

Preliminary Report on an Accident involving A Sikorsky S76c+ Helicopter with nationality and registration marks 5N-BQG operated by East Wind Aviation Logistics Services Limited, which Occurred in the Atlantic Ocean Southeast of Eket, Bight of Bonny, Nigeria on 24 October 2024

Operator:	Eastwind Aviation Logistics Services Limited
Aircraft type and model:	Sikorsky S76C+
Manufacturer:	Sikorsky Aircraft Corporation
Year of manufacture:	1998
Nationality and registration marks:	5N-BQG
Serial number:	760486
Location:	Southeast of Eket, Bight of Bonny (04°13'37"N, 008°19'22"E)
Date and Time:	24 October 2024 at about 11:25 h <i>All times in this report are local time (UTC +1) unless otherwise stated</i>



INTRODUCTION

The Nigerian Safety Investigation Bureau (NSIB) was notified of the occurrence by the operator, Eastwind Aviation Logistics Services Limited, on 24 October 2024. Investigators were dispatched to the site the next day and commenced post-occurrence assessment under the provisions of the Civil Aviation (Investigation of Air Accidents and Incidents) Regulations 2023 and Annex 13 to the Convention on International Civil Aviation.

This preliminary report provides details of the initial facts, discussions, and findings surrounding the occurrence. It includes information gathered from witness statements, Cockpit Voice Recorders, ATC transcripts, and preliminary inspections of the site and the aircraft.

The investigation is ongoing.



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1.0 FACTUAL INFORMATION

1.1 History of the flight

On 24 October 2024, a Sikorsky S76C+ Helicopter with nationality and registration marks 5N-BQG operated by Eastwind Aviation Logistics Services Limited was on a drop-off and pick-up operation of oil workers to Nuim Antan, a Floating Production Storage and Offloading (FPSO) facility located near the Bight of Bonny in the Atlantic Ocean.

At 10:40 h, 5N-BQG requested Start-up clearance from Port Harcourt Military (DNPM) Ground Control for departure to Nuim Antan to maintain 1,500 ft on QNH. Eight persons, including two flight crew, were on board, with a fuel endurance of two hours and fifteen minutes. Start-up clearance was granted, which was acknowledged by the flight crew of 5N-BQG. The Captain was the Pilot Flying (PF), and the First Officer was the Pilot Monitoring (PM).

At 10:43 h, 5N-BQG requested runway 22 Arik link from Tower and was instructed to hold short runway 22.

At 10:45 h, the Duty Air Traffic Control Officer (DATCO) issued take-off clearance to 5N-BQG for Visual Flight Rules (VFR) as follows: *5N-BQG in position cleared Port Harcourt Military to Alakri for Nuim Antan 1500 feet on QNH 1012. Surface wind reported variable 02 knots, runway 22 clear lift.*

At 10:47 h, 5N-BQG was airborne and gave estimates to Alakri at 10:52 h and Nuim Antan at 11:32 h, which the DATCO acknowledged.

At 10:52 h, 5N-BQG reported checking the Alakri control zone boundary out and two-way communication with Airworks, to which the DATCO requested the flight crew report re-joining.

At 10:58:36 h, the PF informed the PM, *"You know what we are going to do is to maintain this heading until we pass here, and then we will turn right,"* which the PM acknowledged.

At 11:06:36 h, 5N-BQG contacted Nuim Antan and passed its traffic information as *Quebec Gulf from the NAF base Port Harcourt airborne zero niner four six maintaining one thousand five hundred feet. We are estimating your station one zero three zero one*



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zero three zero. We have six passengers for you, endurance at this time, one plus five, standing by your current weather payload deck clearance.

At 11:07:46 h, Nuim Antan contacted 5N-BQG and asked them to repeat their Estimated Time of Arrival (ETA). The flight crew of 5N-BQG relayed their ETA to Nuim Antan at 11:30 h. Nuim Antan relayed up-take payload information as six passengers and some luggage with a total payload of 1318 pounds (Lbs), which was acknowledged by 5N-BQG.

At 11:08:27 h, 5N-BQG requested the current weather information at Nuim Antan and was asked to stand by.

At 11:08:48 h, Weather information was relayed to 5N-BQG as *Wind 180°/08 kts, visibility five miles, cloud one thousand two hundred, temperature 27° C and QNH 1015 hPa with an approaching cloud from the East bearing an easterly direction* which was acknowledged by the flight crew of 5N-BQG.

At 11:10:29 h, There was a brief discussion between the PM and the PF in which the PM said *Sir, it's that weather that I was telling you about that was building up.* The PM then asked the PF whether he was comfortable with the earlier payload of 1318 Lbs at Nuim Antan, which the PF did not acknowledge. The PM continued with the conversation by asking the PF *Are you hearing me, Sir,* to which the PF replied sternly, *I can hear you standby* which the PM acknowledged.

