified flowcharts (see Figure 1) to aid in determining whether certain operations qualify as PAO. The flowcharts are intended to be used to aid government entities to determine whether certain flights they operate qualify for operation as PAO under the statute.

8 DISCUSSION.

- 8.1 What Aircraft Are Considered Public Aircraft?** Public aircraft are defined in 49 U.S.C. § 40102(a)(41) (see Appendix A).
- 8.2 Are All Operations by Government Entities PAO?** Not necessarily; the statute restricts PAO to those that do not have a commercial purpose or would be typically flown by a commercial entity and, where applicable, to flights with certain persons on board. A government entity may unintentionally conduct civil operations that would be subject to the regulations in 14 CFR. All government entities are advised to become acquainted with the basics of the statutory requirements.
- 8.3 What Circumstances Enter into the Determination of a PAO?** The statute includes provisions on aircraft ownership/exclusive lease, the entity operating the aircraft, the persons on board, and the purpose of the flight to determine whether operations are public or civil. At no time may a public operation have a commercial purpose. Reimbursement for PAO is strictly limited to one set of circumstances defined in the

statute (refer to 49 U.S.C. § 40125(a)(1)), though certain military operations under Title [10](#) U.S.C. may involve other statutory considerations. It is important to note that the “commercial purpose” provision of the statute does not prohibit government entities from contracting civil operators for the purposes of conducting PAO. The provision prohibits reimbursement for the government entity, but does not prohibit contractors from being paid for conducting eligible PAO (see paragraph [11.3](#)).

- 8.4 Are All Operations by the Armed Forces PAO?** Not necessarily; the U.S. Military is covered under a separate paragraph of the statute (49 U.S.C. § 40125(c)) to include much of its routine operation. Separate provisions in that paragraph determine the status of certain operations performed by civil contractors that require a designation by the Secretary of Defense.
- 8.4.1 Operations of Armed Forces Aircraft.** Operations by the Armed Forces of their own aircraft (or those they operate) are covered by 49 U.S.C. § 40125(c), including operations in accordance with 10 U.S.C. and those operated in performance of a governmental function under Titles [14](#), [31](#), [32](#), or [50](#) of the U.S.C., provided they are not used for a commercial purpose. The FAA does not make the determination of operation under any of these titles for the Armed Forces.
- 8.4.2 Public Aircraft Designation.** Title 49 U.S.C. § 40125(c)(1)(C) provides that aircraft chartered to provide transportation or other commercial air service to the U.S. Armed Forces only qualify as PAO when the Secretary of Defense designates the operation of the chartered aircraft as required in the national interest. As discussed earlier in this AC, PAO status remains valid only within U.S. airspace. Similar to civil government-contracted operations, all such chartered operations will be considered civil until the FAA has notice of the Secretary’s designation.
- Note:** Civilian contractors to the Armed Forces that have valid public aircraft status under 49 U.S.C. § 40125(c) are subject to the FAA policy on submission of a written declaration to the FAA, as discussed in paragraph [9](#).
- 8.5 What Oversight of PAO Does the FAA Have?** The FAA has limited oversight of PAO, though such operations must continue to comply with the regulations applicable to all aircraft operating in the NAS. The government entity conducting the PAO is responsible for oversight of the operation, including aircraft airworthiness and any operational requirements imposed by the government entity. The government agency contracting for the service assumes the responsibility for oversight of a PAO.
- 8.6 Does the FAA Prescribe Regulations for PAO?** No, the FAA has no regulatory authority over PAO other than those requirements that apply to all aircraft operating in the NAS.
- 8.7 Which Regulations in 14 CFR Do Not Apply to PAO?** In general, regulations that include the term “civil aircraft” in their applicability do not apply to PAO (e.g., 14 CFR part [91](#), § [91.7](#)).

- 8.8 Can I Conduct a PAO Outside of the United States?** No, public aircraft status exists only within U.S. airspace. Once an aircraft leaves U.S. airspace, it loses its PAO status and is either civil or State (including military), depending on its official designation. The FAA does not have the authority to issue State or military aircraft designations. Individual U.S. states and local governments do not have the authority to declare their operations to be State operations. Without an official U.S. Government designation, all aircraft outside U.S. airspace are considered civil.
- 8.9 Can I Carry Passengers on an Aircraft That is Conducting a PAO?** All persons carried on board must be crewmembers or meet the statutory definition of “qualified noncrewmember” (see Appendix [A](#), 49 U.S.C. § 40125(a)(3)). Carriage of a person other than a crewmember or a qualified noncrewmember makes a flight civil under the terms of the statute. It is important to note that a qualified noncrewmember is someone whose presence is required to perform the governmental function associated with the flight; providing air transportation is not a governmental function (except as provided for in § 40125(c)).
- 8.10 What Constitutes a Governmental Function?** The statute provides several examples of governmental functions in 49 U.S.C. § 40125(a)(2). This list is not all-inclusive and other governmental functions may exist. Functions not listed should not be presumed to be acceptable; contact the FAA Office of the Chief Counsel, Regulations Division (AGC-200) regarding a legal interpretation to identify additional functions.
- 8.11 Can a Government Entity Qualify for a Civil Operating Certificate?** Yes, provided the government entity requires a civil operating certificate to conduct proposed operations that cannot be conducted as PAO. Government entities must follow the same application and certification processes and comply with the same regulatory requirements as all other civil applicants. The FAA advises all government entities with a civil operating certificate to establish a clear process for determining whether a flight is a PAO or is being conducted under its civil operating certificate.
- 8.12 If I Am a Government Entity With an Aircraft That Does Not Have a Civil Airworthiness Certificate, May I Use It to Conduct a PAO?** Yes; however, aircraft that do not have a civil airworthiness certificate may not operate as a civil aircraft. Government entities are cautioned to become familiar with the requirements for PAO status so that they do not unintentionally conduct civil operations with these aircraft. For example, a government entity using surplus military aircraft without civil airworthiness certificates could not receive compensation for any operations with those aircraft (i.e., could not operate them as civil aircraft under any part of 14 CFR).
- 8.13 Can Multiple Government Entities Operate Under One Certificate of Authorization (CoA)?** Yes; however, the government entity who receives the CoA is responsible for each entity.

