FINAL INVESTIGATION REPORT ON FUEL EMERGENY INCIDENT TO M/S INDIGO AIRBUS 320-271N AIRCRAFT VT-ITA IN DELHI ON 02.07.2021

1.	Aircraft	Type	Airbus 320-271N
		Nationality	Indian
		Registration	VT-ITA
2.	Owner and Operator		M/s Subrai Six Limited and M/s Indigo
3.	Pilot – in –Command		ATPL Holder
	Extent of injuries		Nil
4.	Date & Time of Incident		02.07.2021, 1138 UTC
5.	Place of Incident		Delhi
6.	Co-ordinates of Incident site		Latitude 28^0 30' 7.56" N Longitude 77^0 21' 57.6" E
7.	Last point of Departure		Bengaluru
8.	Intended place of landing		Dehradun
9.	Number of Passengers on board		122
10.	Type of Operation		Schedule (Passenger) Flight
11.	Phase of Operation		Approach
12.	Type of Incident		Fuel Emergency

(All timings in the report are in UTC unless otherwise specified)

SYNOPSIS:

Airbus 320-271N aircraft VT-ITA operated by M/s Indigo was involved in an incident of fuel emergency during approach to land at Delhi on 02.07.2021. The aircraft was planned to operate a schedule passenger flight 6E-852 from Bengaluru- Dehradun- Bengaluru on the day. There were 02 flight crew, 04 cabin crew & 122 passngers on board the aircraft.

During approach to land at Dehradun aircraft did a Go-around due weather and entered into prescribed hold pattern. Flight Crew discussed about the weather as no aircraft was making approach, company aircraft 6E-953 diverted to Delhi so flight crew of 6E-852 also decided to divert Delhi which was one of the planned destination alternate aerodromes. **Flight crew had Delhi weather approximately 30 minutes before diversion which was obtained by Dehradun ATC from Delhi ATC on hotline and same was completely incorrect from actual weather scenario at Delhi.** The MET information which was communicated by Delhi ATC to Dehradun ATC at 1031 UTC was matching with the METAR of Delhi at 0500 UTC. **Flight crew did not request latest weather of Delhi prior to diversion** around 11:00:00 UTC.

After changing over to Delhi, aircraft was asked by Delhi Radar to hold at present position due weather. Flight Crew informed ATC that they had around 14 minutes of EXTRA fuel remaining. However, **flight crew did not declare Minimum Fuel at any point of time**. Subsequently, as the aircraft reached approach path of runway 28 & 29, weather around Delhi deteriorated in thunderstorm activity with rain and winds gusting up to 50 knots. As a result 6E-852 discontinued approach due bad weather and there was no landing on runway 28 or 29 (westerly mode) at Delhi from 11:21 UTC to 12:00UTC due weather.

6E-852 declared May Day fuel at 1138 UTC and subsequently 6E-852 was vectored for easterly mode of operation runway 10 & 11. 6E-852 requested Delhi ATC to keep them closer to approach path of runway 10 which was denied by ATC. 6E-852 was cleared to intercept localizer Runway 11 and subsequently instructed to discontinue approach due CFT on runway as preceding company aircraft 6E-953 also issued MAY DAY and ATC had taken full emergency declare. Aircraft was further vectored for runway 11 and subsequently got established on ILS and landed safely around 1210 UTC on runway 11. Upon landing remaining fuel on board the aircraft was approximately 300 Kg.

There were no evidences of external fire or sign of smoke available in the aircraft or in the vicinity. There were no injuries to any of the crew member or passengers on board the aircraft.

DGCA instituted the investigation by appointing investigator-in-Charge under Rule 13(1) of the Aircraft (Investigation of Accidents and Incidents) Rule 2017. The investigation revealed that the cause of the incident is attributed to lack of situational awareness regarding importance of obtaining latest weather before commencing diversion and non adherence of standard procedure to inform minimum fuel state by declaring MINIMUM FUEL to ATC by the flight crew. Weather and incorrect MET information which was communicated by Delhi ATC to Dehradun ATC are the contributory factor to the incident.

1. FACTUAL INFORMATION:

1.1 History of flight:

1.1.1 On 02/07/2021, M/s Indigo Airbus 320-271N aircraft VT-ITA was operating a schedule passenger flight 6E-852 from Bengaluru to Dehradun. The flight was under

the command of duly licensed PIC on type along with the duly qualified First Officer. There were 04 cabin crew and total 122 passengers on board the aircraft. This was the first flight of the day for the flight crew, PIC was the pilot flying & first officer was the pilot monitoring

1.1.2 Before flight, both the flight crew had submitted undertaking in Bengaluru that they have not consumed Alcohol/ Psychoactive substance in the last 12 hours from the time of reporting for the duty. The flight was operating Bengaluru to Dehradun after having proper ADC and FIC obtained. The flight plan revealed that the flight was planned to be conducted under IFR. Before undertaking the flight, aircraft was declared airworthy after carrying out Pre-flight Inspection by appropriately approved person.

1.1.3 As per flight plan Jaipur (MDF 2507 kg) and Delhi (MDF 1868 kg) was planned as two destination alternate aerodromes and fuel was uplifted accordingly. There were total 8600 kg (18959.75 lbs) of fuel on board the aircraft, the take-off weight of the aircraft was 61854 lbs which was well within the max takeoff weight of 72455 lbs. The CG of the aircraft was well within limits during the entire flight. The flight preparation was done normally and the aircraft was airworthy.

1.1.4 Following a normal pre-flight check and taxi to the runway, aircraft took off from Bengaluru around 07:46:27UTC and subsequently flew uneventfully till Dehradun. Pilot contacted ATC Dehradun and was cleared for ILS approach for Runway 08. During approach to land in Dehradun at 10:18:35 UTC around 1022 feet RA, aircraft did a Go-around due crosswind up to 45-50 knots. After Go-around the aircraft reached 7000 feet and entered into prescribed hold pattern approximately 10:25:14 UTC with total 3193 kg of fuel onboard.

1.1.5 Left hand hold was requested at 25 NM. Latest weather for Delhi was requested by flight crew from Dehradun tower around 10:29:30 UTC. The weather information was obtained on hot line by Dehradun ATC from Delhi ATC and weather reported was visibility 3500m, temp-37^0C, QNH-998 TREND NO SIG. **Delhi gave weather report to Dehradun and same was communicated to 6E-852 by Dehradun ATC at 10:31 UTC which was not in line with the actual weather condition at Delhi between 1000-1030-1100 UTC**. It was found that the MET information which was communicated by Delhi ATC to Dehradun ATC at 1031 UTC was matching with the METAR of Delhi at 0500 UTC.

