UNITED STATES DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC

In the Matter of:	FAA Order No. 99-5
AFRICA AIR CORPORATION	Served: August 31, 1999
	Docket No. CP96EA0044

DECISION AND ORDER[1]

Complainant has appealed from the written initial decision of Administrative Law Judge Ann Z. Cook, in which the law judge held that Complainant had failed to make a prima facie case that Respondent Africa Air had violated 14 C.F.R. §§ 91.7(a),[2] 91.203(c),[3] 91.405(b),[4] and 91.407(a).[5] In its amended complaint, Complainant sought a

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[1] The Administrator's civil penalty decisions are available on LEXIS, WestLaw, and other computer databases. They are also available on CD-ROM through Aeroflight Publications. Finally, they can be found in Hawkins's Civil Penalty Cases Digest Service and Clark Boardman Callaghan's Federal Aviation Decisions. For additional information, *see* 64 Fed. Reg. 43236, 43250 (August 9, 1999).

[2] Section 91.7(a) of the Federal Aviation Regulations provides, "No person may operate a civil aircraft unless it is in an airworthy condition." 14 C.F.R. § 91.7(a).

[3] Section 91.203(c) of the Federal Aviation Regulations provides:

> No person may operate an aircraft with a fuel tank installed within the passenger compartment or a baggage compartment unless the installation was accomplished pursuant to part 43 of this chapter, and a copy of FAA Form 337 authorizing that installation is on board the aircraft.

14 C.F.R. § 91.203(c).

[4] Section 91.405(b) of the Federal Aviation Regulations provides:

> Each owner or operator of an aircraft shall ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

$3,000 civil penalty for the alleged violations of these regulations. On appeal, Complainant argues that a civil penalty of at least $750 is appropriate for violations of Sections 91.405(b), 91.407(a), and 91.7(a) arising from the placement of oil lines in the wings. Complainant asks further that the case be remanded to the law judge for further consideration of evidence that she disregarded concerning the facts giving rise to the alleged violation of Section 91.203(c). As will be explained further in this decision, Complainant's appeal is denied, and the initial decision of the law judge is affirmed.

Africa Air admitted the facts in the first five allegations of the complaint. Africa Air was the owner of a DeHavilland Caribou, DHC-4A, civil aircraft registration number N900NC. On October 12, 1994, Africa Air operated that aircraft from Battle Creek, Michigan, to Sept Isles, Quebec, Canada. Between October 12 and 18, 1994, Africa Air operated the Caribou on at least two local flights in the Sept Isles, Quebec, vicinity. On October 18, 1994, Africa Air operated the Caribou departing from Sept Isles, Quebec, with Frobisher Bay, Quebec, as the intended destination. Due to engine problems, the Caribou made an emergency landing at Kuujjuaq, Quebec. Africa Air intended to operate the aircraft to Zaire, Africa.

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14 C.F.R. § 91.405(b).

[5] Complainant referred to the provisions of 14 C.F.R. § 91.407(a)(2) in the complaint, although it cited to § 91.407(a) generally. Section 91.407(a)(2) provides:

> No person may operate any aircraft that has undergone maintenance, preventive maintenance, rebuilding or alteration unless –
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> (2) The maintenance record entry required by § 43.9 or § 43.11, as applicable, of this chapter has been made.

14 C.F.R. § 91.407(a)(2).

The Fuel Tank. Complainant alleged that during these flights from October 12 through October 18, 1994, a full 500-gallon fuel tank was installed in the main deck cargo/baggage compartment. Africa Air admitted that there was a fuel tank in the cargo/baggage compartment but maintained that it was not connected to any system in the aircraft and was carried as cargo.

Complainant alleged further that the maintenance records contained no entry regarding the installation of an auxiliary fuel tank and that no authorized individual had approved the installation of an auxiliary fuel tank installation. Africa Air responded that no maintenance entry or approval was necessary because the fuel tank was not connected to any aircraft system.

Complainant alleged further that the field installation of an auxiliary fuel tank constitutes a major alteration and, as a result, the execution of a FAA Form 337 was required but there was no FAA Form 337 for this major alteration on board the Caribou during any of the flights in question. Africa Air responded that while certain auxiliary fuel tank installations constitute major alterations when connected or made a part of the aircraft's approved fuel system, "that was not the case here," and consequently, denied that it was required to have a FAA Form 337.

The Oil Drums. Complainant alleged and Africa Air admitted that during these flights, four oil drums were placed in the cargo compartment.

The Oil and Fuel Lines. Complainant alleged that prior to the departure to Frobisher Bay, hoses extending from each wing root had been placed into the Caribou's

wing cavities for transferring oil from the oil drums to the oil reservoir for each engine.[6] Africa Air responded to this allegation about the oil transfer lines as follows:

> Denied, the hoses were placed in various places including wing cavities to keep them out of the way, but were not connected to any system of the aircraft. The oil was carried for replenishing on the ground only by routing the lines outside of the aircraft as there were no connections for an in-flight oil transfer system.

Second Amended Answer, Paragraph 8.

Complainant alleged further that as of October 19, 1994, Africa Air had not made a maintenance entry reflecting the installation of oil or fuel transfer hoses in the wings, and had not obtained an approval from an authorized person for the installation of oil or fuel transfer hoses in the wings. Africa Air denied that any such maintenance entry or approval was necessary because the hoses were not connected to any aircraft system. Africa Air contended that the hoses (did not specify whether these were the oil or fuel transfer hoses) were coiled and placed in the wing cavities.

Complainant alleged that the field installation of fuel or oil transfer hoses in the wings of a civil aircraft is a major alteration. Africa Air replied that there was no installation of an auxiliary fuel system in this instance.

National Transportation Safety Board case. In a related certificate action case, the Administrator suspended the airline transport pilot certificate of the Caribou's pilot, Larry Livingston, for 20 days based upon allegations that Mr. Livingston had violated 14 C.F.R. §§ 91.7, 91.13(a),[7] 91.407(a)(1) and (2), and 91.203(c). NTSB Administrative

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[6] There was no corresponding separate allegation in the complaint pertaining to the placement of the fuel lines.

