NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety Washington, D.C. 20594

Attachment 6 - ATC Transcripts

OPERATIONS/HUMAN PERFORMANCE SUPPORT TO THE U.S. ACCREDITED REPRESENTATIVE

DCA10RA092

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A. ACCIDENT

Operator:	United Parcel Service (UPS) Flight 6
Location:	Dubai, United Arab Emerates
Date:	September 3, 2010
Airplane:	Boeing 747-400

B. SUMMARY

At about 8:00 pm local time (1600 UTC), United Parcel Service (UPS) Flight 6, a Boeing 747-400F (N571UP), crashed on approach to Dubai International Airport (DXB), Dubai, United Arab Emirates (UAE). The flight had departed from Dubai approximately 45-minutes earlier enroute to Cologne, Germany, but the flight crew declared an emergency and requested an immediate return to DXB. The airplane reportedly impacted inside an Emirati air base near a busy highway intersection, approximately 9 miles from Dubai's international airport. The two flight crew members were fatally injured. The airplane was being operated as a scheduled cargo flight from Dubai, UAE to Cologne, Germany.

C. OPERATIONS/HUMAN PERFORMANCE TECHNICAL ADVISORS

Captain David Lawrence Air Safety Investigator National Transportation Safety Board 490 L'Enfant Plaza East S.W. Washington, DC 20594

Mr. Eric West Air Safety Investigator Federal Aviation Administration (FAA) 800 Independence Ave. S.W. Washington, DC 20591 Dr. Katherine Wilson Human Performance Investigator National Transportation Safety Board 490 L'Enfant Plaza East S.W. Washington, DC 20594

Captain Thomas Lange Senior Safety Pilot The Boeing Company P.O. Box 3707 MC 14-HA Seattle, Washington 98124-2207 Captain Phillip Spiker Assistant Chief Pilot, B747-400 United Parcel Service 825 Lotus Avenue Louisville, Kentucky 40213-3101 Captain Martin Hinshaw Captain, 747-400 Independent Pilots Association 6200 Lockheed Anchorage, Alaska 99502

D. Bahrain ATC Transcripts

INVESTIGATION BOARD REPORT UPS6 Aircraft Accident Bahrain ATC Investigation 3 September 2010 @ 1511UTC.

1. Incident Investigation Board.

1.1 Vinesh Dulabh – STO - Bahrain

2. Date of Investigation.

- 2.1 3rd September 2010
- 3. Documentation
- 3.1 Copy of Flight Progress Strips
- 3.2 Occurrence Report
- 3.3 ATCO statement.

4. Aircraft Involved

4.1 UPS6 B744 OMDB EDDK FL320 SQK0526

5. ATCO's Involved

- 5.1 Richard Phillips. License # 3040 ATCO on 132.12
- 5.2 Corne Venter. License # 2052 ATCO on Coordination
- 5.3 Ahmed Bucheery. License # 674B Initial Coordination and Crew Supervisor.

6. Frequency

6.1 Frequency in use was 132.12 MHz - Bahrain Area East Control



UPS6 Accident

7. Summary of Events. (All times in UTC)

- 1. 1511 UPS6 checked on with Bahrain on climb to FL320 and was given a route clearance through the Bahrain FIR.
- 1513. UPS6 informed Bahrain of a fire indication on the main deck and of the need to land as soon as possible. UPS6 was offered a diversion to Doha (OTBD) International Airport. The pilot requested to return to Dubai and at that time, declared an emergency. UPS6 was given a right turn back to Dubai and was issued an initial descent to FL280.
- 1514. The pilot requested an emergency descent and reported what sounds like "on fire". UPS6 was given further descent to FL270.
- 4. 1515. UPS6 reported that he needed to descend to 10 000 feet and was so cleared by ATC. Conflicting traffic IAW127 was vectored out of the way.
- 1517. UPS6 reported what sounds like "full cockpit of smoke" and requested the fire equipment to be on standby in Dubai. There were several transmissions to UPS6 including attempts transfer UPS6 to UAE ACC frequency.
- 1521. The pilot called Mayday, and told ATC that he could not see his radios and therefore could not change frequencies. The ATCO then relayed altitude clearances via other aircraft (FDB751, FDB229 and DUB001) in conjunction with UAE ACC.
- 7. These relays continued until 1542 when UAE ACC reported that radar contact with UPS6 was lost.