1.1.6 Flight Crew discussed about the weather, no aircraft making approach and diversion to Delhi as company aircraft 6E-953 diverted to Delhi. **Flight crew did not request latest weather of Delhi prior to diversion** and around 11:00:00 UTC, aircraft exited the hold and turned to a southerly heading 180 towards Delhi with fuel quantity of approximately 2195 kg which was above MDF for Delhi i.e 1868 kg.

1.1.7 Post changing over to Delhi, aircraft was asked by Delhi Radar to hold at present position due weather. Flight Crew informed ATC that they had around 14 minutes of EXTRA fuel remaining. **However flight crew did not declare Minimum Fuel at any point of time.** 6E-852 came in contact with Delhi Approach around 1114 UTC and runway 28 and 29 westerly mode of operation was in progress. By the time aircraft reached approach path Runway 28 & 29, weather around Delhi deteriorated in thunderstorm activity with rain and winds gusting up to 50 knots around the airfield.

1.1.8 The company aircraft 6E- 953 which was also diverted from Dehradun to Delhi and attempted approach on runway 28, but carried out missed approach around 1129 UTC

due to bad weather. However 6E-852 discontinued approach due bad weather at this time remaining fuel on board was 1433 kg. There was no landing on runway 28 or 29 (westerly mode) at Delhi airport from 11:21 UTC to 12:00UTC due to weather and gusting winds in the approach path of runway 28 & 29. During the above time 05 arrivals carried out missed approach, 03 arrivals were re-vectored. Between 11:30 UTC to 12:10 UTC total 06 arrivals diverted to Lucknow and Jaipur.

1.1.9 Company aircraft 6E-953 declared May Day fuel at 1133 UTC & 6E-852 also declared May Day fuel at 1138 UTC. During this time winds reported were of the order of 40 knots. 6E-953 and 6E-852 were vectored for easterly mode of operation runway 10 & 11. Around 1144 UTC, 6E- 953 near approach path of runway10 & 11 requested to wait for another 10 minutes for improvement of weather and preferred to stay close to localizer runway 10 & 11 which was agreed by Delhi ATC. 6E-852 also requested Delhi ATC to keep them closer to approach path of runway 10 which was denied by saying "NOT POSSIBLE EVERY AIRCRAFT NOT POSSIBLE". Flight crew informed ATC that they do not have fuel upon which ATC controller replied "TWO ALREADY AIRCRAFT DIVERTED WHO HAVE DECLARED MAYDAY". 6E-852 while being vectored for an approach on runway 10 or runway 11 were asked to hold present position and make a left orbit. Later, 6E-852 was vectored for runway 11 and was no.2 in approach behind company aircraft 6E-953.

1.1.10 Company aircraft 6E-953 landed safely on runway 11 at 1201 UTC as number one arrival in the easterly mode and 6E-852 was cleared to intercept localizer runway 11. Subsequently ATC instructed 6E-852 to discontinue approach due CFT (Crash Fire Tender) on runway as preceding company aircraft 6E-953 issued MAY DAY and ATC had taken full emergency declare. ATC advised 6E-852 that there would be another 7 to 8 minutes delay. Post Go-around by 6E-852 fuel onboard remaining was 599 kg. Flight crew expressed their urgency to land as they were low on fuel and subsequently aircraft was further vectored for runway 11 and got established on ILS and landed safely around 1210 UTC on runway 11. Upon landing remaining fuel on board the aircraft was approximately 300 Kg.

1.2 Injuries to persons:

Injuries	Crew	Passengers	Others
Fatal	Nil	Nil	Nil
Serious	Nil	Nil	Nil
Minor	Nil	Nil	Nil
None	06	122	Nil

1.3 Damage to aircraft: There was no damage to the aircraft.

1.4 Other damages: There were no other damages.

1.5 Personal Information:

1.5.1 Pilot-in-Command

Age	:	30 Years /Male
License	:	ATPL
Date of issue	:	29/08/2017
Valid up to	:	28/08/2022
Category	:	Multi-Engine Land

Date of medical Exam	:	06/01/2021
Exam valid up to	:	12/01/2022
Date of issue of FRTO license	:	08/03/2019
FRTO license valid up to	:	07/03/2024
IR rating and instructor rating	:	N/A
Total flying experience	:	4780:41 hrs
Total flying experience on type	:	4379:51 hrs
Total flying experience during last 1 year	:	528:21 Hrs
Total flying experience during last 6 months	:	265:59 Hrs
Total flying experience during last 30 days	:	31:10 Hrs
Total flying experience during last 07 days	:	15:19 Hrs
Total flying experience during last 24 hours	:	00:00 Hrs
Duty time last 24 hours	:	00:00 Hrs

1.5.2 Co- Pilot

Age	:	36 Years/ Male
License	:	CPL
Date of issue	:	31/03/2017
Valid up to	:	28/08/2022
Category	:	Multi-Engine Land
Date of medical Exam	:	29/06/2021
Medical Exam valid up to	:	28/06/2022
Date of issue of FRTO license	:	23/02/2017
FRTO license valid up to	:	22/02/2022
IR rating and instructor rating	:	29/07/2020 (IR)
Total flying experience	:	1760:27 Hrs
Total flying experience on type	:	1511:55 Hrs
Total flying experience during last 1 year	:	606:59 Hrs
Total flying experience during last 6 months	:	331:04 Hrs
Total flying experience during last 30 days	:	40:47 Hrs
Total flying experience during last 07 days	:	22:15 Hrs
Total flying experience during last 24 hours	:	03:21 Hrs
Duty time last 24 hours	:	05:47 Hrs

1.5.3 ATCO Dehradun:

- Controller Ratings - Aerodrome Control & Approach Control Procedural (Combined)
- Proficiency Checks -15/01/2020, 08/12/2020 and 28/09/2021
- English Language Proficiency aptitude - LEVEL 6

1.5.4 ATCO Delhi:

- Controller Ratings - Aerodrome Control Unit, Approach Control (Surveillance & Procedural) Unit
- Proficiency Checks - 14/12/2020 approach control surveillance, ADC Unit 10/11/2021; APP (Surveillance & procedural)-05/10/2021
- English Language Proficiency aptitude - Level 5