9 FAA POLICY FOR CONTRACTING CIVIL AIRCRAFT OPERATORS.

To clarify FAA oversight of certain contracted civil aircraft operators, on March 23, 2011, the FAA published its Notice of Policy Regarding Civil Aircraft Operators Providing Contract Support to Government Entities (Public Aircraft Operations) ([76 FR 16349](#)). This policy is consistent with the FAA's interpretation of the statute and does not change the statutory requirements for PAO. This section summarizes the policy and its impact on operators, government entities, and the FAA.

9.1 Does a Contract With a Government Entity Automatically Grant PAO Status to a Civil Operator? No, public aircraft status is not automatic. The determination of public aircraft status is made on a flight-by-flight basis; both the government entity and the contracted civil operator share responsibility for determining whether:

1. A particular flight meets the statutory requirements for a PAO before the operation takes place, and
2. The status has been properly communicated between the contracting entities and the FAA.

9.2 If I Am a Civil Operator Contracting My Services to a Government Entity, What Actions Should I Take Before Conducting a PAO? The contracting government entity should provide the civil contractor with a written declaration of public aircraft status for designated, qualified flights. This written declaration should be made in advance of the proposed public aircraft flights. Government entities need to determine who is qualified to make a written declaration (which determines responsibility) for the entity. The FAA recommends that the declaration be made by a contracting officer or other official familiar with the public aircraft statute, and be separate from any contract between the government entity and contracted civil operator.

9.2.1 Once a civil operator receives a declaration from the contracting government entity, the contractor should submit a copy of the written declaration to the FAA Flight Standards District Office (FSDO) responsible for the operator. This will serve as notice to the FAA that there is a contract between the civil operator and the government entity that anticipates the conduct of PAO.

9.2.2 The civil operator and the contracting government entity are responsible for jointly determining whether each flight conducted under the contract qualifies for PAO status under the terms of the statute.

9.3 I Am a Civil Operator With a Government Contract. The contract terms require me to operate in accordance with 14 CFR (or hold an FAA operating certificate). The contracting government entity has provided a written declaration of public aircraft status.

9.3.1 Does the FAA Have Oversight of PAO Under This Contract? No, because the contracting government entity has made a declaration, that government entity has responsibility for the eligible PAO flights.

9.3.2 Do I Still Have to Comply With Regulatory Requirements Contained in 14 CFR?

All aircraft, even those conducting eligible PAO, must comply with certain operating rules of the NAS (e.g., § [91.119](#)). Other requirements imposed through the terms of the contract, such as the requirement to hold an FAA 14 CFR part [135](#) certificate, would not be enforced or overseen by the FAA when PAO are being conducted.

9.4 What Are the Legal Implications of Conducting a PAO? Contracting government entities must be aware that PAO performed by civil operators create a significant transfer of responsibility to the contracting government entity, and that most FAA oversight ceases.

9.4.1 Contracted civil operators must be aware that unless there is a declaration of public aircraft status on file with the agency, the FAA considers all operations civil; civil operations must be conducted in accordance with all applicable civil aviation regulations. The FAA retains oversight and enforcement authority for any deviation from the provisions of 14 CFR until the agency is informed of the change in status to PAO by means of a written declaration.

9.4.2 Additionally, civil operators are cautioned that it is their responsibility to refuse a contract to perform operations that would violate applicable 14 CFR regulations unless the operator is sure that the government entity offering the contract will be declaring them a PAO. It is the responsibility of the government entity and the operator to determine that each flight meets eligibility requirements for a PAO as required by the statute.

9.5 Does the Contracting Government Entity Have to Make a Declaration on a Flight-By-Flight Basis? No, but a determination should be made prior to each flight as to whether the flight will be public or civil in order to meet the terms of the statute. While it is necessary for the contracting parties to ensure that each PAO flight meets the statutory requirements, a written declaration to the FAA is not required for each flight.