8. The Investigation.

- 8.1 Staffing was normal for the time of day.
- 8.2 Traffic was considered medium with low complexity however that ATCO's workload increased dramatically during the course of this event.

9. Flight Progress Strip (FPS) Board Management.

9.1 N/A

10. Post Incident

- 10.1 The ATCO's were relieved from the position the Crew Supervisor informed Bahrain CAA management of the event.
- 10.2 The 3 ATCO's were relieved of duty for the next 72 hours and offered CISM counseling.

11. ATCO professional details.

11.1 The Supervisor, Ahmed holds an Approach and Area rating and has no incidents on file.

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- 11.2 ATCO Rich Phillips holds an Area rating and has no incidents on file.
- 11.3 ATCO Corne Venter holds and Area Rating and has no incidents on file.

UPS6 Accident



12. Interview.

12.1 The ATCO's were not formally interviewed but described the events as depicted in their reports.

13. Equipment.

13.1.1 The UAE ATCO to ATCO line was unserviceable. The unit has been undergoing problems with this line for sometime and the problem is being addressed but without a permanent solution.

14. Conclusion

- 14.1 UPS6 first reported an equipment problem with BAH ATC and was given immediate assistance to accommodate the aircraft.
- 14.2 It is unknown why the crew chose to return to Dubai instead of Doha which was the close airport.

15. Recommendations.

- 15.1 It is recommended that the UAE/BAH ATCO to ATCO lines are returned to stable service as soon as possible.
- 15.2 It is recommended that a shared radar data feed between UAE and Bahrain be implemented as soon as possible. This would have in this instance, prevented a 5 or 6 way relay of pertinent information to an aircraft in distress.

Vinesh Dulabh STO.

Dated: 6/9/10



UPS6 Accident

KINGDOM OF BAHRAIN



مملكة البحرين شئون الطيران المدني إدارة الملاحة الجوية

CIVIL AVIATION AFFAIRS

ATC Audio Transcript 131.12 Bahrain Area East and UAE ACC Line 3 September 2010

<u>3 September 2010</u> All times in UTC and non relevant transmissions have been omitted.

UPS6 B744 from OMDB to EDDK A0526 checked in with Bahrain East at 1511 on climb to FL320.

1511:06	UPS6	Bahrain UPS6 out of Flight Level Three Zero Zero for Flight Level Three Two Zero estimating COPPI at err. standby on that estimate.
:17	BAH	The land the estimate Will be Greek and The G
	BAH	I don't need the estimate it'll be fine sir route Uniform Lima Seven Six Eight to COPPI for UPS6 this is Bahrain and you're radar contact.
		Tx from ETD633
:32	BAH	UPS6 you copy sir, you're radar contact.
:35	UPS6	Radar Contact now for UPS6 thank you.
		RT with other a/c
1513:15	UPS6	Bahrain er UPS6 over
:16	 BAH	Go ahead.
:19	UPS6	We've got fire indication on the er main deck I need to land ASAP.
:23	BAH	Er Doha at your Ten O' Clock and One Hundred Miles is that close enough?
:27	UPS6	How about we turn around and go back to Dubai I'd like to declare an emergency.
:30	BAH	UPS6 make aright turn heading Zero Nine Zero and descend Flight Level Two Eight Zero.
:35	UPS6	Right Zero uhsay again the heading

R/T exchange between UPS6 and Bahrain Area East controller:

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:39	BAH	Right Zero Nine Zero
:40	UPS6	Zero Nine Zero down to Flight Level Two Eight Zero UPS6
:43	BAH	Roger that.
		Other aircraft callingall told to standby.
1514:36	UPS6	Bahrain I need emergency descent UPS6 (unintelligible sounds like "on fire")
:41	BAH	UPS6 descend Flight Level Two Seven Zero
:44	UPS6	UPS6 is going down to what altitude sir?
:47	BAH	Flight Level Two Seven Zero sir are you able to maintain altitudes?
:49	UPS6	Unintelligible (sounds like "we'll try but I don't know").
:52	BAH	Roger sir you able to maintain altitudes?
		Tx to other a/c., including turning IAW127 out of the way of UPS6.
1515:23	UPS6	Bahrain do you read UPS6 over
:25	BAH	UPS6 go ahead sir
:26	UPS6	I need a descent down to Ten Thousand right away.
:29	BAH	UPS6 descend and maintain One Zero Thousand your discretion.
:32	UPS6	Alright we're on the way down to Ten Thousand UPS6.
:46	BAH	Iraqi One Two Seven turn left heading Zero Eight Zero NOW!
:49	IAW127	Left heading Zero Eight Zero Iraqi One Twenty Seven
:51	BAH	UPS6 ah
		TX to FBD201.
1516:06	UPS6	(parts unreadable probably due to pilot masks)I

