

SUB: ADDITIONAL RECOMMENDATIONS PERTAINING TO ACCIDENT TO VT-AXV, B737 AIRCRAFT BELONGING TO M/S AIR INDIA EXPRESS LIMITED ON 22ND MAY 2010 AT MANGALORE.

ADDITIONAL RECOMMENDATIONS - DGCA:

1. DGCA, being the custodian of aviation safety, should be adequately staffed with well-qualified and trained personnel to carry out their safety oversight obligations. The lack of adequate staff duly qualified, has affected carrying out the performance of oversight functions in a timely manner.
2. DGCA should inspect facilities and evaluate the operator's studies objectively to determine non-conformances and deviations from the applicable DGCA CARs. DGCA should inspect the facilities & evaluate the operator's studies objectively and quickly to detect any incorrect visual aids as well as unsuitable facilities, services and equipment.
3. The DGCA should ask all operator(s) to submit a plan of action to resolve such non-conformances and deviations in the interest of safety. Any issue that cannot be resolved immediately should be brought to the notice of the DGCA along with necessary safety studies/aeronautical studies and approval sought prior to implementation.
4. DGCA should require all airport operators to conduct safety studies comprehensively and justify the RESA length while seeking approval.
5. The DGCA should direct AAI to recalculate the declared distances to provide 240 m RESA by reducing the Landing distance appropriately at safety-critical airports. This can be reduced if a suitably designed aircraft decelerating system is provided beyond the minimum 90m RESA.
6. The DGCA should check an Aerodrome Emergency Plan testing by participating as an observer at airports chosen randomly.
7. The DGCA should ensure that airports comply with the DGCA CARs Section 4, Series B, Part 1 on frangible structures within the operational area as it was applicable from 2006. DGCA should direct AAI to make an inventory of such installations and ensure compliance within the next six months.
8. The DGCA should ask all airport operators to ensure that periodic emergency exercises are planned and conducted as stipulated in the CARs Section 4, Series B, Part1, Chapter 9 to ensure emergency preparedness including the timed response of the local fire

brigade and other agencies for responding to aircraft emergencies outside the airport boundary.

9. The DGCA should act decisively to respond to requests from airport and airline operators in good time. No operator should assume that pending DGCA reply/decision, the permission requested for has been granted.
10. The DGCA should issue a directive/circular to all airport operators/ANS providers to ensure that the ATC tapes are sealed in the event of an accident or serious incident at an airport.
11. The DGCA should issue a circular or guidance on the issue of reporting confidentially any cases of Hard Landings and Go Around procedures.
12. The DGCA should ensure that all Indian air carriers have SOPs on operations at safety-critical airports and adhere to them. If required, the DGCA should develop a new CAR or issue a Circular on this subject.
13. The DGCA should clarify the terms “aircraft type/variant” in its CARs. Also suitable guidance on the acceptability or otherwise of Type difference training on simulators in lieu of practical hands-on experience on the newer generation of aircraft should be issued by the DGCA.
14. The DGCA should ensure that till a complete set of documents are presented by an airline, the airline’s request for issue of FATA to its pilots being recruited, should not be hastened.
15. The DGCA should also issue a Circular/guidance on the preparation of accident investigation reports comprehensively.

ADDITIONAL RECOMMENDATIONS – AI/AIE

1. AI/AIE recruitment policy and procedures should be reviewed to ensure that all documents are thoroughly checked to ensure completeness when submitting to the DGCA for approval.
2. AI/AIE should review the circulars on Hard Landing and Go Around procedures (as recommended by the COI report) with a view to withdrawing it and substituting it with a computerized system of reporting. It should be confidential, non-punitive and encourage voluntary reporting in a stress-free environment.
3. AIE and AI should encourage their flight crew to report, as users, any deficiencies with regard to the facilities, services and equipment at an airport with the view to improving operational safety.
4. AIE should comply with each and every directive of the DGCA and an action taken report must be duly submitted to show compliance. This applies to all airlines operating in India.
5. AI and AIE should resolve the issue of crew resource management as well as training, crew performance monitoring etc. with transparency and uniformity. As recommended in the COI report, AIE should grow to be an autonomous entity.
6. AI and AIE should do away with the age old system of writing in official flight crew scheduling documents in pencil and modify it with an eraser or confirm it with an ink pen. It should be computerized for transparency, clarity and fairness to all on an equal basis.
7. AI/AIE should be more sensitive to issues related to communicating with members of the deceased crew.

ADDITIONAL RECOMMENDATIONS – AAI

1. AAI, a public sector undertaking specialized in development, operation and management of airports, should ensure that at every AAI airport should conform to the relevant DGCA CARs in Section 4, Series B, Part 1.
2. AAI should ensure that all airfield markings and other essential visual aids provided at airports are fully compliant with DGCA CARs Section 4, Series B, Part 1.
3. AAI should ensure that a very objective evaluation of the airport area is conducted to ensure that the required size of the Runway End Safety Area (RESA) is provided at each end of a runway at every airport, commensurate with the aerodrome reference code as stipulated in the DGCA CARs, Section 4, Series B, Part 1, so that safety of aircraft operations is not endangered. Mere compliance with the safety minimum specifications is not enough to ensure safety.
4. AAI should, on top priority, plan and conduct emergency exercises at every airport strictly in accordance with DGCA CARs. Section 4, Series B, Part 1 to test every element of the Plan. AAI's Aerodrome Emergency Preparedness is very basic and inadequate. In fact, it appears that enough importance and planning is not given to the need to be prepared to handle aircraft emergencies on or in the vicinity of an airport – especially those with some safety critical features. This should be addressed urgently.
5. AAI should carry out meticulously the Aerodrome Emergency exercises to test every element of the Plan. To this end, AAI should know what, why and how of carrying out such exercises. Full-scale emergency exercises should be conducted without fail every two years and the deficiencies found should be rectified urgently and affirmed at the partial exercises to be conducted in the intervening years.
6. AAI should submit to the DGCA a comprehensive checklist of the emergency preparedness at all its airports including the dates of last full-scale testing and plans for the next one along with the results of the most recent exercise and any outstanding issues.
7. AAI should comply with the DGCA CARs Section 4, Series B, Part 1 requirement of frangibly-mounted structures within the operational area urgently. Calicut and Mangalore airport ILS/LOC antenna supporting structures are examples. AAI should make an inventory of such installations for submission to the DGCA and ensure compliance within the next six months. The DGCA should inspect and verify this compliance.

8. AAI should be directed to comply with each and every directive of the DGCA and action taken report must be duly submitted within 30 days to show compliance or planned action and closure of the inspection findings.
9. AAI has not carried out its evaluation of the type of RFF vehicle type and number being acquired for Mangalore Airport (“horses for courses”). An efficient and comprehensive Aerodrome Emergency Exercise would have indicated the various problems and AAI could have taken suitable action. AAI should ensure that such exercises are planned and conducted to be useful to establish emergency preparedness including the timed response of the local fire brigade for responding to aircraft emergencies outside the airport boundary.
10. AAI should standardize runway surface friction measurement at ALL airports with a set of systematic testing programmes to be followed meticulously by all airports. There must be a programme/schedule for inspecting movement areas (all paved operational areas), removing rubber deposits in a timely manner and measuring the runway surface friction values.
11. Since the sealing of ATC tapes after an accident is a standard requirement, it must be complied with meticulously by the entity responsible for those tapes. AAI must ensure this.