9.6 What Should a Declaration Look Like? The FAA does not have specific format requirements for PAO declarations. The declaration must provide enough information to indicate who has operational responsibility for the flight. The need for information may vary between contracts and the entities involved. The FAA recommends that the following information be included in each declaration, at a minimum:

- Name of civil operator (the contracted operator);
- Aircraft type(s) to be used for the PAO;
- Name of aircraft owner(s);
- Aircraft registration number(s);
- Date of contract;
- Date of proposed first flight as a PAO;
- Date of contract termination;

- Name of the government entity declaring public aircraft status (the government entity contracting for aircraft services);
- Name, title, and contact information for the government official making the declaration of PAO status; and
- Nature of operations (include enough detail to demonstrate that the flights qualify for PAO status under the statute).

9.7 Why Does the FAA Consider a Written Declaration Necessary? The FAA is implementing this policy to clarify oversight roles and responsibilities related to PAO status. The FAA is required to oversee all civil operations. To fulfill its statutory responsibility, the FAA needs to know when the status of a civil operator changes.

9.8 What if I Do Not Have a Written Declaration Before I Conduct a PAO? While the absence of a written declaration does not change the legal status of a valid PAO, until the FAA receives notice, the FAA considers all civil operations subject to FAA oversight, and the agency will enforce all applicable civil regulations.

9.9 Does the FAA Require a Civil Operator to Submit a Copy of Its Contract With a Government Entity? No; submission of a contract is optional. Submitting the contract does not replace the submission of a declaration.

9.10 Under FAA Policy, What Are My Responsibilities as a Contracted Civil Operator? As a contracted civil operator, you are responsible for the following:

1. If you are offered a contract to perform operations that could be contrary to 14 CFR civil regulations applicable to the operation, ensure that a written declaration of public aircraft status is on file with the FAA or refuse the contract.
2. Obtain a written declaration of public aircraft status from the contracting government agency prior to conducting any PAO flights.
3. Provide a copy of the written declaration to the FSDO having oversight of your operation prior to conducting any PAO flights.
4. In coordination with the contracting government entity, evaluate and determine that each flight qualifies as an eligible PAO under the terms of the statute. Operations that do not qualify as PAO remain subject to all civil regulations and FAA oversight and enforcement authority.

9.11 Under FAA Policy, What Are the Responsibilities of a Government Entity? As a government entity, you are responsible for the following:

1. Recognize that public aircraft status eligibility is determined by statute.
2. Make a declaration of public aircraft status in advance and in writing to the operator when the government entity intends for the operator to conduct PAO.

3. Understand that PAO represent a significant transfer of responsibility to the government entity and that the FAA does not provide oversight for those flights.

9.12 Under FAA Policy, What Are the Mutual Responsibilities of a Civil Operator and a Government Entity When Operating Under a Contract? Both parties must understand that:

1. Even if a written declaration of PAO status has been made, the operator must continue to comply with certain 14 CFR regulations that affect all users of the NAS.
2. Other regulations may apply even when operating a PAO (e.g., operating rules in 14 CFR parts 91 and [137](#)).
3. The FAA retains enforcement authority for any deviation from applicable provisions of 14 CFR.
4. The FAA also advises both parties to consider whether PAO status is necessary or the flights may be conducted in accordance with the regulations in 14 CFR.

9.13 Is There a Flowchart for Contracted Operations? No; the flowcharts are designed to guide government entities through the terms of the statute to determine whether a particular operation is a valid PAO (see [Figure 1](#)). Once a valid PAO is established, a government entity may hire a contractor to conduct that same operation for them. Since a contractor “stands in the shoes” of a government entity under a contract, the flights must be analyzed as if conducted by the government entity.

10 MAINTENANCE REQUIREMENTS FOR AIRCRAFT CONDUCTING PAO.

10.1 What Are My Obligations Prior to Operating That Aircraft as a Civil Aircraft?

If an aircraft is altered outside of its type certificate (TC) or not maintained under an FAA-accepted maintenance program during PAO, a conformity inspection is required to ensure the aircraft meets all civil regulations. The operator of an aircraft that has been operated in public aircraft status may not return the aircraft to service in civil operations without demonstrating that the aircraft meets all the criteria as prescribed by the regulations to hold its airworthiness certificate. For more information, contact the appropriate FSDO.

10.2 Will I Have to Surrender My Aircraft’s Civil Airworthiness Certificate to Conduct a PAO? No; an airworthiness certificate itself does not indicate that an aircraft is Airworthy.

11 OTHER QUESTIONS REGARDING PAO.

11.1 Whom Do I Contact if I Have Questions About FAA Policy Regarding PAO? As a civil operator that contracts to conduct PAO, you should contact the appropriate FSDO for oversight of your civil operating certificate or, for non-certificated operators,

the FSDO with jurisdiction where you intend to conduct PAO. Legal interpretations of the public aircraft statute are handled by AGC-200 (see Appendix [B](#)).