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		need astraight to Dubai over
		All UPS6 transmissions from now are difficult to read due to the masks.
:20	BAH	UPS6 if you're able turn right heading One Three Zero
1516:24	UPS6	One Three Zero
:29	BAH	Iraqi One Two Seven traffic is a heavy jet Twelve O' Clock and Six miles turning eastbound and descending in an emergency situation.
:31	IAW127	Iraqi One Twenty Seven copies.
:38	BAH	Iraqi One Twenty Seven continue left turn heading Zero Seven Zero
:39	IAW127	Zero Seven Zero Iraqi One Twenty Seven
:41	BAH	Appreciate all your help sir, Gulfair Five Zero Nine descend One Two Thousand QNH One Thousand.
:44	GFA509	Twelve Thousand QNH One Thousand Gulfair Five Zero Nine.
		Tx to other a/c.
1517:22	UPS6	Bahrain UPS6 we have(sounds like "full cockpit of smoke and please have fire equipment standby at Dubai")
:44	BAH	UPS6 proceed direct Dubai if able.
:48	UPS6	Roger
		TX to other a/c
1518:51	BAH	Everyone standby.
:56	UPS6	Okay UPS6 is straight in to Twelve Left sirstraight in to Twelve Left ILS for UPS6 over.
1519:08	BAH	UPS6 expect One Two Left proceed direct to a final of your discretion.
:12	UPS6	Alright we're doing our bestgimmie a heading if you can I can't see

:16	BAH	Okay standby.
:22	BAH	Okay we'll get right back to you with that sir.
:48	BAH	UPS6 the heading is One Zero Six that'll put you on a Ten mile final for One Two left heading One Zero Six
1519:56	BAH	UPS6 heading One Zero Six if you're able.
1520:10	BAH	UPS6 heading One Zero Six.
:17	Unknown	Heading for US One Zero Six heading
:20	BAH	UPS6 contact UAE on One Three Two Decimal One Five. UPS6 One Three Two Decimal One Five
		R/t with other a/c
1521:12	BAH	UPS6UPS6 UAE One Three Two Decimal One Five
:20	UPS6	UPS6 MAYDAY MAYDAY MAYDAY can you hear me?
:22	BAH	UPS6 yes sir One Three Two One Five
:27	UPS6	We're gonna have to stay with you we do not see the radios.
:30	UPS6	Can you give me an altitude?
:38	BAH	UPS6 descend at your discretion to Niner Thousand.
:40	BAH	SkyDubai Seven Five One
:45	FDB751	Go ahead Seven Five One go ahead.
:46	BAH	Yes sir you're my intermediary speak to UPS6 descend to Nine Thousand for UPS6
:51	FDB751	UPS6 this is SkyDubai Seven Five One descend to Nine Thousand.
1522:01	FDB751	UPS6 did you hear SkyDubai Seven Five One?
:04	FDB751	Bahrain the UPS he cannot see his radio he ask you his current altitude now he wants his current he cannot see the altitude.
:12	BAH	His altitude is One Six Thousand Seven Hundred.