1.6 Aircraft Information:

1.6.1 Technical Information

Manufacturer	Airbus Industry, Hamburg, Germany	
Type	AIRBUS A320-271N	
Sr. No.	6744	
Year of manufacturer	2016	
C of A , date of issue and validity	C of A No: 6763, issue: 05.04.2016 validity: N/A	
Category	Normal	
Certificate of registration	C of R No: 4653, CAT "A"	
Owner	M/s Subrai Six Limited	
Maximum all up weight authorised	73,500 KG	
Last major inspection	2C-check, 09.02.2021, 2250 FH/270 days INSP, 28.06.2021	
Last inspection	Weekly inspection, 28-06-2021	
Airframe Hrs since new	15614:50 Hrs	
Airframe Hrs since last C of A/ARC	480:16 Hrs	
ENGINE INFORMATION	No.1	No.2
Manufacturer	Pratt & Whitney	Pratt & Whitney
Type	PW1127GA-JM	PW1127GA-JM
Serial No.	P770196	P770639
Hrs done since new	5569:39/3833	5674:17/3899
Hrs done since overhaul	5569:39/3833	5674:17/3899
Last major inspection carried out	2C-check,09.02.21	2C-check, 09.02.21
Last inspection	Weekly inspection 28.06.2021	Weekly inspection 28.06.2021
Average oil consumption	0.008 Qtz/hr	0.014 Qtz/hr
Type of fuel used	JET A1	JET A1

1.7 Metrological Information:

1.7.1 <u>METARS of Dehradun dated 02.07.2021 (0900 to 1130 UTC):</u>

METAR VIDN 020900Z 17004KT 4000 HZ SCT030 36/25 Q0999=
METAR VIDN 020930Z 18007KT 4000 VCTS SCT030 FEW035CB BKN070 35/25 Q0998=

METAR VIDN 021000Z 02014G24KT 4000 -TSRA SCT015 SCT020 FEW030CB OVC060 34/26 Q0999=
METAR VIDN 021030Z 36015G25KT 4000 -RA SCT015 SCT020 FEW030CB OVC060 28/24 Q1001=
METAR VIDN 021100Z 07010KT 4000 -TSRA SCT015 SCT020 FEW030CB OVC060 27/24 Q0999=

METAR VIDN 021130Z 08007KT 5000 BR SCT015 SCT025 FEW030CB BKN070 25/23 Q0999=

1.7.2 <u>METARS of Delhi dated 02.07.2021 (0900 to 1300 UTC):</u>

VIDP 020900Z 30009KT 2000 BLDU FEW100 40/22 Q0998 NOSIG=
VIDP 020930Z 32007KT 2200 BLDU FEW035 FEW040CB SCT100 40/22 Q0997 NOSIG=

VIDP 021000Z 30007KT 2200 BLDU FEW035 FEW040CB SCT100 41/21Q0996 NOSIG=
VIDP 021030Z 31007KT 2200 BLDU SCT035 FEW040CB BKN100 41/21Q0996 NOSIG=

VIDP 021100Z 28006KT 2200 DU SCT035 FEW040CB BKN100 40/20 Q0996 TEMPO 27015G25KT 1500 TS=

VIDP 021130Z 24015G25KT 2200 VCTSRA SCT030 FEW035CB OVC080 37/21 Q0997 TEMPO 1500 TSRA=
VIDP 021200Z 14015G30KT 0800 R28/1000 R29/P2000 SCT030 FEW035CB OVC080 25/23 Q0998 BECMG 1500 TSRA=

VIDP 021230Z 16009KT 2200 TS SCT030 FEW035CB OVC080 26/25 Q0999 TEMPO TSRA=
VIDP 021300Z 13007KT 2500 TS SCT030 FEW035CB BKN090 27/25 Q0999 TEMPO TSRA=

1.8 Aids to Navigation:

Delhi Airport is equipped with DVOR, Cat IIIB ILS, PAPI and High Power DME. It has also a secondary surveillance RADAR for providing route navigation services. ASMGCS is also functional on the airport for surveillance aircraft and vehicular movement in operational area. All the equipments were serviceable. Navigational Aids fitted in the aircraft were also serviceable.

1.9 Communication:

There was always two ways communication between the ATC and the aircraft. Communication equipment in the aircraft and ATC were serviceable.

1.10 Aerodrome Information:

Indira Gandhi International (IGI) Airport, New Delhi is a civil aerodrome. The operations are controlled by GMR and ATC is controlled by Airports Authority of India. Airport has got ICAO Code VIDP, ARP coordinates are 28°34'07"N, 77°06'44"E and is located 15 KM from Delhi railway station. The elevation is 777 feet and type of traffic permitted is IFR/VFR. Aerodrome category for fire fighting is CAT-10 and Rescue equipment's are available as per category. Delhi airport has three runways with orientation 27/09, 28/10 and 29/11.

1.11 FLIGHT RECORDER: The Cockpit Voice Recorder (CVR) and the Digital Flight Data Recorder (DFDR) were downloaded and the following information was available from them.

1.11.1 DFDR:

Time (UTC)	Event	Fuel on board (Tons)
07:28:00	During departure (off block) from Bengaluru	8.727
07:46:27	Aircraft took off from Bengaluru	8.563
10:18:35	During approach to land at Dehradun, aircraft was on profile and fully configured, around 1022 feet RA aircraft did a Go-around due crosswind up to 45 knots	3.556
10:25:14	After Go-around the aircraft reached 7000 feet and entered into prescribed hold pattern.	3.193
11:00:00	Aircraft exited hold and turned heading 180 towards Delhi	2.195
11:31:40	During approach to land at Delhi, initial approach for ILS RWY 28 was executed and subsequently discontinued at 2637 feet RA due to weather activity approx 22 knots of tail wind	1.433
12:01:52	After discontinued approach from RWY 28, aircraft was vectored for RWY 11. Aircraft established Localizer for RWY 11 however this approach was also discontinued due CFT on runway, aircraft took a right turn with heading of 180.	0.599
12:10:01	Aircraft was further vectored for RWY 11 and subsequently got established on ILS and landed on RWY 11	0.308

1.11.2 CVR: CVR recording is available from when aircraft entered into prescribed hold pattern after first missed approach at Dehradun.

From	To	Communication
6E-852	Dehradun	Request weather
Tower	6E-852	Visibility 4000M, feeble rain, cloud scattered 1500FT, scattered 2000FT, FEW CB 3000 FT overhead north overcast 6000 FT QNH 1000 TEM 28^{O} dew point 24 tower observe wind 030^{O}/ 12KT
PIC	F/O	Crew was heard discussing about the weather, no aircraft was making an approach. Expected turbulence during approach terrain below them. Up draft and down draft which they went through during first approach. Diversion to Delhi and expected congestion in Delhi. They heard discussing about making an approach but they waited for other aircrafts to make approach as they have already done once.
PIC	F/O	Crew was heard discussing for diversion to Delhi as company aircraft 6E-953 diverted to Delhi. Crew was further heard discussing that they wanted to make approach but they cannot effort another Go around at Dehradun. F/O anticipated Congestion in Delhi but PIC was sure that congestion will not be in Delhi.
6E-852	Dehradun	Maintaining 6500 feet, requesting latest winds only
Dehradun	6E-852	070 degree 10 knots
6E-852	Dehradun	WE ARE DIVERTING TO DELHI
6E-852	Delhi Radar	Release by Chandigarh climbing to 160 passing 152
Delhi	6E-852	Hold present position to your left maintain 160 on reaching
6E-852	Delhi	Request reason for hold sir
Delhi	6E-852	Can you guess what is the reason