- 11.2 How Does the FAA Determine if a Government Entity Qualifies Under the Statutory Definitions in 49 U.S.C. § 40102(a)(41)(C) or (D)?** The FAA has received several inquiries from universities and smaller local government agencies concerning their status under the statute. In some circumstances, a public entity may need to seek verification of its status under the public aircraft statute from its state Attorney General or other qualified state office. Upon request, the FAA can provide a letter detailing the specifics of the findings to be made by the state.

Note: Such a verification serves only as a determination of eligibility for PAO, not a determination that any particular operations are qualified PAO under the statute (see Appendix [A](#)).

- 11.3 What Constitutes a “Commercial Purpose” That Removes Someone From PAO Status?** In general, the FAA interprets the commercial purpose prohibition in 49 U.S.C. § 40125(a)(1) to mean that there can be no type of reimbursement to government entities for PAO, except under the one set of specific circumstances described in that section. Specific instances of whether an operation has a commercial purpose may be submitted for interpretation to AGC-200 (see Appendix B). As detailed in paragraph [9](#), a government entity may contract with a private operator (and pay that operator) to conduct a PAO on behalf of the government entity. The statutory prohibition on commercial purpose prevents a government entity from getting paid or reimbursed to operate a PAO, not for paying for contracted services.

- 11.4 By What Means Do I Certify to the “Administrator of the Federal Aviation Administration That the Operation [Was] Necessary to Respond to a Significant and Imminent Threat to Life or Property and That No Service by a Private Operator is Reasonably Available to Meet the Threat,” as Required by 49 U.S.C. § 40125(a)(1)?** The FAA recommends that the statutory certification be made in writing to the appropriate FSDO within 10 business-days of the operation.

- 11.5 Are There Any Other Exceptions to PAO Definitions Applicable to the Government of a State, the District of Columbia, or a Territory or Possession of the United States or a Political Subdivision of One of These Governments as Defined in 49 U.S.C. § 40102(a)(41)(D)?** Yes. The statute was changed in 2012 to allow certain leased aircraft (including contracted operations) to have public aircraft status even when not exclusively leased for at least 90 calendar-days. This provision, 49 U.S.C. § 40125(d), affects certain search-and-rescue operations. The statute contains specific qualifications for its use and requires a determination by the FAA (see Appendix A). Government entities seeking approval for PAO status under § 40102(a)(41)(D) must submit written documentation that addresses the statutory requirements to the General Aviation and Commercial Division (see Appendix B) and will receive a decision in writing from the FAA.

11.6 What Training Courses Are Available for a Government Entity That Desires More Information on Developing Surveillance and Oversight Programs Similar to Those That the FAA Conducts? The FAA's Mike Monroney Aeronautical Center (MMAC) conducts training for FAA aviation safety inspectors (ASI) who conduct FAA oversight and surveillance. These courses may be made available to government entities upon request and based on availability. For more information, please contact the MMAC (see Appendix B, paragraph B.6).

12 UAS GENERAL APPLICABILITY AND REQUIREMENTS. This paragraph applies to UAS operations conducted in the NAS other than in active restricted and prohibited areas designated for aviation use, and provides information and limited guidance on air traffic policies and prescribes procedures for the planning, coordination, and services involving the operation of PAO of UAS in the NAS. PAO are limited by statute to certain government operations within U.S. airspace, and must comply with certain general operating rules applicable to all aircraft in the NAS. Other civil certification and safety oversight regulations do not apply to PAO, and most aspects of PAO are not subject to FAA oversight. For example, PAO may self-certify standards for unmanned aircraft (UA) airworthiness as well as pilot certification, qualification, and medical standards. However, if a public entity elects to operate under civil regulations, such as the conduct of operations under the [FAA Modernization and Reform Act of 2012](#) (FMRA), section 333, or 14 CFR part [107](#), then those operations would be subject to oversight by ASIs. Government agencies may conduct both public and civil aircraft operations with the same aircraft. However, when conducting operations under civil regulations, the operator will be required to maintain the aircraft in accordance with the appropriate regulations applicable to civil aircraft operations. Any aircraft or operation certificated by the FAA is subject to surveillance regardless of whether they are operating as public or civil. Government-owned aircraft operators that are conducting PAO should be included in the FSDO's annual planned surveillance activities to ensure that the operator's status remains unchanged.

Note: If an organization or responsible person is issued a CoA, they must abide by those special provisions outlined in that CoA.

12.1 How Do I Obtain a Special Governmental Interest (SGI) (Emergency) CoA? If the proposed operating area is not covered under the public agency's approved Blanket or Jurisdictional CoA, the public agency can request and receive approval from the FAA for an SGI Emergency CoW/A that will allow for the one-time operation of the UAS at that location based on an imminent risk-to-life type event where manned aircraft may need to be available or the risk to manned aircraft is too great.

12.2 What Should a Public Declaration Letter Include to Demonstrate to the FAA That Our Agency is Qualified to Operate as a Public Operator? The first step is to coordinate with your city, county, or state Attorney General's office the need for a public declaration letter that should be mailed to the FAA.