[7] Section 91.13(a) provides:

Law Judge William Pope issued a written initial decision on July 11, 1996, in which he held that the Administrator had failed to prove by the preponderance of the substantial, reliable, and probative evidence that Mr. Livingston had violated the regulations.[8] The

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> (a) *Aircraft operations for the purpose of air navigation.* No person may operate an aircraft in a careless or reckless manner so as to endanger the life or property of another.

14 C.F.R. § 91.13(a).

[8] Judge Pope framed the issues as follows:

> This case turns on the question of whether an auxiliary fuel and oil system had been installed on N900NC before it made an emergency landing at Kuujjuaq, Quebec, Canada, on October 18, 1994, while it was en route to Africa, where it was intended for humanitarian purposes. There is no dispute that when it landed it had on board in its cargo compartment a 500 gallon steel fuel tank, 4 drums filled with oil, various lines or hoses, two hand pumps, and an electric pump. If these components were hooked up to the aircraft's fuel and oil systems, so fuel and oil could be transferred to the engines in flight, then FAA approval of the installation on a Form 337 and proper maintenance entries were required. If the components were not hooked up to the aircraft systems, then the components were not installed, and a Form 337 was not required for carriage of the components as cargo. There is no dispute that installation of a supplemental oil and fuel system on that aircraft had not been approved by the FAA, and there was no Form 337 covering installation of an auxiliary fuel and oil system on N900NC at that time.

1997 NTSB LEXIS 83, *42-43.

Judge Pope found that the Administrator's witnesses were credible. The Administrator introduced circumstantial evidence to establish that the auxiliary fuel tank and oil drums were connected to the aircraft fuel and oil systems during the flight. At the end of the Administrator's case, the law judge found that the Administrator had put on sufficient evidence, which if unrebutted, would prove that fuel and oil could be transferred from the fuel tank and the oil drums to the aircraft's fuel and oil systems during flight.

The respondent in the NTSB action, Larry Livingston, testified that the fuel tank and the oil drums were not connected to the aircraft's fuel tanks and the oil reservoirs during flight. Judge Pope wrote that Mr. Livingston had testified that when he looked into the wing cavity, he saw that the supply lines from the auxiliary fuel tank and the oil drums were coiled and secured inside the wing cavity, out of the way, without being connected to the aircraft fuel and oil system. Judge Pope found Mr. Livingston to be a credible witness.

The law judge was troubled by the fact that the Administrator did not introduce any evidence based on actual observation concerning where the supply lines went once they disappeared in the wing cavities. He found that the FAA representatives and the Canadian inspector who visited the aircraft simply assumed that the fuel tank and the oil drums were connected to the aircraft's fuel and oil systems.

The law judge found that the evidence in the record equally supported the two contradictory positions of the parties. He stated:

Administrator appealed to the full NTSB, arguing that the law judge overlooked evidence that supported affirmation of the allegations of violations of 14 C.F.R. §§ 91.407 and 91.13(a).

Africa Air filed a motion in the civil penalty action seeking a stay of the proceedings on the grounds of collateral estoppel until the NTSB rendered its final decision in the Livingston case. Judge Cook denied the motion during a prehearing conference. The hearing in the Africa Air civil penalty case was held before the full NTSB issued its decision on the appeal.

Shortly before Judge Cook issued her written initial decision in the Africa Air case, the full NTSB in the Livingston case denied the Administrator's appeal and affirmed the decision of the NTSB law judge. The NTSB held that the alleged violations of Sections 91.407 and 91.13(a) by the pilot had not been proven. Specifically, regarding Section 91.407, the full NTSB held that there was no evidence in the record to establish that the storage of coiled hoses in the wings, unconnected to the aircraft fuel and oil systems, constituted an alteration of the aircraft. 1997 NTSB LEXIS 83, *5.

Africa Air renewed its motion to dismiss on the grounds of *res judicata* and collateral estoppel after the NTSB's final decision was issued. Judge Cook denied the

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> The burden of proof in this case is upon the Administrator to establish by a preponderance of the evidence that there was an unapproved supplemental, or auxiliary, fuel and oil system installed on N900NC, as alleged in the Complaint. Where, as here, there are two equally plausible conclusions, one of which supports the alleged violation, and the other rebuts it, in order to prevail the Administrator must produce evidence which will tilt the balance in his favor. That was not done in this case. ... I specifically find that the Administrator has not proven that it is more probable than not that the Respondent committed the acts which are alleged to be violations of the Federal Aviation Regulations in this Complaint. In the case of a tie, which is, in effect, the situation here, the party with the burden of proof loses. I find that the Administrator has failed to meet his burden of proof in this case, and therefore the Complaint must be dismissed.

1997 NTSB LEXIS 83, *56-57.

motion and noted that she had not considered the NTSB's decision in the Livingston case when she prepared her initial decision. (Initial Decision at n.2.)

The Evidence Introduced in the Civil Penalty Action before Administrative Law Judge Ann Cook against Africa Air.

Testimony of Murry Caldwell. Both Complainant and Africa Air introduced excerpts containing the testimony of Murry Caldwell from the NTSB hearing transcript in the Livingston case.[9] Mr. Caldwell is the holder of a Canadian aircraft maintenance engineer license. Mr. Caldwell testified that he went to see the Caribou at the Kuujjuaq Airport on October 18, 1994, about 30 minutes after it made its emergency landing. He entered the aircraft and observed a large fuel tank and several drums of oil. (Exhibits C-50 and AA-5, vol. 1, at 47.) Regarding the lines from the oil barrels, he testified, "I noticed the lines running across the ceiling and into the wing roots. Just the general appearance of them, nothing specific." (Exhibits C-50 and AA-5, vol. 1, at 71.) He also testified that the line from the fuel tank ran up into and across the ceiling, going into the wing root. (Exhibits C-50 and AA-5, vol. 1, at 55.) He observed 2 12-volt batteries, but he did not know whether those batteries were hooked up during the flight to Kuujjuaq. (Exhibits C-50 and AA-5, vol. 1, at 59.)

Mr. Caldwell reviewed photographs taken on October 19 -- the day after he visited the aircraft -- by Canadian Airworthiness Inspector Ian Stewart, and testified that they generally depicted what he observed on October 18. He testified that none of these

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[9] Complainant introduced Exhibit C-50 containing some of the testimony that Mr. Caldwell gave at the NTSB hearing in the Livingston case. Africa Air introduced Exhibit AA-5, a 4-volume set of transcripts from the Livingston case. Mr. Caldwell's testimony was included in Exhibit AA-5.

photographs depicted any connection to the aircraft fuel system. (Exhibit AA-5, vol. 1, at 87.)