ATC TRANSCRIPTS

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:15	FDB751	UPS your altitude is One Six Thousand Four Hundred.
:19	UPS6	I hear you I'm looking for some oxygen One Six Thousand Four Hundred
1522:27	FDB751	UPS6 you can call the UAE on One Three Two One Five, One Three Two One Five.
		R/t to other a/c.
1523:04	UPS6	UPS6 is (unreadable) what is my altitude?
:08	BAH	UPS6 altitude One Five Thousand One Five ThousandSkyDubai Seven Five One relay One Five Thousand for UPS6.
:17	FDB751	We will relay, UPS6 your altitude is One Five Thousand this is SkyDubai Seven Five One relay
:30	FDB751	UPS6 did you hear SkyDubai Seven Five One?
:34	UPS6	UPS6 we can hear you, we cannot see.
:38	FDB751	Okay you are passing One Five Thousand, I ask again to Bahrain, Bahrain confirm again the altitude of UPS6?
:44	BAH	UPS6 currently at One Four Thousand
:47	FDB751	Now you are One Four Thousand UPS6
:55	UPS6	UPS6 can you give me a heading to the airfield?
:59	BAH	Heading One Zero Five, Heading One Zero Five SkyDubai relay Heading One Zero Five
1524:05	UPS6	UPS6 can you give me a heading
:07	BAH	Okay heading UPS6 heading Heading One Zero Five Heading One Zero Five
:15	UPS6	One Zero Five
:18	FDB751	Affirm One Zero Five.
:30	FDB751	Bahrain UPS6 request current altitude



:40	FDB751	Bahrain UPS6 requesting current altitude
:44	ВАН	Roger I'll get it in just a second he's out of my range I'm calling UAE to get that just standby
1524:52	FDB751	He ask about the current altitude, current altitude
:54	BAH	Alright just standby, I don't see him sir
:56	BAH	One One Seven descending out of One One Seven
1525:00	FDB751	UPS6 One One Thousand feet UPS6
:11	BAH	SkyDubai seven Five One the frequency One One Eight point Seven Five for Dubai Tower please One One Eight Seven Five for the UPS to the tower.
:22 :25	UPS6 FDB751	UPS6 Bahrain confirm for the UPS6 to go One eighteen Seven Five?
:28	BAH	Yes sir One One Eight Decimal Seven Five
:31	FDB751	Okay Bahrain UPS6 cannot see the radios.
:36	BAH	I'm uh okay advise UPS6 what he needs from me?
:42	FDB751	Okay UPS6 what's your request from Bahrain?
52	FDB751	Okay Bahrain he request radar vector to the nearest airport he cannot see.
1526:00	FDB751	Bahrain did you copy SkyDubai Seven Five One?
:03	BAH	Yes sir I copied
:05	FDB751	Okay
:07	FDB751	UPS6 just stand by.
:10	BAH	Okay tell him the nearest airport is Dubai, heading One Zero Five
:15	FDB751	Okay UPS6 currnearest airport is Dubai, Bahrain what is the current altitude of UPS6
:23	BAH	Descending One One Thousand



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:25	FDB751	Okay now he is One One Thousand confirm?
:29	BAH	One One Thousand is correct.
:31	FDB751	UPS6 you are One One Thousand nearest airport is Dubai.
1526:41	FDB751	Errr Dubai standby how far Dubai from the aircraft Bahrain?
:43	BAH	Standby
		Rt to other A/c
1527:29	FDB751	Bahrain SkyDubai Seven Five One.
:30	BAH	SkyDubai Seven Five One
:32	FDB751	UPS request UPS6 request radar vectors to the runway in use in Dubai, direct vectors to the runway in use in Dubai.
:40	BAH	Okay tell him to standby we're working on that right now we're working on a relay
:44	FDB751	Okay UPS6 just standing by for a while please.
:48	BAH	Okay UPS6 current altitude Nine Thousand Six Hundred and he's Seven Eight, Seven Eight miles from the airport.
:57	FDB751	Okay Bahrain UPS asks for the frequency now.
1528:02	BAH	Okay UPS6 current distance is Seventy Eight miles direct to runway One Two and frequency One Three Two One correction er. One One Eight point Seven Five
:14	FDB751	Okay UPS6 you are Seven Eight miles from Dubai runway One Two frequency now One One Eight Seven Five
:28	FDB751	Okay now err Bahrain he cannot see the radios he msut keep the frequency and he ask for current altitude and vectors to runway One Two.
:39	BAH	Okay fly present heading and maintain current altitude is Niner Thousand