Federal Aviation Administration
Air Traffic Manager
Emerging Technologies Team (AJV-115)
470 L'Enfant Plaza SW, Suite 7105
Washington, DC 20024

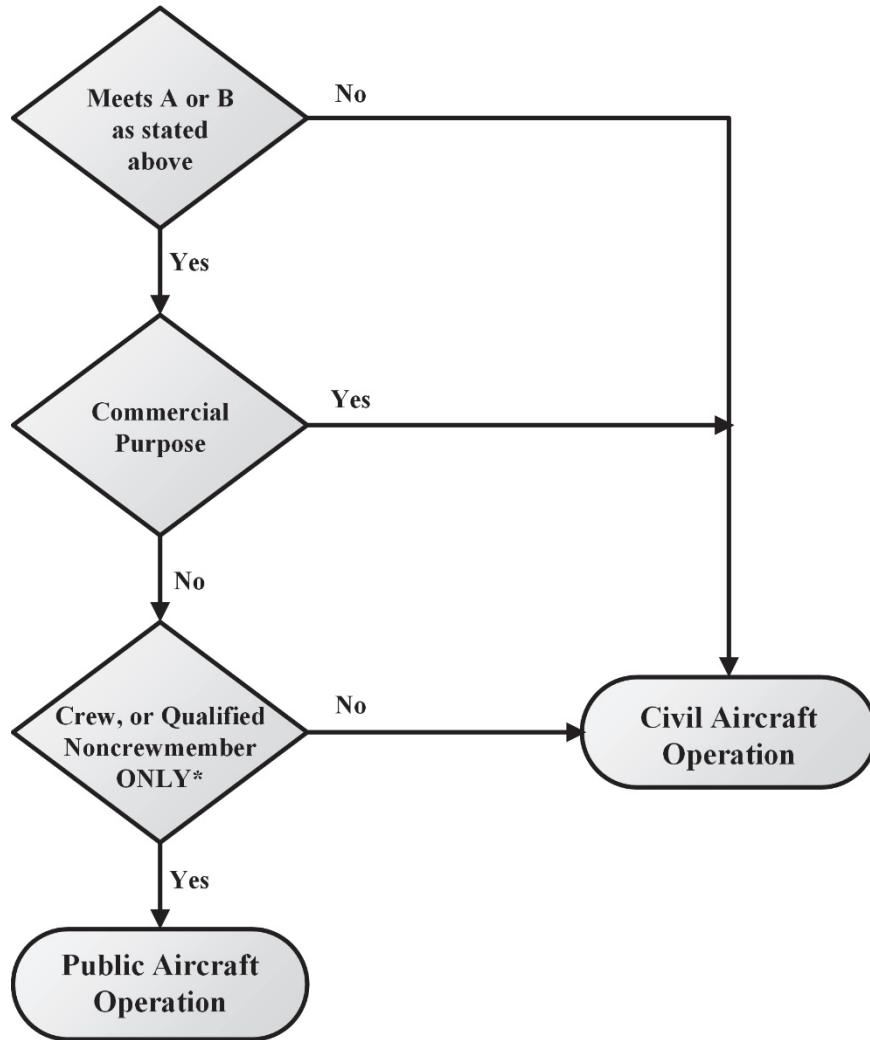
- 12.2.1** Once the FAA's legal office has reviewed the letter and deemed it sufficient, an online access form will be forwarded to the point of contact (POC) for the public agency to complete and return to the FAA. It currently takes approximately 15 business-days for the FAA to establish an account within the online program that is partitioned to allow for security of the data that the public agency enters.
- 12.2.2** The public declaration letter is on official letterhead dated and signed by the individual making the declaration (your department cannot self-certify your public aircraft status), and your public agency is named in the letter.
- 12.2.3** The individual making the declaration is in a position to determine that the entity requesting to operate as a public aircraft operator is actually qualified. The city, county, or state Attorney General is the appropriate party to make that declaration.
- 12.2.4** The public declaration letter references the two sections in 49 U.S.C. (§§ 40102(a)(41)(C) and 40125(b)), so that the individual making the declaration understands that the entity is a political subdivision of the state based on these sections.
- 12.2.5** The letter references some section in your state statute that declares that the entity qualifies as a political subdivision of the state for the purposes of operating as a public aircraft operator.
- 12.2.6** The public agency that is requesting to operate as a public aircraft operator will not operate for compensation or hire in reference to 49 U.S.C. § 40125(b).

Figure 1. Decision Flowcharts for PAO

Decision Flowchart for Federal Government Aircraft Operations

Section 40102(a)(41)(A): An aircraft used only for the United States Government.

Section 40102(a)(41)(B): An aircraft owned by the U.S. Government and operated for crew training, equipment development, or demonstration.