Testimony of Ian Stewart. Both parties introduced transcript excerpts of the testimony of Canadian Inspector Ian Stewart given at the NTSB hearing in the Livingston case. Mr. Stewart testified at that hearing that he observed the Caribou at the Kuujjuaq Airport the day after the emergency landing, took photographs, and spoke with the pilot and other crewmembers. The photographs of the interior of the aircraft, taken on October 19th, showed the 500-gallon cylindrical fuel tank, the 4 oil drums and the various lines from the tank and the barrels extending into the ceiling and the side walls (through spaces created by the removal of interior panels). Mr. Stewart testified that he could not see where those lines went or whether they were attached to any aircraft systems. (*See* Exhibit C-51,at 129.) He assumed, however, that the lines were connected to the aircraft systems. (Exhibit C-51 at 130.) He observed an electric fuel pump in front of the fuel tank and hand pumps for the oil drums. (Exhibit C-51 at 131.) Inspector Stewart asserted that the installation that he saw on October 19, 1994, did not conform to the approved auxiliary fuel system arrangement shown in the Caribou Maintenance Manual. (Exhibit C-52 at 210.)

Inspector Stewart testified that he asked Mr. Livingston, the pilot, whether the fuel tank installation had been used and that Mr. Livingston had replied that that they had not used it on the flight, but had been planning to use it on a couple of legs of the trip over the North Atlantic. (Exhibit C-52 at 172-173, 283.)

Inspector Stewart testified that he asked the crew for a FAA Form 337[10] and was later told that there was no form. (Exhibit C-51 at 132.) He testified that there was no proof of FAA or Designated Engineering Representative (DER) approval for the fuel tank installation in the aircraft cabin or the oil drum transfer set up. (Exhibit C-52 at 184-185.) He also asked for a copy of the logbooks, and was given the aircraft's journey logbook. (Exhibit C-51 at 143, 149, 151.)

Inspector Stewart, in coordination with the Canadian authorities and the FAA, issued an aircraft detention notice. (Exhibit C-51 at 144-145, 147-148.) FAA Inspector Edward Hall directed that the aircraft should not be operated because it did not meet the specifications of its type certificate. (Exhibit C-51 at 146.)

On cross-examination, Inspector Stewart testified that Mr. Caldwell had told him on October 19, 1994, that the crew had been pumping oil by hand in flight. (Exhibit AA-5, vol. 2, at 231, 235-236.) He stated that Mr. Livingston and Mr. Martin[11] had told him that the crew had tried to feed oil during the flight because the engines were losing oil. (Exhibit AA-5, vol. 2, at 235-7, 240.) Inspector Stewart testified that he had no pictures showing any connections of "this system" and that no connections could be seen from inside the cabin. (Exhibit AA-5, vol.2, at 283.)

Testimony of FAA Airworthiness Inspector Edward L. Hall. Inspector Hall testified at the FAA civil penalty hearing before Administrative Law Judge Cook. Inspector Hall, who is based at the Richmond, Virginia, Flight Standards District Office, did not observe the aircraft at any time.

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[10], The attorneys for Africa Air and Complainant stipulated that there were no FAA Form 337s for an auxiliary fuel or oil system. (Tr. 58, 64).

[11] Mr. Martin is the mechanic who was on board during these flights.

Inspector Hall testified that the emergency landing had been caused by a loss of oil pressure in one engine, probably due to a breather problem. (Tr. 62.) He explained that Inspector Stewart had told him that the crew had stated that they had been trying to transfer oil in-flight to the stricken engine. (Tr. 62.)

Inspector Hall prepared a list of items that needed correction before the aircraft could be operated again. He wrote in the correction notice that the fuel and oil lines had to be detached from the aircraft and stowed as cargo, and the batteries had to be removed from the aircraft. (Tr. 64-65.)

Inspector Hall testified that if the auxiliary systems had been installed exactly as described in the Caribou's maintenance manuals, then an entry in the maintenance records and a Form 337 would have been necessary. If an auxiliary system that deviated from the maintenance manual description was installed, then a field approval by a FAA inspector would be necessary as well as the maintenance entries and Form 337. (Tr. 66.)

Inspector Hall examined the auxiliary fuel and oil systems depicted in the maintenance manual and concluded that they differed significantly from the installations in the Caribou (as depicted in the photographs). He explained that the most significant difference is that there were no safety provisions. (Tr. 70; see 72-73.)

According to Inspector Hall, a Form 337 was necessary because the installation of an auxiliary fuel system is an alteration, and alterations have to be done in accordance with approved data. (Tr. 73.) He explained further that the placement of oil lines in the wings of a Caribou, extending from the fuselage to a point next to the oil reservoir would constitute a major alteration necessitating a Form 337. He stated that this would be a major alteration because it would affect the flight characteristics of the aircraft. (Tr. 76.)

He explained that it would not matter whether the hoses were connected; as long as the hoses were placed in the wing root, a Form 337 would be required. (Tr. 79.) He stated that oil lines running between the wing root and the oil reservoir in the wings might interfere with many systems including the engine flight controls, the aileron and the electrical systems that run through the wing, regardless of whether the oil lines were connected. (Tr. 80-81.) He stated that the distance between the wing root inside the fuselage and the oil reservoir in the wing is approximately 6 feet. (Tr. 82.)

Inspector Hall sent a letter of investigation to Africa Air. Archie Newby, a consultant hired by Africa Air, responded. Mr. Newby wrote in pertinent part:

> We did, unwittingly, neglect to submit the proper required paperwork to the FAA and make log entries as required. However, the fuel/oil system had been previously approved for ferry flights and the same system was reinstalled for this flight. We do understand our errors and it will not happen again. We do not feel that the aircraft was operated in an unsafe condition at any time.

(Exhibit C-66.) Counsel for Africa Air at the hearing argued that Mr. Newby's letter was a conciliatory gesture as part of on-going settlement negotiations. (Tr. 87.)[12] Inspector Hall, in contrast, testified that he did not have any settlement discussions with Mr. Newby. (Tr. 89-90.)

On cross-examination, Inspector Hall acknowledged that the photographs taken by Inspector Stewart did not depict any connections of the auxiliary systems to the aircraft. (Tr. 98.)