6E-852	Delhi	Say again
Delhi	6E-852	There is a weather deviation in Delhi and A/C enable to align on the ILS
6E-852	Delhi	Sir we got 14 min of fuel with us extra
Delhi	6E-852	Cleared by SP5B RWY 28
6E-852	Delhi	Confirm aircrafts are landing
Delhi	6E-852	Affirm, turn left heading 160 and decent from FL 120 to FL 70
PIC	F/O	Flight crew was heard discussing that Dehradun did not tell them about bad weather in Delhi "we had Jaipur we burst that fuel and held over Dehradun. I was waiting for the weather to move out so the weather moved but then I burst my fuel, so that I had to divert". Flight crew was also heard discussing about getting ECAM for fuel very soon
Delhi	6E-852	Intercept localizer runway 28
6E-852	Delhi	Confirm wind shear reported on 28
Delhi	6E-852	Wind shear reported for runway 29, 03 aircrafts went around from runway 28
Delhi	6E-852	ILS approach runway 28 decent to FL 2600 feet, QNH 997, wind 080^{O}/ 20 Knots fluctuating.
6E-852	Delhi	LIKE TO DISCONTINUE APPROACH
Delhi	6E-852	DISCONTINUE APPROACH CLIMB TO FL60, TURN LEFT HEADING 180
6E-852	Delhi	MAY DAY MAY DAY MAY DAY FUEL
Delhi	6E-852	ROGER MAY DAY
6E-852	Delhi	We would like to set course towards Delhi, we would like to shoot an approach sir
Delhi	6E-852	Fly heading 290 expect RWY 10 or 11, wind 280^{O} /57 Knots
6E-852	Delhi	DELHI I FLY 852 CONFIRM HINDON IS AVAILABLE
Delhi	6E-852	NEGATIVE
6E-852	Delhi	Can you take us closer to approach path of runway 10
Delhi	6E-852	Not possible every aircraft not possible
6E-852	Delhi	Sir we don't have fuel we declared MAYDAY
Delhi	6E-852	Two already aircraft diverted who have declared MAYDAY
PIC	F/O	Flight crew was heard discussing and sequencing Runway as Primary 10 & Secondary 11. They also discussed about cross winds 140^{0}/ 22 knots and they cannot afford to have Go around and they cannot land with this wind speed. They have endurance of 30 MIN they can still make it.
Delhi	6E-852	DESCENT AND MAINTAIN FL70
6E-852	Delhi	MAINTAINING 70 SIR REQUEST HEADING 300
Delhi	6E-852	300 APPROVED BUT RADAR OBSERVING YOU ARE MAINTAINING FL 75
6E-852	Delhi	ROGER , SIR WILL MAINTAIN FL70
Delhi	6E-852	Decent 3000 FT turn right heading 015 QNH 999 aircraft was cleared to intercept localizer Runway 11.
Delhi	6E-852	Preceding company aircraft landed safely on RWY 11
Delhi	6E-852	DISCONTINUE APPROACH FROM RIGHT HEADING 180
6E-852	Delhi	RIGHT HEADING 180, I FLY 852 REASON
Delhi	6E-852	WE HAVE PRECEDING COMPANY AIRCRAFT ISSUED MAY DAY AND WE HAVE TAKEN FULL EMERGENCY DECLARE, CFT ON RWY

6E-852	Delhi	I FLY 852 I AM ON LOCALIZER RWY 11
Delhi	6E-852	Continue approach
Delhi	6E-852	Runway 11 clear to land wind 130^0/10 knots, runway surface wet
PIC	F/O	Flight crew carried out landing checklist and landed safely on runway 11

1.11.3 Dehradun ATC Tape Transcript:

TIME: BETWEEN 10:00 UTC TO 10:40 UTC, **STATION**- DEHRADUN, **FREQUENCY**- 122.3 MHZ.

TIME (UTC)	FROM	TO	TRANSMISSION
10:00:48	IGO852	TOWER	DEHRADUN IGO852 WE ARE RELAEASED BY DELHI TWO WAY WITH CHANDIGARH DESCENDING TO FL100 DIRECT TO DABGO.
10:00:59	TOWER	IGO852	IGO852 ROGER PROCEED DIRECT TO DABGO NO TRAFFIC WITH DEHRADUN. QNH999
10:04:31	IGO852	TOWER	DEHRADUN IGO852 CONFIRM RAINING OVER THE AIRFIELD
10:04:36	TOWER	IGO852	NEGATIVE
10:04:51	IGO852	TOWER	CONFIRM WIND ONLY IGO852
10:04:58	TOWER	IGO852	NOW TOWER OBSERVED WIND 330/10 KNOTS
10:05:06	IGO852	TOWER	CONFIRM ANY GUSTING ON GROUND
10:05:16	TOWER	IGO852	AS PER MET GIVEN UPTO 20 KNOTS TOWER OBSERVED 15 KNOTS
10:06:18	TOWER	IGO852	IGO852 DESCEND TO 5600 FEET REPORT 15 MILE QNH 999
10:08:20	TOWER	IGO852	IGO852 DEHRADUN CONFIRM READY FOR APPROACH
10:08:25	IGO852	TOWER	AFFIRM IGO8S2
10:08:30	IGO852	TOWER	DEHRADUN IGO852 WILL BE JOINING THE HOLD TO LOOSE ALTITUDE THEN WILL PROCEED FOR APPROCAH
10:08:39	TOWER	IGO852	ROGER REPORT READY FORAPPROACH
10:12:50	IGO852	TOWER	READY FOR APPROACH IGO852
10:13:41	TOWER	IGO852	IGO8S2 CLEARED ILS APPROACH RUNWAY 08 DESCEND AS PER PROCEDURE REPORT ON LOCALLIZER
10:16:03	TOWER	IGO852	IGO852 RUNWAY 08 CLEAR TO LAND WIND 010/14 KNOTS.
10:16:17	TOWER	IGO852	RUNWAY 08 CLEAR TO LAND IGO852
10:18:40	IGO852	TOWER	DEHRADUN IGO852 GOING AROUND
10:18:46	TOWER	IGO852	IGO852 COPIED FOLLOW GO AROUND PROCEDURES REPORT JOINING DABGO AT 5600 FEET.
10:19:34	IGO852	TOWER	DEHRADUN IGO852 WE EXPERIENCE CROSSWINDS UPTO 50 KNOTS AT JUST ABOUT 1000 FEET
10:23:52	IGO852	TOWER	DEHRADUN IGO852 REQUEST TO HOLD OVER SP.
10:24:59	IGO852	TOWER	DISREGARD SIR IGO852 THERE IS WEATHER AT DABGO WOULD LIKE TO SET COURSE TOWARDS SP AND HOLD AT 25 MILES FROM DDN.
10:25:05	TOWER	IGO852	IGO852 ROGER PROCEED TOWARDS SP AND