:45	FDB751	Okay current altitude UPS6 is Niner Thousand and fly present heading.
:52	BAH	SkyDubai Two Two Nine Bahrain you up?
1529:00	FDB751	Say again UPS6
:11	FDB751	Okay Bahrain give you Nine Thousand altitude you are at Nine Thousand feet and heading One Zero Five for Dubai
:19	FDB751	Bahrain UPS6 roger
:20	BAH	Okay Thank you.
:51	BAH	SkyDubai Two Two Nine Bahrain you up?
:53	FDB229	Two Two Nine is with you level Three Two Zero
:57	BAH	Okay thank you you gonna be my next relay, your company Seven Five One is getting outta range, you'll be talking to UPS6 he's inbound to Dubai in an emergency and standby for relays.
1530:07	FDB229	Standing by
:11	BAH	Okay SkyDubai Seven Five One I'm gonna hand off relays to your company who is behind you, you're gonna be out of range from the traffic shortly
:26	FDB751	Okay Bahrain that is understood and UPS6 request his distance from Dubai now.
:40	FDB751	I understood UPS6 we are just changing to another aircraft that is near from Dubai to relay with you I ask distance for Bahrain, Bahrain distance for UPS6 from Dubai?
:52	BAH	Okay standby SkyDubai Two Two Nine standby for relay for distance to Dubai for UPS6 tell UPS6 to standby for distance check he's currently Six Zero miles Six Zero miles from the airport.
1531:03	FDB229	Okay UPS6 you are currently Six Zero miles from the airport.
:09	FDB229	And errr the altitude please.



:11	BAH	Currently Level Nine Thousand Six Hundred
:14	FDB229	Nine Thousand Six Hundred UPS6
:25	FDB229	Yes you are on vectors to the runway One Two in Dubai.
		r/t to other a/c.
1531:51	FDB751	SkyDubai Seven Five One err UPS6 said err he is hurry in need for vectors to land in Dubai.
1532:00	BAH	Roger tell him to SkyDubai Two Two Nine Bahrain.
:04	BAH	SkyDubai Two Two Nine
:06	BAH	SkyDubai Two Two Niner
:15	FDB229	Bahrain this is SkyDubai Seven Five One
:17	BAH	Yes sir SkyDubai Seven Five One you're gonna be out of range shortly I'm trying to get a hold of your company doesn't seem to wanna answer, SkyDubai Two Two Niner.
:26	FDB229	SkyDubai Two Two Nine is reading you
:28	BAH	Okay sir I need you to listen up do relays err currently for UPS6 Five Zero miles from the field.
:37	FDB229	Okay UPS you are Five Zero miles from Dubai airport
:46	FDB229	And he needs his altitude readout also.
:50	BAH	Still Nine Thousand Six Hundred, Nine Thousand Six Hundred Five Zero miles from the airport Twelve O' Clock and Five Zero miles.
:55	FDB229	Ah you are at Nine Thousand Six Hundred feet now, Five Zero miles out of err the Dubai airport you have it Twelve O' Clock.
1533:16	BAH	SkyDubai Two Two Nine
:18	FDB229	Two Two Nine go ahead
:20	BAH	Ask UPS if he can see outside of the cockpit, if he can see outside of the cockpit.

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:25	FDB229	That's a negative, he's flying blind and needs your vectors for coming in to the Dubai airport.
		r/t to other a/c
:58	BAH	Dubai One you up?
1534:00	DUB001	Dubai One yes sir go ahead.
:02	BAH	Dubai One you're radar contact sir and I need you to do relays for UPS6
:04	DUB001	Okay go ahead sir.
:06	BAH	Okay UPS6 is currently wind at Dubai Three Hundred at Four.
:14	BAH	Dubai One I need you to relay this traffic is err flying blind, smoke and fire in the cockpit.
:20	BAH	Dubai One UPS wind Three Zero Zero at Four.
:26	DUB001	Alright what do you want me to tell UPS6?
:29	BAH	I want you to tell him exactly what I say when I say it wind Three Zero Zero at Four.
:33	DUB001	UPS6 from Dubai One err Three Zero Zero at Four.
:39	BAH	Yes sir wind Three Zero Zero at Four, One Two Left currently Three Two DME.
:45	DUB001	Err Currently Three Two DME
:48	BAH	Okay Tower clears you to land Runway One Two left.
:53	DUB001	And Tower clears you to land One Two Left
1535:05	DUB001	UPS6, UPS6 you're cleared to land One Two Left, cleared to land One Two Left.
:14	BAH	Dubai One are you getting a response sir?
:16	DUB001	Ahh negative sir.
:18	BAH	Okay just just keep trying sir broadcast again One two left, you're the closest aircraft I have.
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DUB001	UPS6 this is Dubai Zero Zero One relaying for Dubai Tower clears you to land One Two Left.			
DUB001	They're requesting precision radar guidance they've got no headings.			
DUB001	They want to know what altitude, what speed, what heading they've got they're flying blind at the moment.			
BAH	Yes sir we'll get that to them tell them to standby one.			
DUB001	Standby One UPS6			
BAH	Okay UPS DME is Two Zero from the field, heading is One One Five			
DUB001	UPS you're now Two Zero DME from the field.			
BAH	Right Ten degrees, turn right Ten degrees.			
BAH	Dubai One UPS turn right Ten Degrees.			
DUB001	Turn right Ten degrees UPS6			
ВАН	ILS frequency One One Zero point One ILS One One Zero point One frequency.			
DUB001	ILS frequency One One Zero point One			
BAH	DME One Four miles currently One Four miles			
DUB001	Ah you were stepped on say again?			
BAH	DME One Four miles, no traffic between the field and the aircraft no traffic between the field and the aircraft.			
DUB001	Okay he just needs a heading for the runway that's all.			
BAH	Heading One One Five			
DUB001	Heading One One Five now UPS6			
BAH	Altitude Eight Thousand at Eleven Miles now Altitude Eight Thousand at Eleven DME.			
DUB001	Now Eleven DME Eight Thousand to the field.			
DUB001	What's his altitude			
	DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH DUB001 BAH			