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[12] The law judge accepted the Newby letter, Exhibit C-66, "knowing that at least Africa Air maintains that there were settlement negotiations ongoing, and this statement may have been made in a conciliatory gesture to try and get rid of the investigation and the action, and so it should be taken with a grain of salt. And since Mr. Newby isn't around to be examined on it, I'm not sure how much weight I'll accord it." (Tr. 88.)

In answer to the law judge's questions, Inspector Hall defined the term "installation" as "put in or attached." He said that to be "installed" means to be more than physically present. (Tr. 158.) Hence, if the fuel tank was in its cradle,[13] it was not installed. *Id.* The fuel tank and the oil drums, he stated, were simply cargo. *Id.* The fuel tank and oil drums, with their associated lines unconnected to the aircraft, would constitute a partial installation, he explained.[14] He stated that he considered a full fuel tank in the main cargo compartment, a pump attached to the tank, and fuel lines running from that tank up into the ceiling of the aircraft to constitute a partial installation. (Tr. 167-168.)

Testimony of FAA Aviation Safety Inspector John Phelps. FAA Aviation Safety Inspector John Phelps testified at the FAA civil penalty hearing. Inspector Phelps testified about his analysis of the Caribou's ability to fly under VFR and IFR conditions along its anticipated route across the North Atlantic.[15] Based upon his calculations, he

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[13] The cradle was strapped in with the existing cargo restraints. (Tr. 157.)

[14] Inspector Hall testified:

> Well, the – if you do a partial installation, it would have to – a partial installation would be lines running in various directions unconnected but, nevertheless, installed. The connections would be immaterial to the alteration of the aircraft. It would be paramount in the ability of the system to work but nevertheless the installation would be a partial installation requiring field approval in that case.

(Tr. 159.) He testified further that a partial installation would still require a Form 337 and a field approval. He stated:

> [I]t would come back to the FAA inspector to look at that partial installation, assure that it was done in accordance with the instructions that were contained in a full installation, and then, because it wasn't a full installation, field approve that partial installation.

(Tr. 160-161.)

[15] The aircraft's anticipated route across the North Atlantic was as follows: Kuujjuaq to Frobisher Bay, Canada; then from Frobisher Bay, Canada, to Sonderstrom, Greenland; then from

asserted that while each of the legs of the trip over the North Atlantic was within the Caribou's fuel capacity assuming VFR weather conditions, the Caribou did not have the fuel capacity to make all of these legs under IFR conditions. (Tr. 176-180.) He testified that a pilot flying across the North Atlantic should anticipate that the weather conditions could change rapidly. (Tr. 183.)

Testimony of Robert W. Lake. Africa Air introduced no live testimony at the FAA civil penalty hearing. In addition to the Livingston transcript portions previously mentioned, Africa Air introduced the remaining portions of the Livingston transcript, including the testimony of Robert Lake before the NTSB.

Mr. Lake was employed by International Jet Charter, which coordinated the trip for Africa Air. (Exhibit AA-5, vol. 3 at 571.) It was his understanding that an auxiliary fuel tank was stowed as cargo on board the aircraft but was not installed. (Exhibit AA-5, vol. 3 at 581.) Mr. Lake explained that the fuel tank and oil drums were on board because aviation fuel and oil were extremely hard to find and were very expensive in Africa. (Exhibit AA-5, vol. 3 at 582, 588.)

Testimony of Larry D. Livingston. Both Complainant and Africa Air introduced the transcript of pilot Larry Livingston's testimony before the NTSB in the Livingston case. (*See* Exhibits C-53 and Exhibit AA-5, vol. 4)[16] Mr. Livingston, who is the holder of an airline transport pilot certificate, had been hired to fly the Caribou to Africa for Africa Air.

Sonderstrom, Greenland, to Reykjavik, Iceland; and then from Reykjavik, Iceland, to Shannon, Ireland. (Tr. 175-176.)

[16] Complainant only introduced selected pages from Livingston's testimony before the NTSB.

Mr. Livingston first flew the aircraft from Battle Creek, Michigan, in early October. He testified that he asked the aircraft mechanic, Mr. Martin, about the fuel tank and the oil drums. Regarding the fuel tank, Mr. Livingston testified:

> [T]he steel tank was to be used in Africa as a storage tank on turnaround missions. Also there were several destinations between Battle Creek and Africa where aviation fuel was either in short supply or nonexistent,.... And so it could be used as a supply tank or resupply tank for ground servicing.
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> I also asked him if there was any additional paperwork needed for this steel tank, Form 337 or other paperwork, and he said no because the tank was not connected and all the components were not there in order to do a system.

(Exhibit AA-5, vol. 4, at 426-427; *see also* at 494-496.) Mr. Livingston claimed that while they were in Battle Creek he ascertained for himself that the lines were not attached to any basic aircraft systems. (Exhibit AA-5, vol. 4, at 427.)

As for the oil drums:

> Two of the barrels were mineral oil, break-in oil for the engines as they were fairly new. The other two barrels were aero Shell 120 weight standard aviation oil. They were to be carried along to replenish the engines with break-in oil, mineral oil, during the flights.
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> The remaining oil was to be used in Africa as aviation 120 is not even obtainable in Zaire.

(Exhibit AA-5, vol. 4, at 427.) He stated that the oil barrels were not connected to the aircraft oil system, so that they did not have the ability to transfer oil from the barrels to the system in flight. (Exhibit AA-5, vol. 4, at 427-428.)

The aircraft departed from Battle Creek and arrived in Sept Isles on October 12, 1994. (Exhibit AA-5, vol. 4 at 429.) On October 18, 1994, they departed from Sept Isles, bound for Frobisher Bay. About 2 ½ hours into the flight from Sept Isles, the right engine low oil quantity light illuminated, indicating that about half of the engine oil had been used. Mr. Livingston determined that something was amiss and decided that continuing to Frobisher Bay was inadvisable. (Exhibit AA-5, vol. 4, at 431-432.) During

the in-flight emergency, Mr. Livingston shut down one engine and ordered the mechanic, Mr. Martin, to jettison the fuel from the steel tank to reduce the weight of the aircraft. Mr. Martin was able to do this without the use of a pump, simply by rigging up a line. (Exhibit C-53 and Exhibit AA-5, vol. 4, at 432-433.)