			MAINTAIN 7000 FEET AND REPORT IN CONTACT WITH CHANDIGARH
10:29:30	IGO852	TOWER	SIR COULD YOU GET US LATEST WEATHER DELHI PLEASE.
10:33:15	TOWER	IGO852	IGO852 COPY DELHI WEATHER VISIBILITY 3500M RUNWAY 29 QNH998 TEMP 37 TREND NO SIG
10:37:39	TOWER	IGO852	REPORT POSITION
10:37:44	IGO852	TOWER	25 MILES DDN WE ARE DOING HOLD AT 25 MILES
10:37:54	TOWER	IGO852	ROGER TRAFFIC INFORMATION COMPANY AIRCRAFT WILL DEPART RUNWAY 26 AND CLIMB TO 6000 FEET
10:38:19	IGO852	TOWER	SIR WE ARE STILL IN WEATHER REQUEST CHANGE THE HOLD WILL MANTAIN LEVEL80 AT 25MILE INBOUND COURSE 070 RIGHT HAND HOLD
10:39:10	IGO852	TOWER	WE ARE IN CONTACT WITH CHNADIGARH
10:39:21	TOWER	IGO852	CLIMB TO ANY LEVEL ABOVE 8000 FEET IN COORDINATION WITH CHANDIGARH AS DIRECTED BY CHANDIGARH
10:40:13	IGO852	TOWER	DEHRADUN IGO852 CHANDIGARH CLEARED US 9000 FEET
10:40:19	TOWER	IGO852	IGO852 ROGER CLIMB 9000 REPORT REACHING 9000
11:00:00	**IGO 852 Diverted to Delhi**		

1.11.4 Delhi ATC Tape Transcript: TIME: BETWEEN 11:23 UTC TO 12:07 UTC, **STATION**- DELHI, **FREQUENCY**- 124.2MHZ.

TIME	UNIT	TRANSMISSION
11 2347-112350	RADAR	IFLY EIGHT FIVE TWO DECEND TO FLIGHT LEVEL SIX ZERO AND TURN RIGHT HEADING 240
112752-112757	IGO852	DESCEND TO 3600 FEET
112940-112945	RADAR	I FLY EIGHT FIVE TWO INTERCEPT LOCALISER TURN RIGHT TO INTERCEPT LOCALISER RUNWAY 28
113020-113024	IGO852	TOWER I FLY EIGHT FIVE TWO CONFIRM WIND SHEAR REPORTED ON 28
113024-113033	RADAR	REPORTED FOR RWY 29 AND 03 AIRCRAFT WENT AROUND FROM 28
113038-113041	IGO852	CONFIRM NOW WE ARE NUMBER ONE I FLY EIGHT FIVE TWO
113044-113050	RADAR	I FLY EIGHT FIVE TWO RADAR AFFIRM SIR CLEARED FOR ILS APPROACH RWY 28 DESCEND TO 2600 FEET QNH 997 QNH 997, WIND 080^{O}/ 20 KNOTS FLUCTUATING.
113114-113117	IGO8S2	I FLY EIGHT FIVE TWO LIKE TO DISCONTINUE APPROACH
113124-113128	RADAR	I FLY EIGHT FIVE TWO DISCONTINUE APPROACH CLIMB TO FLIGHT LEVEL SIX ZERO, TURN LEFT HEADING 180
113836-113839	IGO852	DELHI I FLY EIGHT FIVE TWO MAY DAY MAY DAY MAY DAY FUEL
113841-113842	RADAR	ROGER MAY DAY

113844-113850	IGO852	AND I FLY EIGHT FIVE TWO WE WOULD LIKE TO SET COURSE TOWARDS DELHI. WE WOULD LIKE TO SHOOT AND APPROACH SIR
114015-114026	RADAR	I FLY EIGHT FIVE TWO RADAR FLY HEADING 290 EXPECT RWY 10 OR 11
114315-114321	RADAR	I FLY EIGHT FIVE TWO HOLD PRESENT POSITION LEFT HAND PATTERN AND WIND SPEED IS 260 DEGREES 40 KNOTS
114330-114332	IGO852	AND DELHI I FLY EIGHT FIVE TWO CONFIRM HINDON IS AVAILABLE
114334-114334	RADAR	NEGATIVE
114512-114518	IGO852	DELHI I FLY EIGHT FIVE TWO CAN TAKE US CLOSE TO THE APPROACH PATH OF RWY 10
114519-114521	RADAR	NOT POSSIBLE EVERY AIRCRAFT NOT POSSIBLE
11452 2-114525	IGO852	SIR WE DONT HAVE FUEL I FLY EIGHT FIVE TWO
114525-114530	RADAR	TWO ALREADY AIRCRAFT DIVERTED WHO HAVE DECLARED MAYDAY
114545-114547	IGO852	SIR ABOUT FOR RWY 11
114548-1145 52	RADAR	I FLY EIGHT FIVE TWO FLY HEADING 280
115014-115018	IGO852	I FLY EIGHT FIVE TWO SIR OUR ENDURANCE IS NOW 30 MINUTES
115057-115101	RADAR	I FLY EIGHT FIVE TWO DESCEND AND MAINTAIN FL 70
115102-115106	IGO852	MAINTAINING 70 SIR REQUEST RIGHT HEADING 300 IFLY EIGHT FIVE TWO
115106-115112	RADAR	300 APPROVED BUT RADAR OBSERVING YOU ARE MAINTAINING FL75
115413-115415	IGO852	REQUEST TOWER OBSERVED WINDS FOR RWY 11
115416-115419	RADAR	AT PRESENT 130 DEGREES 14 KNOTS
115420-115423	IGO852	COPIED, I FLY EIGHT FIVE TWO WE WOULD LIKE TO MAKE AN APPROACH FOR RWY 11
115503-115507	RADAR	I FLY EIGHT FIVE TWO DESEND TO 4000 FEET QNH 999
115727-115733	RADAR	I FLY EIGHT FIVE TWO WE WOULD PUT LOCALIZER TO YOU WHEN YOUR PRECEEDING COMPANY AI RC RAFT WILL LAND ON RWY 11
120112-120116	RADAR	I FLY EIGHT FIVE TWO PRECEEDING COMPANY AIRCRAFT LANDED SAFELY ON RWY 11
120118-120120	IGO852	COPIED,ON LOCALIZER RWY 11 I FLY EIGHT FIVE TWO
120148-120151	RADAR	I FLY EIGHT FIVE TWO DISCONTINUE APPROACH TURN RIGHT HEADING 180
120157-120205	RADAR	WE HAVE PRECEEDING COMPANY AIRCRAFT ISSUED THE MAYDAY AND WE HAVE TAKEN FULL EMERGENCY DECLARED CFT ON RWY
120248-120251	IGO852	DELHI I FLY EIGHT FIVE TWO SIR WHEN CAN WE EXPECT LANDING
120254-120256	RADAR	ANOTHER SEVEN TO EIGHT MINUTES
120257-120259	IGO852	SIR UNABLE SIR WE NEED TO LAND
120508-120513	RADAR	I FLY EIGHT FIVE TWO TURN RIGHT HEADING 075 CLEARED FOR ILS 11 REPORT ESTABLISHED QNH 999
120607-120609	RADAR	I FLY EIGHT FIVE TWO REPORT ESTABLISH
120609-120611	IGO852	AFFIRM ON LOCALISER I FLY EIGHT FIVE TWO