At 11:11:36 h, the PF instructed the PM to inform Nuim Antan about the decision to reduce the earlier payload given to them from 1318 Lbs to 1300 Lbs, which the PM acknowledged.

At 11:11:40 h, the PM contacted Nuim Antan and relayed the information about the decision to reduce 18 Lbs from the up-take payload at Nuim Antan, which was acknowledged.

At 11:12:25 h, Nuim Antan informed 5N-BQG that the two wind socks were down, which was acknowledged. The PF then remarked, "Zero Socks." At 11:12:41 h, Nuim Antan reported having light shower on deck and promised to revert to the flight crew of 5N-BQG if the weather further deteriorated, which was acknowledged by 5N-BQG.



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At 11:17:24 h, The PF asked the PM to set the course. The PM said, *"Descending call approach"*, and the PF replied in the affirmative. This was followed by a radio call. *All stations on one three one six five Quebec golf is ehh showing ah one four miles northwest of the Nuim Antan landing in five minutes next call lifting* which Nuim Antan acknowledged. The PM asked the PF about descending, and the PF replied by instructing the PM to wait for a moment, which was acknowledged.

At 11:18:00 h, the PF made a remark, *"Okay, descend."* The PM asked the PF whether 200 ft/min vertical speed was okay, and the PF replied in the affirmative.

At 11:18:55 h, the PF started to show concern in a brief discussion with the PM regarding the weather information earlier given to them as incorrect. The PF then instructed the PM to call the Nuim Antan. The PM immediately contacted the Nuim Antan and requested the prevailing wind direction, which was acknowledged.

At 11:19:25 h, The PF expressed concern about the wind tending towards 240° in a northerly direction, and the PM concurred.

At 11:19:45 h, Wind information was relayed by Nuim Antan as 045°/10kts, which was acknowledged.

At 11:20:07 h, the PF and the PM briefly discussed whose landing it was going to be. The PM suggested that the PF land the aircraft due to the current wind direction of 045°/10kts, as the orientation of the helideck bearing is 220°.

At 11:20:41 h, the PF made a remark about the weather: *Eight miles broken, you can't see nothing*. The PM replied, *"Sir, confirm we are not diverting from here,"* which was not acknowledged by the PF.

At 11:21:48 h, The PM called out *altitude captured*, which the PF acknowledged.

At 11:22:41 h, the PF instructed the PM to set the altitude to 2000 ft, initiate a climb, disengage Airspeed hold, and engage altitude pre-select again to 2000 ft so that they could return to DNPM, which the PM acknowledged in the affirmative.

At 11:23:32 h, the PM made a remark about the weather. *He said, "It's a light shower"*, followed by a sarcastic chuckle. The PF made a remark, *"Climb, Climb, Climb,"* to which the PM replied, *"We are climbing, eh."* The PM advised the PF that the only way to climb was to engage airspeed mode and use the collective.



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At 11:23:45 h, the PM further advised the PF, *"Hold there, left pedal put left pedal Okay."* The PM then suggested to the PF whether the vertical speed (rate of climb) could be increased to 300 ft/min, which the PF acknowledged in the affirmative, *"Yeah, increase it."*

At 11:24:52 h, the PM remarked, "This thing is not working ...". This was followed by an aural warning from the aircraft, "Bank angle, Bank angle," which was the last recorded data on the CVR.

At About 11:25 h, a person on duty at Nuim Antan reported to the Helicopter Landing Officer (HLO) that he saw a helicopter from the western route with thick smoke emanating from the engine ditch into the water. The personnel stated that the helicopter appeared to be struggling to gain balance right before it crashed into the ocean. The HLO reported calling 5N-BQG via radio three times, but there was no response, so they immediately made a PAN PAN call. Search and rescue operation was activated involving combined efforts by the Nigerian National Petroleum Corporation Limited (NNPCL), Nigerian Navy, Nigerian Safety Investigation Bureau (NSIB), HD PIONEER Hydro Drive, Nigerian Maritime Administration and Safety Agency (NIMASA) and several ships that were sailing around the vicinity of the accident site.

5N-BQG had crashed into the ocean, and all its eight occupants were fatally injured.

The accident occurred at 11:25 h in daylight.

1.2 Injuries to persons

Injuries	Crew	Passengers	Total in the aircraft	Others
Fatal	2	6	8	Nil
Serious	Nil	Nil	Nil	Nil
Minor	Nil	Nil	Nil	Nil
None	Nil	Nil	Nil	Nil
Total	2	6	8	Nil

1.3 Damage to aircraft

The helicopter was destroyed.