Mr. Livingston testified that shortly after landing in Kuujjuaq, Mr. Martin began to work on the aircraft to replenish the lost oil.[17] Mr. Martin hooked up a line to the hand pump and then pumped the oil through the line to the oil reservoir. There is an oil reservoir along side each engine. (Exhibit C-53 and Exhibit AA-5, vol. 4, at 434.) Mr. Livingston described the process as follows:

> [I]t's a two-man operation or a three-man operation .... One person has to be ... up inside the airplane, the other person can climb up on a ladder, open the oil filler cap door, take the oil line and place it in the opening from removing the cap and holler "let her go." And the individual inside starts hand-pumping.

(Exhibit AA-5, vol. 4, at 435; *see also* Exhibit C-53 and Exhibit AA-5, vol. 4, at 543.) Mr. Livingston testified that Mr. Martin had been working on the aircraft for about 1 hour before Mr. Caldwell came on board. (Exhibit AA-5, vol. 4, at 440.) He stated that Mr. Caldwell came on board about an hour to an hour and a half after the landing. (Exhibit AA-5, vol. 4, at 441.)

According to Mr. Livingston, the oil pumps were not installed on the oil drums, and the electric fuel pump was not installed on the fuel tank during the flight that ended at Kuujjuaq. (Exhibit AA-5, vol. 4, at 437.) The batteries, he testified, were carried in the forward baggage compartment over the pilot and co-pilot's seat during the flight. (Exhibit AA-5, vol. 4, at 439.)

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[17] Mr. Livingston denied that he had tried to pump oil by hand to either engine during the in-flight emergency. (Exhibit C-53 and Exhibit AA-5, vol. 4, at 522.)

Mr. Livingston testified that Mr. Martin purged the fuel tank of the remaining fuel on the day following the emergency landing. Mr. Martin installed the electric fuel pump after the aircraft landed. (Exhibit AA-5 at 441.) According to Mr. Livingston, the electric fuel pump was being carried to Africa to be used with batteries and a generator, to pump fuel into the aircraft. He said that this pump would work on the ground, but in flight they would have needed a pressure pump. (Exhibit AA-5, vol. 4, at 438, 443.)

Mr. Livingston testified that he spoke with Inspector Stewart about mid-day on October 19th, the day after the emergency landing. He testified that he did not tell Inspector Stewart that he intended to use the auxiliary fuel system to transfer fuel from the tank into the main system during flight. (Exhibit AA-5, vol. 4, at 444.)

According to Mr. Livingston's testimony, the photographs, Exhibits C-7, C-8, C-9, C-10, C-11, and C-12, do not represent the way the interior of the aircraft looked at any time during the flight. (Exhibit AA-5, vol.4, at 446.) For example, Exhibit C-11, depicting the fuel pump attached to the fuel tank and fuel lines running to the ceiling, does not depict the aircraft as it was in flight because prior to Kuujjuaq, the electric pump was stowed, and the batteries were in a storage compartment. Also, the fuel lines were disconnected from the fuel system during the flight, he said. He testified that one end of the fuel line was coiled up in the wing root and the other end was coiled across the sideboards during the flight.[18] (Exhibit AA-5, vol. 4, at 453-454, 457-458, 465-466; Exhibit C-53 at 457-458, 465-466.) He said that the delivery end of the fuel line, approximately 12 to 18 inches of line, was coiled and secured by zip ties just inside the wing cavity. The coils, he testified, were about 6 inches inside the wing. (Exhibit AA-5,

[18] The departure or supply end of the fuel lines, he testified, was secured to the bulkhead in the vicinity of the steel tank. (Exhibit AA-5, vol. 4, at 537.)

vol. 4 at 534-536.) He testified that zip ties secured the coils to the aircraft structure and kept the coils from moving about. (Exhibit AA-5 at 535-536.)[19] He stated that the coiled delivery end of the fuel line in the wing root did not endanger the electrical wiring in the wing. (Exhibit AA-5, vol. 4, at 534-535.) Mr. Livingston stated that prior to the flight from Sept Isles, he had looked into the wing roots and observed that the "lines" were coiled up there but not attached. (Exhibit AA-5, vol. 4, at 467.)[20]

According to Mr. Livingston, during the flight, the oil lines "were stowed alongside the bulkhead on the opposite side, on the oil barrels side. The supply end was run up into the wing root in the vicinity of the oil reservoir."[21] (Exhibit C-53 and Exhibit AA-5, vol. 4, at 466.)[22] He specifically stated that unlike the fuel lines, the oil lines were not coiled in the wing root. (Exhibit C-53 and Exhibit AA-5, vol. 4, at 541.) Mr. Livingston stated that the delivery end was inserted in the wing root in the vicinity of the reservoir and was secured by a metal tie, like a metal clamp, to the wing root bulkhead. (Exhibit C-53 and Exhibit AA-5, vol. 4 at 542-543.)[23]

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[19] He explained that the lines were stowed in this fashion because there was not enough room for all of the lines in the cargo compartment, along with the fuel tank and the oil barrels, and this was necessary to keep the lines out from under foot. (Exhibit AA-5, vol. 4, at 537.)

[20] In light of his subsequent testimony that the *oil* lines were not coiled up in the wing root, but were run from the main cargo compartment to the oil reservoirs, he apparently meant that he saw that the *fuel* lines were coiled up in the wing cavity.

[21] According to Inspector Hall, the distance between the wing root inside the fuselage and the oil reservoir in the wing is approximately 6 feet. (Tr. 82.)

[22] The departure or pump end of the oil line was coiled and stowed along the bulkhead side next to the oil drums (the side opposite the fuel tank.) (Exhibit AA-5, vol. 4, at 538.)

[23] Mr. Livingston testified, "The oil lines were stowed along the bulkhead from the pump end. However a portion of the line laid up into the wing root in the vicinity of the oil reservoir ... for ground servicing." (Exhibit C-53 and Exhibit AA-5 vol. 4, at 542; *see also* Exhibit C-5 and Exhibit AA-5, vol. 4, at 448-451 regarding replenishing oil during ground servicing.)