120611-120613	RADAR	ROGER CLEARED FOR ILS 11EIGHT MILES FROM TOUCH DOWN CONTACT TOWER 125.85
12:10:01	**IGO 852 LANDED SAFELY ON RUNWAY 11**	

Note: WSO Log book entries were not made by ATCO regarding actions after declaration of MAYDAY FUEL by 6E-852.

1.11.5 Hot Line Transcript between Dehradun & Delhi at 1031 UTC:

TIME	FROM	TO	CONVERSATION
10:31	DEHRADUN	DELHI	WE HAVE 03 ARRIVALS HOLDINGS DUE WEATHER PLEASE GIVE DELHI WEATHER
	DELHI	DEHRADUN	OK WHICH ARRIVALS
	DEHRADUN	DELHI	ALLIANCE AIR LLR646, INDIGO IGO852 & IGO953
	DELHI	DEHRADUN	VISISBILITY 3500 M QNH0998 RUNWAY IN USE 28/29
	DEHRADUN	DELHI	CONFIRM 29
	DELHI	DEHRADUN	AFFRIM
	DEHRADUN	DELHI	ANY CLOUD
	DELHI	DEHRADUN	TREND NO SIG TEMPERATURE 37 ADVISE IF ANY DIVERSION

Note: Delhi gave weather report at 10:31 UTC to Dehradun "**VISISBILITY 3500 M QNH0998** RUNWAY IN USE 28/29 **TREND NO SIG TEMPERATURE 37"** which was not in line with the actual weather report issued between 1000-1030-1100 UTC.

VIDP 021000Z 30007KT 2200 BLDU FEW035 FEW040CB SCT100 41/21Q0996 NOSIG=
VIDP 021030Z 31007KT 2200 BLDU SCT035 FEW040CB BKN100 41/21Q0996 NOSIG=
VIDP 021100Z 28006KT 2200 DU SCT035 FEW040CB BKN100 40/20 Q0996 TEMPO 27015G25KT 1500 TS=

According to Delhi ATS unit, the MET information on the electronic display window around 1030 UTC was probably not the updated one and the controller passed the available old displayed information to Dehradun which was matching with the METAR of Delhi at 0500 UTC. IMD and CNS Automation Team were asked by Delhi ATS unit to provide the recording of the displayed weather information on 02.07.2021 at 1030 UTC, however the same could not be made available.

1.12 Wreckage & Impact Information: Nil

1.13 Medical & pathological information:

Before flight, both flight crew had submitted undertaking in Bengaluru that they have not consumed Alcohol/ Psychoactive substance in the last 12 hours from the time of reporting for the duty.

1.14 Fire: There was no fire.

1.15 Survival Aspects: The incident was survivable.

1.16 Tests & Research: Nil

1.17 Organisational & Management Information:

InterGlobe Aviation Ltd (Indigo) is an Indian schedule airline headquartered in Gurgaon, Haryana, India. It has a fleet of 282 aircraft including 140 new generation A320 NEOs, 56 A320 CEOs, 35 ATRs and 51 A321 NEO. IndiGo has a total destination count of 95 with 71 domestic destinations and 24 International.

1.18 Additional Information:

1.18.1 Flight Plan of the aircraft:

Type of Flight Rule	:	Instrument Flight Rule
Departure Aerodrome	:	Kempegowda International Airport, Bengaluru
Estimated Time of Departure	:	07:40 UTC
Cruising Altitude	:	FL 370
Route	:	VOBL DCT BIA Q22 HIA DCT ALBED Q24 DPN W35 SP W85 DDN DCT VIDN
Destination Aerodrome	:	Jolly Grant International Airport, Dehradun
Schedule block time	:	0240 Hrs
Persons on board	:	128
Alternate Aerodrome	:	Delhi & Jaipur

1.18.2 Fuel Figure onboard the aircraft:

Before departure from Bengaluru quantity of fuel onboard the aircraft met the minimum fuel quantity required by the Company Operation Manual with following breakdown:

	Fuel (Kg)	**Time**
Taxi fuel	: 200	
Trip fuel	: 5055	02:36
RTE RSV (Route Reserve)	: 253	00:08 Max (5 PCT BURN OR 200 Kg)
ALTN fuel	: 1688	00:49
Final fuel	: 819	00:30
Dispatch fuel (ETP)	: 0	00:00
MIN fuel REQD	: 8015	04:03
Extra fuel (Delay/Hold)	: 585	00:19
TNKG fuel	: 0	00:00
Total fuel	: 8600	04:22
Block fuel	: 8600	MIN DIVERSION FUEL 2507 (ALTN VIJP)

DEST ALTN	DIST	TIME	FUEL	MDF	FL
VIDP	0129	00.32	1049	1868	180
VIJP	0254	00.49	1688	2507	320

1.18.3 Operation Manual of Operator:

The following information is available from Operation Manual of Operator which in conformance with the regulation in ICAO Annex 6 & CAR Section 8 Series O part II.

a) PIC shall request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome with less than the final reserve fuel plus

any fuel required to proceed to an alternate aerodrome. (In the Indian airspace a 10 min notice to MDF is relayed to the ATC).

b) PIC shall advise ATC of a minimum fuel state by declaring **MINIMUM FUEL** when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel.

Note: *The declaration of* ***MINIMUM FUEL*** *informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance may result in landing with less than the planned final reserve fuel. This is not an emergency situation but an indication that an emergency situation is possible should any additional delay occur.*

c) PIC shall declare a situation of fuel emergency by broadcasting **MAYDAY MAYDAY MAYDAY FUEL,** when the calculated usable fuel predicted to be available upon landing at the nearest aerodrome where a safe landing can be made, is less than the planned final reserve fuel.