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:34	BAH	Nine miles Seven Thousand, Nine miles Seven Thousand			
:37	DUB001	Okay you're Nine miles Seven Thousand feet.			
:46	BAH	Seven and a half miles Seven Thousand			
1537:53	DUB001	Nine Miles Seven Thousand feet UPS6			
:58	BAH	Six Miles Six Miles,			
1538:00	DUB001	You're now Six miles.			
:03	BAH	They said he's too fast and too high is he able to make a Three Sixty?			
:07	DUB001	Ah You're too fast and too high, can you make a Three Sixty?			
:10	DUB001	He says negative.			
:17	BAH	Six Thousand feet.			
:19	DUB001	Six Thousand feet now.			
:36	BAH	Is he able a left turn for a Ten Mile final for Sharjah?			
:41	DUB001	Are you able to do a left turn now, Sharjah is Ten miles away?			
:48	DUB001	Arr what sort of heading Bahrain?			
1539:03	BAH	Heading Zero Nine Five for Ten Mile final at Sharjah.			
:06	DUB001	Okay heading Zero Nine Five you're Ten mile final for Sharjah.			
:13	DUB001	What's the frequency there?			
:15	BAH	It'll be runway Three Zero at Sharjah runway Three Zero.			
:19	DUB001	Okay runway Three Zero at Sharjah, what's the frequency Bahrain?			
:23	BAH	Frequency for the ILS?			
:26	DUB001	Affirm.			



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:29	BAH	Standby			
:44	BAH	Okay UPS6 made a right turn over Dubai, does he have visual with the field?			
:48	DUB001	Okay do you have visual with the field UPS6?			
1539:53	DUB001	He does not, no.			
1540:07	DUB001	What's his height now Bahrain?			
:13	BAH	Standby			
:15	BAH	Dubai is Three O' Clock and Five Miles.			
:18	DUB001	Okay Dubai field is Three O' Clock at your Three O' clock and Five miles.			
:24	BAH	Current altitude Three Thousand Five Hundred.			
:31	DUB001	What's his airspeed?			
42	BAH	Groundspeed Two Six Six			
:44	DUB001	Okay your groundspeed is Two Six Six sounds like it's much too fast.			
:51	BAH	Altitude is Two Thousand			
:53	BAH	Altitude currently One Thousand Five Hundred.			
:56	DUB001	Altitude is now One Thousand Five Hundred.			
:58	BAH	Seven miles south of the field Seven miles south of the field One thousand Five Hundred			
1541:06	BAH	Eight Hundred feet			
:08	DUB001	Okay you're Eight Hundred feet.			
:10	BAH	Seven Hundred feet descending fast			
:12	DUB001	Seven Hundred feet descending fast			
:14	BAH	Eight miles currently Eight miles south of the field Seven Hundred feet descending			
:19	DUB001	Okay you're Eight miles south of the field			