Administrative Law Judge Ann Cook's Written Initial Decision

Judge Cook held that Complainant failed to present a prima facie case, and that even if enough inferences could be drawn to establish a prima facie case, Africa Air had rebutted Complainant's proof. (Initial Decision at 3.) The law judge noted that Complainant had no witnesses who had personal knowledge about the condition of the aircraft during the flight from Sept Isles ending at Kuujjuaq. The law judge considered it significant that Inspector Hall had never seen the aircraft himself, but was dependent upon his memory of conversations with Mr. Stewart, who did not see the aircraft until the day after the flight. Mr. Stewart's knowledge of the flight came from his conversations with Mr. Livingston and Mr. Caldwell. Mr. Caldwell did not see the aircraft until between 1 hour and 1 ½ hours after it landed at Kuujjuaq. Judge Cook wrote:

> Stewart's knowledge of the condition of the Caribou in flight is entirely speculative and based solely on hearsay. Hall admits that his information is based on the unfounded assumption that the Caribou looked the same in flight as it did the day after the flight when the pictures were taken.

(Initial Decision at 4.)

The law judge wrote further:

> Hall seemed confused as to what would constitute an alteration which would require a Form 337. His testimony seemed to change back and forth as to just what would constitute an alteration. He vacillated to the point where he stated that there could have been a "partial" installation even though this theory had never been brought up in the pleadings or in any prior case law.

Initial Decision at 4-5.

The law judge found Complainant's theory of the case, regarding the fuel tanks, not to be compelling.

> The Complainant's case would logically seem to require the inference that the hoses were attached to the plane and were being used, or at least were capable of being used in flight. Yet, the FAA argues, at points, that there need be no connections for the tank to be installed, even though their own witness has stated that the tank if not connected with hoses is merely cargo.[24]

(Initial Decision at 5.) The law judge found Inspector Phelps's testimony to be even less helpful than Inspector Hall's, and concluded that that the testimony of these FAA inspectors lacked logic, depth, and persuasiveness and deserved minimal weight. (Initial Decision at 5.)

In contrast, the law judge found Mr. Livingston's testimony during the NTSB hearing to be far more useful and insightful because he had been on board the aircraft during the flight. She considered his testimony to be more probative despite the fact that she was not able to evaluate his demeanor and the self-serving nature of his testimony. (Initial Decision at 5-6.) The law judge credited Mr. Livingston's testimony that:

- the steel fuel tank was being carried to Africa as a storage tank for turnaround missions, and as a supply tank during ground servicing between Battle Creek and Africa when the aircraft was in places in which aviation fuel was in short supply;
- there were no connections between the fuel tank and any aircraft system during the flight.
- the electric pump and the hand pump were for ground servicing, and were secured as cargo on the floorboard during the flight;
- the fuel lines were coiled and tied down with bunji cords and zip ties about 6 inches into the wing cavity.
- Livingston never told Stewart that the tanks could be used in flight.
- the fuel tank could not be used in flight
- when Mr. Stewart photographed the aircraft, ground servicing was underway.

[24] Inspector Hall testified that "the tank itself, as far as I am concerned, could be considered

- the photographs did not represent the way the Caribou looked in flight.

The law judge made no specific finding regarding the specific location of the oil lines during the flight.

The law judge rejected Complainant's argument that Africa Air had admitted the violations in the letters written by Archie Newby (Exhibit C-66) and Byron Hudson (Exhibit C-67.) The law judge concluded that these letters were not admissions, were part of an attempted settlement process, and thus, were not appropriate for consideration. (Initial Decision at 6, n.11.)

The law judge wrote:

> I find it persuasive that both of the FAA experts admit that the Caribou was allowed to be returned to service in Kuujjuaq without the necessity of a Form 337, in the same condition in which I find it took off on the flight in question in this proceeding. Since I find that no auxiliary fuel system was installed on the craft, no maintenance entries were necessary to return the craft to service prior to the flight from Sept Isles.

(Initial Decision at 7.) The law judge concluded:

> There is no evidence to suggest that pictures represent how the plane appeared during flight. There is no direct evidence and scant circumstantial evidence to dispute Livingston's testimony. I find that during the flight the fuel tank, oil drums, and other items in question were stowed as cargo, unconnected to any aircraft system of the Caribou. Further, the FAA did not meet its burden to prove that the hoses which could connect the fuel tank and oil drums to aircraft systems while on the ground were improperly stowed during flight. The FAA provided no case law that would suggest that an item such as a hose allegedly improperly stowed could constitute an alteration, which would require a Form 337. I find that all of the items in question were properly stowed as cargo while the Caribou was in flight and therefore that there were no alterations and that no Form 337 was required.

(Initial Decision at 8.)

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cargo, the tank as the oil drums would. (Tr. 158.)

Complainant's Appeal

I. Complainant argues that the law judge incorrectly decided not to consider the admissions in Archie Newby's letter dated December 8, 1994 (Exhibit C-66) and Byron Hudson's letter dated March 22, 1995 (Exhibit C-67) because of her belief that these were generated as part of a settlement process. In making this determination, Complainant argues, the law judge relied upon two pieces of evidence, an affidavit by Robert Lake, dated April 2, 1997, introduced as Exhibit AA-4, and an unsworn letter by Archie Newby, dated October 28, 1996, introduced as Exhibit AA-1. Complainant argues vigorously that Exhibits AA-1 and AA-4 represent unreliable, uncorroborated hearsay containing no indicia of reliability and therefore, the law judge gave undue weight to those letters. Complainant argues further that Africa Air should be estopped from retracting its admissions in Exhibits C-66 and C-67 because Inspector Hall relied upon these exhibits in determining "to abbreviate his investigation of the violation." Complainant's Appeal Brief at 13.

It should be noted preliminarily that the law judge did not indicate in her written decision that she had relied upon Exhibits AA-1 and/or AA-4 in determining that Exhibits C-66 and C-67 were "clearly part of an attempted settlement process." *See* Initial Decision at 6, n.11. Moreover, certainly regarding Exhibit C-67, it is not necessary to look at anything other than its last paragraph to realize that the author, Byron Hudson, Air Africa's Chief Financial Officer, was making a settlement offer to the Assistant Chief Counsel for the Eastern Region.[25] Hence, we need not consider what

[25] In the last paragraph, Mr. Hudson wrote: "We believe that the $3,000.00 penalty is very harsh and unfair, however, we offer a compromise of $1,500.00 which is enclosed to settle this matter."

weight to give to Exhibit AA-1 because it is obvious without it that Exhibit C-67 contained a settlement offer.