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Figure 1: Helicopter wreckage after recovery from the ocean

1.4 Other damage

Not Applicable.

1.5 Personnel information

1.5.1 Captain

Nationality:	Nigerian
Age:	55 years
Licence type:	Airline Transport Pilot License (H)
Licence:	valid till 25 August 2029
Aircraft ratings:	Part 1: Sikorsky SK76, S76C+, S76C++
Medical certificate validity:	valid till 22 February 2025
Simulator validity:	valid till 18 April 2025
Instrument rating:	valid till 18 April 2025



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Proficiency check:	Not available
Total flying time:	4687 h
Total on type:	3972 h
Total on type (PIC):	2414 h
Last 90 days:	264:24 h
Last 28 days:	80:25 h
Last 7 days:	25:08 h
Last 24 hours:	5:33 h

1.5.2 First Officer

Nationality:	Nigerian
Age:	35 years
Licence type:	Commercial Pilot License (Helicopter)
Licence validity:	16 August 2029
Aircraft ratings:	Part 2: Sikorsky SK76, S76C+, S76C++
Medical certificate:	valid till 30 June 2025
Simulator Validity:	valid till 18 April 2025
Instrument rating:	valid till 18 April 2025
Proficiency check:	11 January 2026
Total flying time:	1718: 42 h
Total on type:	1411 h
Last 90 days:	264:24 h
Last 28 days:	80:25 h
Last 7 days:	25:08 h
Last 24 hours:	5:33 h

1.5.3 Engineer

Nationality:	Nigerian
Age:	33 years
Licence type:	Aircraft Maintenance Engineer License
Licence validity:	17 January 2028



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Aircraft ratings: Sikorsky S76C+, S76C++ (TURBO MECA
ARRIEL) 2S1/2S2 Engines

1.6 General information

1.6.1 Aircraft information

Type: S76C+
 Manufacturer: Sikorsky Aircraft Corporation
 Date of manufacture: 1998
 Serial no: 760486
 Operator: Eastwind Aviation Logistics
 Services Limited
 Registration number: 5N-BQG
 Certificate of airworthiness: valid till 30 December 2024
 Certificate of insurance: valid till 7 March 2025
 Certificate of registration: 30 May 2022
 Noise certificate: 13 December 2012
 Airframe time: 2783 h
 Cycles since new (CSN): 5921

The Aircraft Radio Altimeter (Radalt) was snagged and deferred on October 18, 2024, six days before the accident.

1.6.2 Engines

Engine	Number 1	Number 2
Manufacturer	Turbomeca	Turbomeca
Type/Model	Arriel 2S1	Arriel 2S1
Serial number	20051	20547 TEC
Time Since New	8027 h	9340 h
Cycle Since New	Not Available	Not Available
Power Turbine Time	11913.8	15080.1

Fuel type used: Jet A-1



Figure 2: FPSO NUIM ANTAN Helideck

1.11 Flight Recorders

The helicopter was not fitted with a Flight Data Recorder (FDR). The Nigeria Civil Aviation Regulations (Nig. CARs) 2023 Part 7.8.2.2(q) requires all helicopters with a maximum take-off mass of over 3,175kg and up to 7,000kg shall be fitted with an FDR.

A Solid State Cockpit Voice Recorder (CVR) was fitted on the helicopter with the following particulars:

Recorders	Flight Data Recorder	Cockpit Voice Recorder
Manufacturer	Nil	Universal Avionics Systems Corporation
Model	Nil	SSCVR
Part Number	Nil	1602-01-03
Serial Number	Nil	659



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The Cockpit Voice Recorder (CVR) was recovered from the seabed at the accident site on 8 November 2024, the 13th day after the accident. Upon recovery, the CVR was immersed in fresh water in a container and transported to the flight recorder laboratory of the National Transportation Safety Board (NTSB) of the United States of America for readout and analysis. The last 31 minutes of the CVR recording were successfully downloaded.

1.12 Wreckage and impact information

The aircraft crashed into the Atlantic Ocean and disintegrated. The main wreckage was found at Coordinates 04°13'37" N 008°19'22" E at a depth of 42 m.

While approaching the crash area, fuel was observed on the surface water. Helicopter debris and some personal belongings of the flight crew and passengers were scattered all over the area.

The Search and recovery operation continued day and night for 14 days. It was characterised by violent oceanic currents and waves, heavy rains, and strong winds.

1.13 Medical and pathological information

Medical and pathological tests are being conducted on the five bodies recovered from the crash site.

1.14 Fire

There was no post-impact fire.