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:20	BAH	Six Hundred feet
:23	DUB001	Six Hundred feet.
:31	BAH	Seven Hundred feet
:33	DUB001	Seven Hundred feet
1541:36	BAH	Four Hundred feet currently Four Hundred feet
:40	DUB001	You're four hundred feet
:41	BAH	Three Hundred feet, any runway available any runway is available.
:45	DUB001	Any runway available err UP6
:48	BAH	If able climb immediately, climb immediately.
:50	DUB001	Climb immediately UP6 climb immediately.
1542:06	DUB001	What's the word?
:08	BAH	Radar contact lost south of Sharjah.
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1.0 ATC Controller Statements

AIR TRAFFIC CONTROL OCCURRENCE REPORT

Type of Occurrence:	Accident	AIRPROX	Inciden	t _	Unlawfu Interfer		Hijack	
Reporting Unit:	BAH FIC			Date/Time (UTC) of Occurrence: 090315		15Z.		
ATCOs Involved:	RICH	<u></u>						
ATC Agencies					QNH Set	ting:		
Occurrence Position:	25NM W	EST/BAL.	Class an of Airspa					
Type of ATC Service:	CONTRO	LLED.	Control	Position:	EAST SEETOR.			
Aircraft Involved	Callsign / Registration	Aircraft Type	Dept.	Dest.	FL/Alt.	Aircraft Attitude		Flight Rules
	415 6	B744	OMOB	EDOK	FL324		0526	84.
light Conditions:								
	TED V	a for the second se	Diagram					
Jnserviceable Equ	U1	HE NORTH	Lin	VE C	115.			
Other Agencies Int		Dedee	haldo		Mater	rto h-1-10		
RTF/Data recordin YES / NO	gs held?	Radar recordings YES / NO	a da da apartika.		Met repo YES / NO		(mill)	110.
Signature/Name of Supervisor:	9	Lat	Address			/.	Sale.	Director
	AHMIED	MOHO		Se	erc		la Fast tion Safety and agement System	A CHERT

Serco Middle East Aviation Safety Management Systems

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ATCO / ATCA Written Statement

Name:	Date and time of occurrence:
Richard Phillips	3 550 2010
Work position:	Frequency in use:
EAST RADAR	132.12
Date and time of statement:	Time on position:
3 550 2010 1700	0+45
Statement: UPS 6 Checked	on Frequency ext
or shortly after 150	02, LEVEL FL 320
I ISSUED ROUTE (of Fught through
	OVISED RHOAR CONTACT.
	UPS 6 Adrusão Mã
that he had a	
REQUESTER THEN OTALE	35 AIRPONT I Advised
UPSG DOLTA AURP	or T Appox 10 o'clock and
100 miles Ups 6	LEQUESTED TO RETURN
TO DUBAI I ISSUE	
Right turn herdin	3 090, At or about
that time I so	
AVAILABLE ASSISTRAN	Jué FROM THE FIC
WORKFORCE, UPS 6	then pechaneo AN
EMERGENCY, AND	NOETO 270 DESCENÍ
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Attachment C

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Serco Middle East Aviation Safety Management Systems

ATCO / ATCA Written Statement

Date and time of occurrence: Name: 03/09/10 15/15 VENTER CORNE Frequency in use: Work position: ACC N CUTSINE LINE 132,12 ADC EAST Time on position: Date and time of statement: MINUTES 110 is 03/09 MIRAL WITCON Statement: GMGREE BECAME AWARE OF THE THE ANO MOVED HIGH FATIAL ON ASSIST THE EAST 70 ACCRUSS A POSITION 70 CBITAIN AND A HPG OMPIS TOW ARDS RED TC FROM 1 RUNLAY 12 IN OMAS WAS THE CONTROLLER CN CONTROLLER TO TITE EAST WA ACC TIFE SPEED OF UPS THE ALTITUDE DISTANCE AND ar-AIRCRAFT WAS UNABLE TO THE AS KEPT TITE LING TO ito Ste CONSTANT INFORMATION TO RELAY TO GEN RECEIVING THE GAST CONT ROLLER CONTRULLER ARVISED ME THAT THEY THE - CONTACT OF THE ARCPART SOUTH OF RADAR IDST "This statement is made, in my own words, to the best of my recollection subsequent to the events described but has not been checked for accuracy against the appropriate R/T and/or radar recordings". Continue overleaf if necessary Signature: AIN