As explained in a previous case, "Rule 408 of the Federal Rules of Evidence[26] prohibits the introduction of evidence of settlement offers to prove liability or damages, although evidence of settlement offers may be introduced for other purposes." In the Matter of Mulhall, FAA Order No. 95-16 at 3 (August 4, 1995)(citing Coakely & Williams v. Structural Concrete Equipment, 973 F.2d 349, 353-354 (4th Cir. 1992.)

Moreover, Rule 408 prohibits the admission of statements made in compromise negotiations. The policy behind Rule 408's exclusion of such statements "is to assure that statements and offers made in settlement negotiations do not come back to haunt the party who made them." S. Saltzburg, *et. al.* Federal Rules of Evidence, at 604 (7th ed. 1998). Such protection is necessary to advance the public policy interest in encouraging the free discussions that make dispute settlements possible. *See* Fiberglass Insulators v. Dupuy, 856 F.2d 652, 654 (4th Cir. 1988). To determine whether the statements are covered by the rule, the inquiry is whether the statements were intended to be part of the negotiations for compromise. *Id.;* Ramada Development Co. v. Rauch, 644 F.2d 1097, 1106 (5th Cir. 1981). "The exclusionary rule is designed to exclude the offer of compromise only when it is tendered as an admission of the weakness of the offering party's claim or defense, not when the purpose is otherwise." 2 McCormick on Evidence, § 266, at 196 (4th ed. 1992).

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[26] Rule 408 provides in pertinent part as follows:

> Evidence of (1) furnishing or offering or promising to furnish, or (2) accepting or offering or promising to accept, a valuable consideration in compromising or attempting to compromise a claim which was disputed as to either validity or amount, is not

Rule 408's public policy purpose of encouraging frank settlement discussions is as compelling in FAA civil penalty proceedings as it is in Federal trials. Hence, its guidance will be followed in these proceedings.

In light of the above discussion, it is clear that the law judge did not abuse her discretion when she excluded Exhibit C-67. Not only was it appropriate for her to exclude the offer in the last paragraph to settle this matter for a lesser amount, but it was also appropriate to exclude any admissions contained elsewhere in the letter. While admitting that Africa Air had neglected to take certain actions, Mr. Hudson stated that those failures were done "unwittingly." Thus, it appears that the admission was the prelude to the settlement offer, and hence was excluded properly by the law judge.

Exhibit C-66, the letter written by Archie Newby, dated December 8, 1994, to Inspector Hall, was written in response to Inspector Hall's letter of investigation. Mr. Newby's letter is even more conciliatory than Mr. Hudson's but it does not contain the same explicit compromise offer. It could be argued that public policy would be advanced by the exclusion of such a letter of conciliation. However, it is not necessary to reach a conclusion whether Exhibit C-66 should have been excluded under Federal Rule of Evidence 408. Even if Mr. Newby's conciliatory letter, with its admissions, had been admitted and considered by the law judge, it is most likely that she would have found that the admission had been rebutted by other evidence that she found compelling.

In pertinent part, this letter states:

> We did, unwittingly, neglect to submit the proper required paperwork to the FAA and make log entries as required, however, the fuel/oil system had been previously approved for ferry flights and the same system was reinstalled for this

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admissible to prove liability for or invalidity of the claim to its amount. Evidence of conduct or statements made in compromise negotiations is likewise not admissible.

> flight. We do understand our errors and it will not happen again. We do not feel that the aircraft was operated in an unsafe condition at any time.

(Exhibit C-66.) While this may constitute an admission by a party-opponent as Complainant argues, and therefore, falls outside the scope of the hearsay rule (*see* Fed. R. Evid. 801(d)(2)), that does not tell the judge how much weight to assign to this statement. An evidentiary admission, such as this one, can be rebutted by evidence offered by the party against whom it was introduced. As explained in McCormick on Evidence:

> Evidentiary admissions are to be distinguished from judicial admissions. Judicial admissions are not evidence at all. Rather, they are formal concessions in the pleadings in the case or stipulations by a party or its counsel that have the effect of withdrawing a fact from issue and dispensing wholly with the need for proof of fact. Thus, the judicial admission, unless allowed by the court to be withdrawn, is conclusive in the case, *whereas the evidentiary admission is not conclusive but is always subject to contradiction or explanation.*

2 McCormick on Evidence, § 254, at 142 (4th ed. 1992)(emphasis added.) It has been explained that the most satisfactory reason that evidentiary admissions are considered admissible is because they are the product of the adversary system. (*Id.*, at 141.) Hence, the party opponent will be available to present evidence to explain the admission. (*Id.*, at 140.)

In this case, DOT Administrative Law Judge Cook found Mr. Livingston's live testimony at the NTSB hearing, subject to cross-examination by FAA counsel, that there was no installation, to be compelling. That testimony outweighs the vague and conciliatory statement written by Mr. Newby. Mr. Livingston had first-hand knowledge of the aircraft as it was in flight. Mr. Newby was not present during the flight and had no such first-hand knowledge.

Exhibits C-66 and C-67, even if admitted, would have been inadequate to convert Complainant's very weak evidence that auxiliary oil and fuel systems were installed

during the flight from Sept Isles into a preponderance of the evidence. Complainant had virtually no evidence of an actual installation of an oil or fuel auxiliary system. The photographs, taken during servicing a day and half after the flight did not show any actual connections to the aircraft, and even if they did, that would not prove the condition of the aircraft during the flight. Inspector Hall did not have any personal knowledge regarding the condition of the aircraft during the flight. His belief that the auxiliary systems were connected during flight was based upon multiple hearsay – upon a statement by Inspector Stewart based upon a conversation with the crewmembers. Such multiple hearsay is deserving of minimal weight.

Consequently, Complainant's request that the case be remanded to the law judge for consideration of Exhibits C-66 and C-67 is denied.

II. Complainant also argues on appeal that Administrative Law Judge Cook should have found that the oil lines extended through the wings based upon the testimony of Larry Livingston. Complainant notes further that Inspector Hall testified that the oil lines could have interfered with the various components that run through the wing cavities. Hence, Complainant argues, the placement of the oil hoses in the wing cavities – even if unconnected to any system -- constituted a major alteration under the definition of that term as set forth in 14 C.F.R. § 1.1. Complainant argues that a maintenance record entry was necessary, as well as the completion of a Form 337 and a field approval by a FAA inspector. Complainant argues further that the placement of the oil lines in the wing cavities alters the configuration and type design of the aircraft, and consequently, the aircraft was unairworthy. As a result, Complainant argues, the law judge should have found that Africa Air violated 14 C.F.R. §§ 91.405(b), 91.407(a), and 91.7(a).