It is also recommended while declaring **"Minimum Fuel"** pilot should report endurance in minutes. This is primarily to enable ATC to conduct efficient sequencing

1.18.4 IMD & CNS Weather Automation System:

At IGIA airport Delhi METAR is displayed through I.P. Based local web server (IP 192.168.110.54) and URL to display METAR through this server is http://192.168.110.54/live_cctv.php. As soon as the new METAR is prepared/entered and confirmed, the data/parameters filled in the METAR entry page are saved in the local server itself with date time stamp. METAR display is provided through web pagehttp://192.168.110.54/live_cctv.php in ATS sector positions through network which is not maintained by IMD and the auto refresh rate of METAR display web page is 120seconds.

In ATS Indra Air Traffic Automation System there is streaming of meteorological displays only and there is no provision for recording of MET display streaming in Indra ATMS. However Date and time are displayed with METAR information. It is auto refreshed, but keyboard & mouse have also been provided with each machine in case it is not getting auto refreshed. Normally the displayed weather information is auto refreshed, however whenever the displayed metrological information is stale the colour of the refresh icon changes to RED in such situations, when the displayed Metrological information found to be old/not updated the same should be refreshed using the mouse and refresh option. The display of old displayed weather information should be brought into the notice of supervisors, CNS and IMD along with the relevant entries in the log book.

1.19 Useful or Effective Investigation Techniques: Nil

2. ANALYSIS:

2.1 <u>Pilot handling of the situation:</u>

Flight crew of 6E-852 did a Go around during 1st approach in Dehradun due cross winds up to 50 knots and entered into prescribed hold pattern at 25 NM. Flight Crew discussed about the weather, no aircraft making approach and diversion to Delhi as company aircraft 6E-953

diverted to Delhi. Subsequently around 11:00:00 UTC, aircraft exited the hold and diverted to Delhi. Flight crew had Delhi weather which was incorrectly communicated by Delhi to Dehradun 30 minutes before the decision was made by 6E-852 for diversion. After diversion to Delhi aircraft was asked by Delhi Radar to hold at present position due weather. Flight crew could have monitored updated current weather information through ATIS broadcast or may have considered utilizing other resources which may include use of ACARS etc to come to a final decision. **Flight crew did not request latest weather of Delhi before decision was made for diversion.**

According to Operation Manual of Operator, PIC shall advise ATC of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel. The declaration of MINIMUM FUEL informs ATC that all planned aerodrome options have been reduced to a specific aerodrome of intended landing and any change to the existing clearance may result in landing with less than the planned final reserve fuel. **Flight crew did not declare Minimum Fuel at any point of time** and according to them once they were sure that they would be using up their final reserve fuel, MAYDAY FUEL was declared.

2.2 ATC Aspect:

Latest weather for Delhi was requested by flight crew from Dehradun tower around 10:29:30 UTC. Delhi gave weather report at 10:31 UTC to Dehradun on hotline "VISISBILITY 3500 M QNH0998 RUNWAY IN USE 28/29 **TREND NO SIG** TEMPERATURE 37". As per Delhi MET report between 1000 UTC to 1100 UTC, weather was reported visibility 2200 meter, BLDU (Blowing Dust), cumulonimbus clouds and gusty winds from 15 to 25 knots. Delhi ATC gave weather information to Dehradun on hotline around 10:31 UTC and same was passed on to flight crew by Dehradun which was completely incorrect from actual weather scenario at Delhi.

According to Delhi ATS unit, the MET information on the electronic display window was probably not the updated one and the controller passed the available old displayed information to Dehradun which was matching with the METAR of Delhi at 0500 UTC. It is important to mention here that the MET information on the electronic display window will always have date & time of METAR which should have been verified by the controller on duty. Also the displayed weather information is auto refreshed in 120 seconds, however whenever the displayed metrological information is stale the colour of the refresh icon changes to RED. In such situations, when the displayed Metrological information found to be old/not updated the same should be refreshed using the mouse and refresh option which has also not ensured by the controller on duty before communicating the MET information at 10:31 UTC to Dehradun. IMD and CNS Automation Team were asked by Delhi ATS unit to provide the recording of the displayed weather information on 02.07.2021 at 1030 UTC, however the same could not be made available as there is no provision for recording of MET display streaming in Indra ATMS. Delhi weather obtained by the flight crew from Dehradun was NOSIG and this was the most likely reason that flight crew did not request for latest weather prior to diversion. Hence, incorrect MET information which was communicated by Delhi ATC to Dehradun ATC is the contributory factor to the incident.

2.3 Action after declaration of MAYDAY FUEL:

By the time 6E-852 was approaching runway 28, weather around Delhi deteriorated in thunderstorm activity with rain and winds gusting up to 50 knots as a result of which 6E-852 discontinued approach from runway 28 and declared MAYDAY FUEL.

Company aircraft 6E-953 which was also diverted from Dehradun due bad weather declared MAYDAY FUEL as well and near approach path of runway10 & 11 requested to wait for another 10 minutes for improvement of weather and preferred to stay close to localizer runway 10 & 11 which was agreed by Delhi ATC.

6E-852 while being vectored for an approach on runway 10 or runway 11 was asked to hold present position and make a left orbit. 6E-852 requested Delhi ATC to keep them closer to approach path of runway 10 which was denied by ATC that "NOT POSSIBLE EVERY AIRCRAFT NOT POSSIBLE". Flight crew informed ATC that they do not have fuel upon which ATC controller replied "TWO ALREADY AIRCRAFT DIVERTED WHO HAVE DECLARED MAYDAY". It is evident from here that controller had lack of situational awareness that 6E-852 was the second one after 6E-953 who declared MAY DAY.

Company aircraft 6E-953 landed safely on runway 11 as number one arrival and 6E-852 was cleared to intercept localizer Runway 11. Subsequently ATC instructed 6E-852 to discontinue approach due CFT (Crash Fire Tender) on runway as preceding company aircraft 6E-953 issued MAY DAY and ATC had taken full emergency declare. ATC advised 6E-852 that there would be another 7 to 8 minutes delay. Flight crew once again expressed their urgency to land as they were low on fuel and subsequently aircraft was further vectored for runway 11 and got established on ILS and landed safely on runway 11. Upon landing remaining fuel on board the aircraft was approximately 300 Kg.

It is evident from here that ATC gave priority to 6E-953 only and lacked in recognizing the distress situation with 6E-852. ATC did not accord emergency handling status to 6E-852 or passed current operational scenario in advance regarding ATC has declared full emergency for 6E-953 and CFT would be on runway.