Serco Middle East Aviation Safety Management Systems	Attachment C		
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E. Investigators Notes

On September 7, 2010, the Ops Group departed Dubai by vehicle to Abu Dhabi with Mr. Khalid Al Raisi, GCAA Accident Investigator, where it reconvened and the GCAA office for Air Traffic Control (ATC). The group was given a tour of the UAE Center facility by Mike Dolbey, Senior Air Traffic Control Officer. The group then was escorted to a secure room and allowed to observe the UAE Center radar returns of UPS flight 6, as well as listen to the available recorded data. The Bahrain Audio transcript for frequency 131.12 covering the Bahrain East and UAE Land Line conversations was received. Below is a group consensus of the recorded data heard. Altitudes, ground speeds and vertical speeds are estimates only.

Time	Note: Data presented in table are approximate based on radar observations and ATC audio	Altitude	Ground Speed	Vertical Speed
15:10:13	Transfer from UAE to Bahrain, all OK	29,000	492	
15:13:12	Level off	32,000	496	
15:13:19	UPS 6- "We've got fire indication on the er main deck. I need to land ASAP"		496	
15:13:24	Bahrain offered Doha (81 nm)			
15:13:27	Flight crew wanted Dubai (140 nm)			
15:13:52	Started turn back			
15:14:08	Bahrain telephones UAE, UPS 6 begins descent			
15:14:20	UPS 6 begins a right turn to 090 deg; descending to FL270		490	-2,000
15:14:36	Emergency Descent (Sounds like "on fire")			
15:15:23	Flight crew asked to descend to 10,000			
15:16:06	Unreadable due to pilot donning oxygen masks			
15:16:xx	UPS 6 reports unable to maintain altitude			
15:17:xx	UPS 6 reports fire warning light, descending to 10,000 ft	27,000		-4,200
15:17:22	UPS 6 reports cockpit full of smoke			
15:19:08	UPS 6 reports that they cannot see			
15:19:xx	Bahrain clears UPS 6 direct to Rwy 12L at Dubai	17,000		-2,000
15:21:20	First of three "Mayday"s			
15:22:xx	Reported on Freq 121.5, Air Arabia 108 reports to Bahrain that UPS 6 cannot see their radios			
15:22:19	Pilot reports that he's looking for some oxygen			
15:23:34	Pilot reports that they cannot see			
	Around this time, UPS 6 is out of range of Bahrain; Bahrain contacts other airplanes			
15:23:40	Freq 121.5, Bahrain asks an airplane (possibly Air Arabia 108) to relay UPS 6 cleared 15K to 9K ft			
15:28:xx	Bahrain asks FDB 751 to relay information to UPS 6			
15:xx:xx	First observation of 9600' level at 86 NM			
15:xx:xx	80 nm from Dubai; pilots report too much smoke to change the radios and ask if they are on track	9,600	377	-2000
15:29:41	62 nm from Dubai; Landing clearance passed from UAE to Bahrain via telephone	8,000	415	
15:33:25	Pilot's report that they are flying blind, flying level; not descending			

15:34:00	Bahrain clears UPS 6 to land; pilots report completely blind; ask for ILS frequency			
15:34:14	Pilot's report that they are flying blind and have smoke and fire in the cockpit			
15:34:39	Pilots request a precision radar approach			
15:35:12	Reported on Freq 121.5; FO on oxygen reports "Mayday"			
15:36:xx	19 nm from Dubai	8,500	410	
15:37:25	Reported on Freq 121.5; "Mayday, Mayday"			
15:38:xx	5-7.5 nm from Dubai;	7,000	410	-2,000
15:38:07	Bahrain relays through Dubai 1 to UPS 6 that they are too high and fast; can they make a 360			
15:38:10	Pilots respond that they cannot except a 360			
15:38:37	Approach end, Runway 12L, Dubai	5,000	409	-3,800
15:xx:xx	UPS 6 offered vectors to Sharjah (left turn required) and accepts.			
15:39:17	Started a right turn over Runway 12L	4,000	360	-1,000
15:39:53	Pilots report that they do not have a visual.			
15:40:49	212 degree track	1,400	300	-4,900
15:41:42	Last radar plot; 241 degree track	300	241	-2,100