Inspector Hall did indeed testify that the placement of the oil lines in the wings constituted a major alteration. However, the law judge found that Inspector Hall's testimony lacked depth, logic and persuasiveness, and no reason has been presented for the Administrator to reverse that assessment by the law judge.

Complainant failed to prove that this was a major alteration. Under 14 C.F.R. § 1.1, a major alteration is defined as:

> [A]n alteration not listed in the aircraft, aircraft engine, or propeller specifications --
>
> (1) That might appreciably affect weight, balance, structural strength, performance, powerplant operation, flight characteristics, or other qualities affecting airworthiness; or
>
> (2) That is not done according to accepted practices or cannot be done by elementary operations.

Complainant argues that Inspector Hall's testimony established that it is possible that the oil lines, even if not connected to any aircraft system, could interfere with the flight characteristics of the aircraft. Inspector Hall testified vaguely that there are several systems – engine controls, flight controls, aileron, and electrical systems in the wings with which oil lines, even if unconnected, might interfere. Inspector Hall never looked inside the wing – indeed, he never saw the aircraft – so his opinion was not based upon any personal knowledge pertaining to the whereabouts of the oil line relative to the controls in the wing. Moreover, he did not explain the proximity of these controls to the oil lines. Hence, his opinion regarding the theoretical possibility that the oil lines might interfere with the flight control was lacking in logic, depth and persuasiveness.

The NTSB cases that Complainant cited in support of its position that the unconnected oil lines in the wings constitute a major alteration do not support that proposition. The initial decision of Administrative Law Judge Thomas Reilly in

Administrator v. Sprague, SE-6040, 1984 NTSB LEXIS 293 (April 11, 1984), appeal dismissed for failure to perfect, NTSB Order No. EA-2047, NTSB LEXIS 156 (July 23, 1984), is not helpful to Complainant's argument. In Sprague, a medical oxygen system had been installed in a helicopter. The law judge explained that there was a "solid bolted mount of the clamp brackets to the aircraft structural supports" for the oxygen bottles. 1984 NTSB LEXIS 293, *8. While the oxygen bottles necessarily were easily removable (so that they could be replaced when depleted), the installation mounting was permanent. Because the triple bottle oxygen system installation affected the helicopter's weight and balance and presented a safety hazard, the law judge held that this was a major alteration. In contrast, the oil lines were not installed in the wings, but instead 6 feet of oil line was run into each wing, attached to the supports with metal ties to keep them out of the way. Moreover, Complainant failed to prove that the storage of part of the oil lines in the wings had a potential effect on the flight characteristics of the aircraft.

Administrator v. Apollo Airways, 5 NTSB 1284 (July 28, 1986), cited by Complainant, is even less helpful to its case. In Apollo Airways, the respondent had installed an over-voltage meter protection device into the aircraft's electrical system. The device could be used only on the ground to protect the airplane's electrical systems from an overcharge of electrical current. It was disengaged after use and before the airplane's engines were activated. Complainant alleged that that the installation of this device constituted a major alteration requiring a supplemental type certificate, and as a result, respondent violated 14 C.F.R. § 21.113,[27] 135.437(b), 43.5(b), 43.9, 91.29(a) and 135.25(a)(2). The full Board held:

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[27] Section 21.113 provides:

> In light of the fact that the respondent's exercise of a judgment that installation of the device is not a major alteration or a change to the basic design of the aircraft has merit, and in light of the fact that respondent did apply for a supplemental type certificate after being informed by the FAA that it considered the installation of the device to be a major alteration, the Board finds that the violation was not established. Moreover, we do not find that respondent's application for a supplemental type certificate is an admission that the device is in fact an alteration to the basic design.

5 NTSB at 1292-1293. If anything, this case seems to favor the position taken by Africa Air.

Complainant also argued that Administrator v. Fuller and Clemence, NTSB Order EA-4058, 1994 NTSB LEXIS 8 (January 7, 1994) supports its position. Once again, this case is not helpful for Complainant. This decision was in an Equal Access to Justice Act case, arising from a certificate action case involving the installation of an auxiliary fuel tank. In that case, the Board held that the Administrator had had a reasonable basis for its position that the installation was a major alteration that should have been accomplished in accordance with published approved data. However, while a Form 337 is necessary for the installation of an auxiliary fuel tank (*see* Section 91.203(c)) and the Administrator in that case may have had a reasonable basis for contending that the installation of an auxiliary fuel tank constitutes a major alteration, that does not answer the question whether 6 feet of unconnected oil lines stored in the wings constitutes a major alteration.

Another case cited by Complainant was In the Matter of Woodhouse, FAA Order No. 94-2 (March 10, 1994) in which the Administrator held that the installation of 2 fuel

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> Any person who alters a product by introducing a major change in type design, not great enough to require a new application for a type certificate under § 21.19, shall apply to the Administrator for a supplemental type certificate, except that the holder of a type certificate for the product may apply for amendment of the original type certificate. The application must be made in a form and manner prescribed by the Administrator.

14 C.F.R. § 21.113.

manifolds in a hot air balloon rendered the balloon unairworthy. Once again, the uninstalled oil lines in the Caribou are distinguishable from the installed fuel manifolds in Woodhouse.

Hence, Complainant has failed to present either a persuasive witness or compelling case law to support its position that the 6 feet of unconnected oil lines stored in the wings constituted a major alteration requiring a Form 337.

In light of the foregoing, Complainant's appeal from the initial decision of Administrative Law Judge Ann Cook is denied.[28]

JANE F. GARVEY, ADMINISTRATOR
Federal Aviation Administration

Issued this 23rd day of August 1999.

[28] Unless Respondent files a petition for review with a Court of Appeals of the United States within 60 days of service of this decision (under 49 U.S.C. § 46110), this decision shall be considered an order assessing civil penalty. *See* 14 C.F.R. §§ 13.16(b)(4) and 13.233(j)(2) (1999).