ATC Controller on duty should have more cooperative and accommodative with PIC of 6E-852 after declaration of MAYDAY FUEL. WSO Log book entries were also not made by ATCO regarding actions after declaration of MAYDAY FUEL by 6E-852.

2.4 <u>Weather</u>:

Aircraft 6E-852 departed from Bengaluru at its schedule time and took off around 07:46:27UTC and flew uneventfully till Dehradun. Pilot contacted ATC Dehradun and was cleared for ILS approach for Runway 08. During approach to land in Dehradun around 10:18:35 UTC, aircraft did a Go-around due crosswind up to 45-50 knots.

Dehradun weather between 1000 UTC to 1100 UTC, was reported visibility 4000 meter, thunderstorm rain, cumulonimbus clouds and gusty winds from 15 to 25 knots. The flight crew had Jaipur & Delhi as an alternate destination aerodrome, they held over Dehradun and waited for weather to move out but then flight crew busted Minimum Diversion Fuel for Jaipur. Flight crew discussed about weather, no aircraft was making an approach, expected turbulence during approach, terrain below them, up draft and down draft which they went through during first approach.

Delhi weather obtained by the flight crew from Dehradun was NOSIG as a result of which the decided to divert to Delhi. While they were en-route to Delhi aircraft was asked by Delhi Radar to hold at present position due weather. As per Delhi MET report between 1000 UTC to 1100 UTC, weather was reported visibility 2200 meter, BLDU (Blowing Dust), cumulonimbus clouds and gusty winds from 15 to 25 knots. By the time 6E-852 was approaching Delhi runway 28, weather around Delhi deteriorated in thunderstorm activity

with rain and winds gusting up to 50 knots as a result of which 6E-852 discontinued approach and declared MAYDAY FUEL in Delhi at 1138 UTC.

There was no landing on runway 28 or 29 at Delhi airport from 11:21 UTC to 12:00UTC due weather and gusting winds in the approach path of runway 28 & 29. During the above time 05 arrivals carried out missed approach, 03 arrivals were re-vectored. Between 11:30 UTC to 12:10UTC total 06 arrivals diverted to Lucknow and Jaipur. Subsequently, when weather was conducive for approach, 6E-852 was further vectored for runway 11 and got established on ILS and landed safely around 1210 UTC. Hence, weather was contributory factor to the incident.

3. CONCLUSION:

3.1 FINDINGS:

3.1.1 The flight crew members were appropriately licensed and qualified to operate the flight.

3.1.2 The aircraft was operated within the provision of valid Certificate of Airworthiness and Certificate of Registration before the incident flight.

3.1.3 All the concerned Airworthiness Directive, Service Bulletins, DGCA Mandatory Modifications on this aircraft and its engines were found complied with.

3.1.4 The aircraft was maintained in airworthy condition and no defect was pending for rectification. Serviceability of the aircraft was not the contributory factor to the incident.

3.1.5 Delhi ATC gave weather report at 10:31 UTC to Dehradun ATC on hotline "VISISBILITY 3500 M QNH0998 RUNWAY IN USE 28/29 **TREND NO SIG** TEMPERATURE 37".

3.1.6 As per Delhi MET report between 1000 UTC to 1100 UTC, weather was reported visibility 2200 meter, BLDU (Blowing Dust), cumulonimbus clouds and gusty winds from 15 to 25 knots.

3.1.7 Delhi ATC gave weather information to Dehradun ATC on hotline around 10:31 UTC and same was passed on to flight crew of 6E-852 by Dehradun which was completely incorrect from actual weather scenario at Delhi.

3.1.8 According to Delhi ATS unit, the MET information on the electronic display window was probably not the updated one and the controller passed the available old displayed information to Dehradun ATC which was matching with the METAR of Delhi at 0500 UTC.

3.1.9 Controller on duty did not verify the date & time of MET information on the electronic display window and passed the available old displayed information to Dehradun ATC at 1031 UTC which was incorrect.

3.1.10 Controller on duty has also not ensured that in case of displayed Metrological information found to be old/not updated the same should be refreshed using the mouse and refresh option.

3.1.11 IMD and CNS Automation Team were asked by Delhi ATS unit to provide the recording of the displayed weather information on 02.07.2021 at 1030 UTC, however

the same could not be made available as there is no provision for recording of MET display streaming in Indra ATMS.

3.1.12 Flight crew had Delhi weather which was obtained around 10:31 UTC and they did not request latest weather of Delhi prior to final decision of diversion around 11:00:00 UTC.

3.1.13 Flight crew diverted to Delhi planed destination alternate aerodrome well above MDF.

3.1.14 After diversion to Delhi aircraft was asked by Delhi Radar to hold at present position due weather.

3.1.15 Flight crew did not declare Minimum Fuel at any point of time.

3.1.16 Flight crew declared May Day fuel and upon landing remaining fuel on board the aircraft was approximately 300 Kg.

3.1.17 ATC gave priority to 6E-953 only and lacked in recognizing the distress situation with 6E-852.

3.1.18 ATC did not accord emergency handling status to 6E-852 or passed current operational scenario in advance that CFT would be on runway as ATC has declared full emergency for 6E-953.

3.1.19 WSO Log book entries were not made by ATCO regarding actions after declaration of MAYDAY FUEL by 6E-852.

3.1.20 Weather was the contributory factor to the incident.

3.2 PROBABLE CAUSE OF THE INCIDENT:

The probable cause of the incident is attributed to lack of situational awareness regarding importance of obtaining latest weather before commencing diversion & non adherence of standard procedure to inform minimum fuel state by declaring MINIMUM FUEL to ATC by flight crew.

Contributory Factors:

i. Weather
ii. Incorrect MET information which was communicated by Delhi ATC to Dehradun ATC.

4. SAFETY RECOMMENDATIONS:

1. DGCA Hqrs may take appropriate action as per finding no. 3.1.7 & 3.1.8.

Corrective & Preventive Action in place:

1. The involved flight crew has been counselled by Indigo flight ops i.r.o finding no. 3.1.12 & 3.1.15

2. The involved ATC controller has been counselled by AAI, ATM SQMS unit i.r.o finding no. 3.1.17, 3.1.18 & 3.1.19.

3. AAI has also issued a Circular 30 of 2021 dated 30.07.2021 i.r.o finding no. 3.1.17, 3.1.18 & 3.1.19 regarding handling of flights declaring diversions, Minimum Fuel and/or MAYDAY FUEL in Delhi ACC/Approach Control Units.

4. AAI has issued a Circular 01 of 2022 dated 20.01.2022 i.r.o finding no. 3.1.9 & 3.1.10 regarding dissemination of weather information.

27.04.2022

(Vishal Yadav)
Dy. Director Air Safety (NR)
Investigating-in-Charge-VT-ITA

Date : 27.04.2022
Place : New Delhi