***Citation:**

Section 40125(a)(3) Qualified noncrewmember – The term “qualified noncrewmember” means an individual, other than a member of the crew, aboard an aircraft:

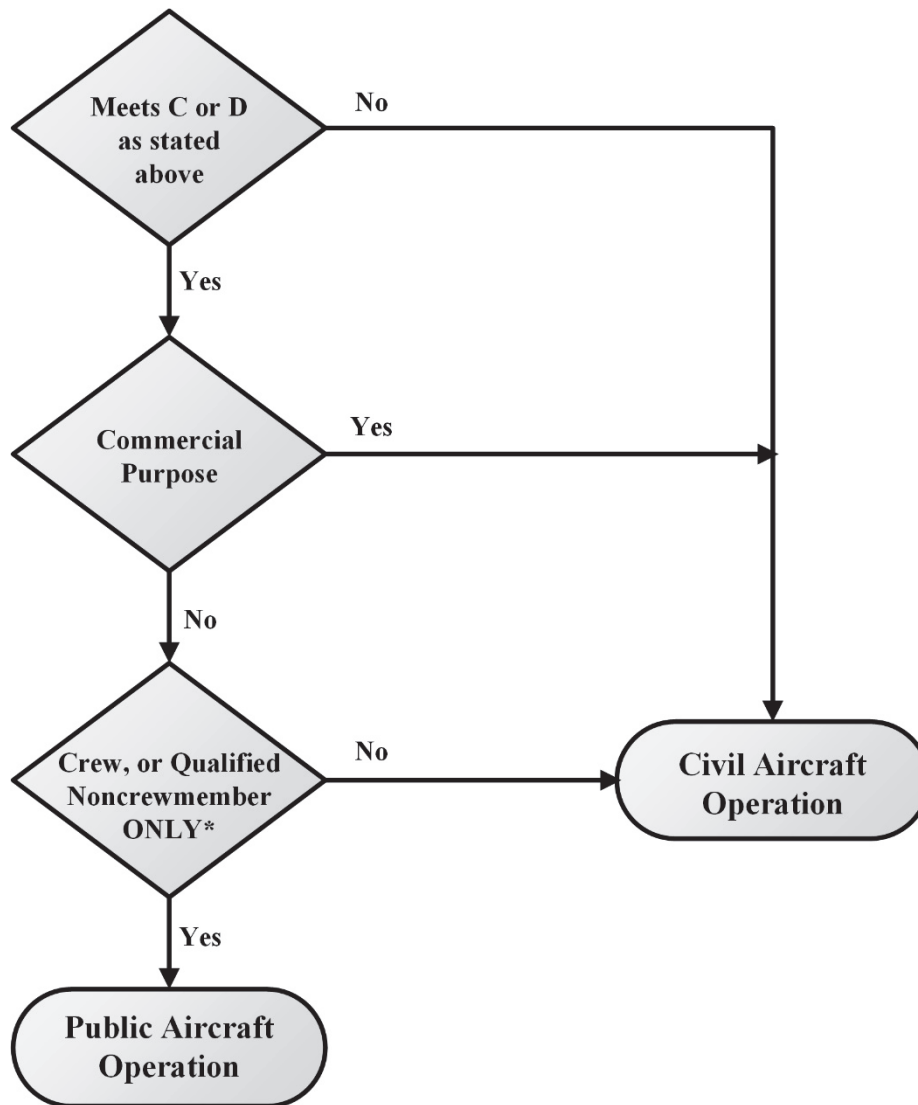
- (A) operated by the Armed Forces or an intelligence agency of the United States Government; or
- (B) whose presence is required to perform, or is associated with the performance of, a governmental function.

Figure 1. Decision Flowcharts for PAO (Continued)

Decision Flowchart for State Government Aircraft Operations

Section 40102(a)(41)(C): An aircraft owned and operated by the government of a State, the District of Columbia, or a territory or possession of the United States, or a political subdivision (as determined by the Attorney General of the State) of one of these governments.

Section 40102(a)(41)(D): An aircraft **exclusively leased for at least 90 continuous days** by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision (as determined by the Attorney General of the State) of one of these governments.



***Citation:**

Section 40125(a)(3) Qualified noncrewmember – The term “qualified noncrewmember” means an individual, other than a member of the crew, aboard an aircraft:

(B) whose presence is required to perform, or is associated with the performance of, a governmental function.

- 13 AC FEEDBACK FORM.** For your convenience, the AC Feedback Form is the last page of this AC. Note any deficiencies found, clarifications needed, or suggested improvements regarding the contents of this AC on the Feedback Form.



Executive Director, Flight Standards Service

APPENDIX A. PUBLIC AIRCRAFT STATUTE

Note: The official statute may be viewed on the website of the Government Printing Office (GPO) at <http://www.gpo.gov/fdsys/browse/collectionUScode.action?collectionCode=USCODE>.

Excerpt from Title 49 of the United States Code (49 U.S.C.) § [40102](#), Definitions:

(a) General Definitions.—In this part—

[...]

(41) “public aircraft” means any of the following:

(A) Except with respect to an aircraft described in subparagraph (E), an aircraft used only for the United States Government, except as provided in section 40125(b).

(B) An aircraft owned by the Government and operated by any person for purposes related to crew training, equipment development, or demonstration, except as provided in section 40125(b).

(C) An aircraft owned and operated by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision of one of these governments, except as provided in section 40125(b).

(D) An aircraft exclusively leased for at least 90 continuous days by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision of one of these governments, except as provided in section 40125(b).