1.15 Survival Aspect

The occurrence was not survivable as the helicopter disintegrated upon impact with the water surface and its various parts scattered. The crash occurred in the ocean about 1.4 km from NNPC FPSO (Nuim Antan) at the Bight of Bonny Finima. Some life vests and three bodies were recovered from the crash area. Some of the bodies recovered had inflated life vests on them. Further perimeter search was carried out, and no additional



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persons or bodies were recovered on the day of the occurrence. The three recovered bodies were transported to Nuim Antan and handed over to the medical team.

The search and recovery radius used was based on eyewitness accounts. The helicopter sank to a depth of about 42 meters. In total, five bodies of the passengers were recovered, while three bodies, including the flight crew and one passenger, are yet to be found.

1.16 Test and research

A Spectrum analysis of the latter portions of the CVR recording was conducted at the NTSB laboratory.

The following components of test and research are to be conducted:

1. Download and Analysis of the Full Authority Digital Engine Control (FADEC).
2. Download and Analysis of Enhanced Ground Proximity Warning Systems (EGPWS).
3. Disassembly/tear-down of the main rotor assembly and gearbox.
4. Disassembly/tear-down of both Engines.
5. Simulation of the flight conditions.

1.17 Organisational and management information

1.17.1 Eastwind Aviation Logistics Services Limited

Eastwind Aviation Logistics Services Limited is an operator based in Ikeja, Lagos. The Nigeria Civil Aviation Authority issued it an air operator certificate (AOC). It conducts Non-scheduled Charter, Premium corporate travel, and Oil and gas logistics support. It has one Sikorsky helicopter, S76C+ (5N-BQG), to conduct its flight operations.



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1.17.2 Nigeria Civil Aviation Authority

Under Section 8 (3) of the Civil Aviation Act 2022, the Nigeria Civil Aviation Authority (NCAA) is the sole civil aviation regulatory body in Nigeria; this is notwithstanding anything contained in any other law.

It became autonomous with the passing into law of the Civil Aviation Act 2022 by the National Assembly and its assent by the President of the Federal Republic of Nigeria. The Act not only empowers the Authority to regulate Aviation Safety without political interference but also to carry out oversight functions of Airports, Airspace, Meteorological Services, etc., as well as economic regulations of the industry.

A series of well-coordinated procedures and rules used by the NCAA to ensure safety and economic regulatory standards in the aviation industry include Inspection, Operation, Certification, Licensing, Monitoring, Sanction, and Enforcement.

Currently, the country has about 31 airports. There are about 39 AOC holders (for scheduled and non-scheduled flight operations), and about 28 foreign airlines operate in Nigeria.

Going by the Licence Crew Data for Total Current (With Valid License) as of April 2024: License Pilots, 2,049; Certification of validation for Pilots, 63; Aircraft Maintenance Engineer's Licence, 2,061; Aircraft Maintenance Engineer's Licence with validation, 102; Aircraft Dispatchers' Licence, 840; Air Traffic Controllers (ATC), 420; Cabin Crew Licence, 3,770; Air Traffic Safety Electronic Personnel Licence, 443; and Aeronautical Station Operators' Licence, 161.



2.0 FINDINGS

1. The flight crew were certified to conduct the flight.
2. At the initial stage of the flight, the Captain was the Pilot Flying while the First Officer was the Pilot Monitoring.
3. The helicopter had a valid Certificate of Airworthiness.
4. A Visual Flight Rules (VFR) flight plan was filed.
5. Five bodies identified as the passengers were recovered, while the remaining three occupants of the helicopter, including the flight crew, are yet to be found.
6. The helicopter was fitted with a solid-state cockpit voice recorder.
7. The helicopter was not fitted with a Flight Data Recorder (FDR), although Part 7.8.2.2(q) of Nigeria Civil Aviation Regulations (Nig. CARs) 2023 requires that FDR shall be fitted on the helicopter.
8. The flight crew used non-standard phraseology throughout the flight.
9. There were no standard callouts for the various phases of the flight.
10. The helicopter Radio Altimeter (Rad alt) was snagged and deferred on October 18, 2024, six days before the accident.
11. No dew point data was reported in the weather information passed to 5N-BQG on the day of the occurrence.



3.0 IMMEDIATE SAFETY RECOMMENDATIONS

3.1 Safety Recommendation 2024-049

Nigeria Civil Aviation Authority should ensure strict compliance to the Nigerian Civil Aviation Regulations (Nig. CARs) 2023 part 7.8.2.2(q) which requires that all helicopters with a maximum takeoff mass over 3175 kg and up to 7000 kg to be fitted with a Flight Data Recorder (FDR).

FURTHER INVESTIGATIVE ACTIONS

1. Further tests and examination of relevant components
2. Compilation of the final report.