(E) An aircraft owned or operated by the armed forces or chartered to provide transportation or other commercial air service to the armed forces under the conditions specified by section 40125(c). In the preceding sentence, the term “other commercial air service” means an aircraft operation that (i) is within the United States territorial airspace; (ii) the Administrator of the Federal Aviation Administration determines is available for compensation or hire to the public, and (iii) must comply with all applicable civil aircraft rules under title 14, Code of Federal Regulations.

Title 49 U.S.C. § [40125](#), Qualifications for Public Aircraft Status:

(a) Definitions.—In this section, the following definitions apply:

(1) Commercial purposes.—The term “commercial purposes” means the transportation of persons or property for compensation or hire, but does not include the operation of an aircraft by the armed forces for reimbursement when that reimbursement is required by any Federal statute, regulation, or directive, in effect on November 1, 1999, or by one government on behalf of another government under a cost reimbursement agreement if the government on whose behalf the operation is conducted certifies to the Administrator of the Federal Aviation Administration that the operation is necessary to respond to a significant and imminent threat to life or property

(including natural resources) and that no service by a private operator is reasonably available to meet the threat.

(2) Governmental function.—The term “governmental function” means an activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management.

(3) Qualified non-crewmember.—The term “qualified non-crewmember” means an individual, other than a member of the crew, aboard an aircraft—

(A) operated by the armed forces or an intelligence agency of the United States Government; or

(B) whose presence is required to perform, or is associated with the performance of, a governmental function.

(4) Armed forces.—The term “armed forces” has the meaning given such term by section 101 of title 10.

(b) Aircraft Owned by Governments.—An aircraft described in subparagraph (A), (B), (C), or (D) of section 40102(a)(41) does not qualify as a public aircraft under such section when the aircraft is used for commercial purposes or to carry an individual other than a crewmember or a qualified non-crewmember.

(c) Aircraft Owned or Operated by the Armed Forces.—

(1) In general.—Subject to paragraph (2), an aircraft described in section 40102(a)(41)(E) qualifies as a public aircraft if—

(A) the aircraft is operated in accordance with title 10;

(B) the aircraft is operated in the performance of a governmental function under title 14, 31, 32, or 50 and the aircraft is not used for commercial purposes; or

(C) the aircraft is chartered to provide transportation or other commercial air service to the armed forces and the Secretary of Defense (or the Secretary of the department in which the Coast Guard is operating) designates the operation of the aircraft as being required in the national interest.

(2) Limitation.—An aircraft that meets the criteria set forth in paragraph (1) and that is owned or operated by the National Guard of a State, the District of Columbia, or any territory or possession of the United States, qualifies as a public aircraft only to the extent that it is operated under the direct control of the Department of Defense.

(d) Search and Rescue Purposes.—An aircraft described in section 40102(a)(41)(D) that is not exclusively leased for at least 90 continuous days by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision of 1 of those governments, qualifies as a public aircraft if the Administrator determines that—

- (1) there are extraordinary circumstances;
- (2) the aircraft will be used for the performance of search and rescue missions;
- (3) a community would not otherwise have access to search and rescue services; and
- (4) a government entity demonstrates that granting the waiver is necessary to prevent an undue economic burden on that government.

APPENDIX B. CONTACT INFORMATION

B.1 FLIGHT STANDARDS DISTRICT OFFICES (FSDO). If you have a question regarding the application of the information in this AC, please contact your appropriate FSDO. A list of FSDOs and the areas they serve is available on the FAA website at http://www.faa.gov/about/office_org/field_offices/fsdo/.

B.2 POLICY QUESTIONS. If you have an operational policy question, please contact the General Aviation and Commercial Division at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs800/; or at the address below:

General Aviation and Commercial Division (AFS-800)
800 Independence Ave., SW
Washington, DC 20591
Phone: 202-267-1100

B.3 AIRWORTHINESS OR MAINTENANCE POLICY QUESTIONS. If you have an airworthiness or maintenance policy question, please contact the Aircraft Maintenance Division at https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/afx/afs/afs300/; or at the address below:

Aircraft Maintenance Division (AFS-300)
5th Floor, 950 L'Enfant Plaza, SW
Washington, DC 20024
Phone: 202-267-1675

B.4 UAS QUESTIONS. If you have a UAS question, please contact the Unmanned Aircraft Systems Safety and Integration Division (AUS-400) at <https://www.faa.gov/uas/>; or at the address below:

Unmanned Aircraft Systems Safety and Integration Division (AUS-400)
490 L'Enfant Plaza, Suite 3200
Washington, DC 22024
Phone: 844-359-6982

B.5 LEGAL QUESTIONS. If you have a legal question or would like to request a legal interpretation, please contact the Office of the Chief Counsel (AGC) at http://www.faa.gov/about/office_org/headquarters_offices/agc/; or at the address below:

Office of the Chief Counsel
Regulations Division (AGC-200)
800 Independence Ave., SW
Washington, DC 20591
Phone: 202-267-3073

B.6 TRAINING. If you are a government entity and would like to attend an FAA training course, please contact the FAA Academy (AMA-1) at http://www.faa.gov/about/office_of/headquarters_offices/arc/programs/academy/contact/; or the Mike Monroney Aeronautical Center (MMAC) at the address below:

Federal Aviation Administration
AMA-1
Building 12, Room 129
P.O. Box 25082
Oklahoma City, OK 73125
Phone: 405-954-6900

Advisory Circular Feedback Form

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by contacting the General Aviation and Commercial Division (AFS-800) at 9-AFS-800-Correspondence@faa.gov or the Flight Standards Directives Management Officer at 9-AWA-AFS-140-Directives@faa.gov.

Subject: AC 00-1.1B, Public Aircraft Operations—Manned and Unmanned

Date: _____

Please check all appropriate line items:

An error (procedural or typographical) has been noted in paragraph _____ on page _____.

Recommend paragraph _____ on page _____ be changed as follows:

In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

Other comments:

I would like to discuss the above. Please contact me.

Submitted by: _____

Date: _____

49 United States Code [U.S.C.], Section 40102

(41) “public aircraft” means any of the following:

(A) Except with respect to an aircraft described in subparagraph (E), an aircraft used only for the United States Government, except as provided in section 40125(b).

(B) An aircraft owned by the Government and operated by any person for purposes related to crew training, equipment development, or demonstration, except as provided in section 40125(b).

(C) An aircraft owned and operated by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision of one of these governments, except as provided in section 40125(b).

(D) An aircraft exclusively leased for at least 90 continuous days by the government of a State, the District of Columbia, or a territory or possession of the United States or a political subdivision of one of these governments, except as provided in section 40125(b).

(E) An aircraft owned or operated by the armed forces or chartered to provide transportation or other commercial air service to the armed forces under the conditions specified by section 40125(c). In the preceding sentence, the term “other commercial air service” means an aircraft operation that (i) is within the United States territorial airspace; (ii) the Administrator of the Federal Aviation Administration determines is available for compensation or hire to the public, and (iii) must comply with all applicable civil aircraft rules under title 14, Code of Federal Regulations.

(F) An unmanned aircraft that is owned and operated by, or exclusively leased for at least 90 continuous days by, an Indian Tribal government, as defined in section 102 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5122), except as provided in section 40125(b).

3.1.1 Regulatory Environment

A. AMO's aircraft will be operated as public aircraft in accordance with the applicable FAA Advisory Circular FARs and, as appropriate, with provisions established by the DoD. When operating outside the United States, International Civil Aeronautics Organization (ICAO) rules will be observed when they are more restrictive than the FARs.

B. AMO's UAS will be operated as public aircraft in accordance with applicable FARs, as outlined in FAA-issued Certificates of Authorization/Waivers (COA).

C. All of AMO's public aircraft, in accordance with 14 C.F.R. 1.1, is regulated as such under FAA guidelines (See also 49 United States Code [U.S.C.], Section 40102 [37], as amended). Rather than write redundant rules of operation, AMO complies with the standards for operation as established in 14 C.F.R. Part 91, Subparts A, B, C, and D, with the exception of sections written to apply specifically to civil aircraft or where specific exemption from regulation is granted by the FAA.

49 U.S. Code § 40125 - Qualifications for public aircraft status

(a) DEFINITIONS.—In this section, the following definitions apply:

(1) COMMERCIAL PURPOSES.—

The term "commercial purposes" means the transportation of persons or property for compensation or hire, but does not include the operation of an aircraft by the armed forces for reimbursement when that reimbursement is required by any Federal statute, regulation, or directive, in effect on November 1, 1999, or by one government on behalf of another government under a cost reimbursement agreement if the government on whose behalf the operation is conducted certifies to the Administrator of the Federal Aviation Administration that the operation is necessary to respond to a significant and imminent threat to life or property (including natural resources) and that no service by a private operator is reasonably available to meet the threat.

(2) GOVERNMENTAL FUNCTION.—

The term "[governmental function](#)" means an activity undertaken by a government, such as national defense, intelligence missions, firefighting, search and rescue, law enforcement (including transport of prisoners, detainees, and illegal aliens), aeronautical research, or biological or geological resource management.

(3) QUALIFIED NON-CREWMEMBER.—The term "[qualified non-crewmember](#)" means an individual, other than a member of the crew, aboard an [aircraft](#)—

(A)

operated by the [armed forces](#) or an intelligence [agency](#) of the [United States](#) Government; or

(B)

whose presence is required to perform, or is associated with the performance of, a [governmental function](#).

(4) ARMED FORCES.—

The term "[armed forces](#)" has the meaning given such term by [section 101 of title 10](#).

(b) AIRCRAFT OWNED BY GOVERNMENTS.—

An [aircraft](#) described in subparagraph (A), (B), (C), (D), or (F) of [section 40102\(a\)\(41\)](#) does not qualify as a [public aircraft](#) under such section when the [aircraft](#) is used for [commercial purposes](#) or to carry an individual other than a crewmember or a [qualified non-crewmember](#).