

**MINUTES OF THE MEETING HELD ON 21<sup>ST</sup> FEBRUARY, 2013 REGARDING PROPOSED ADDITION/ RELOCATION OF ASRs AT MUMBAI AIRPORT - EFFECT ON PERMISSIBLE HEIGHT ASSESSMENT**

The Chairman Appellate Committee in the Ministry of Civil Aviation had desired that a Sub-Committee consisting of the following Members should examine the issues regarding re-siting the existing ASR at Mumbai Airport and installation of additional ASRs and other navigational aids at Mumbai airport and their effect on permissible height of structures around the airport. As a follow up of the above a meeting was held on 21<sup>st</sup> February 2013 in the Chamber of Director MoCA Sh. Rajshekhar Reddy.

Following were present in the aforesaid meeting:

1. Sh. V. Somasundaram, Member (ANS) – Chairman.
2. L. Rajshekhar Reddy, Director, MoCA
3. Sh. J.S. Rawat, Jt. DGCA
4. Sh. V.K. Dutta, ED(ATM)
5. Sh. S.K. Purwar, GM(NOC)
6. Sh. Pan Singh, G.M.(CNS)
7. Sh. J.M.S. Negi, Ex ED(ATM)
8. Sh. K. Gohain, Ex. DGCA

In reference to height restriction in BKC and South Mumbai area due ASR, the AAI representative brought out that height restriction in BKC and South Mumbai area are due to planned shifting of existing ASR to new site which is on South of runway 09/27 . These were the only sites made available to AAI by MIAL. It was emphasized that to retain the existing height pattern, there is a need to have at least one such ASR at a suitable location to the North of runway 09/27 so that the coverage restriction due other ASR located at South of runway 09/27 can be mitigated

The Sub-Committee to start with, deliberated upon the best practices adopted in other countries where multiple integrated ASR systems are used to mount surveillance on heavy density air traffic like in USA and Europe. In these countries multiple ASRs are used in an integrated manner to get the best coverage and clarity. Considering the advantages in the above systems (USA and Europe), the Sub-Committee has drawn inferences in the instant case of equipping Mumbai Airport with multiple ASRs. This

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The bottom of the page contains several handwritten signatures and initials. From left to right, there is a signature that appears to be 'P. K.', a large stylized signature, a signature that reads 'S. K. Purwar', and another signature. The page number '1' is printed in the bottom right corner.

proposed integrated system will be a futuristic solution for all the metro airports with multiple runways etc.

After detailed discussion and examination of the zoning map of Mumbai Airport with the existing and proposed ASR sites and the effect on the permissible heights around the airport from ASR coverage point of view, the following decisions were arrived at :-

- i) The existing ASR will continue to function at the same location till a suitable alternate site to the North of runway 09/27 is identified and provided by MIAL/ Maharashtra Government for its relocation. As the Sub-Committee noted that the shifting of the said ASR from its present location to South of the runway 09/27 will result in additional restrictions in height already granted in the area South of the runway 09/27 particularly in BKC and affect the ASR coverage. Therefore, the Sub-Committee ruled out shifting of present ASR to South of runway 09/27.
  
- ii) The Sub-Committee is of the opinion that if existing ASR is retained at current location or any other suitable site- North of runway 09/27 in addition to proposed 2 new sites ( one near runway 32 beginning and another near runway 09 beginning ) and the coverage of each individual ASR is integrated to give the best ASR coverage for safe and efficient aircraft operation, the restriction due to an individual ASR can be mitigated. The Sub-Committee therefore suggests that while assessing the permissible height from multiple ASRs, the maximum permissible height available from individual ASRs in the system can be considered for granting of NOC as per SO(84E) subject to the condition that objects are at a minimum of one kilometer away from each ASR and large objects like hanger, warehouse etc. are minimum two kilometer away from each ASR. This criteria of assessing maximum permissible height from ASR system will apply only if all operational ASRs are integrated in the ASR system.

S. K. Purnam

- iii) The Sub-Committee suggested that even after integration of multiple ASR system, any gap in ASR coverage that may still exist may be covered up by implementation of ADS-B sensors.
- iv) The CNS Directorate of AAI may take immediate steps to install new ASRs and integrate them along with the existing ASRs.
- v) The Aeronautical study reports applicable to Mumbai airport will continue to be finalized with the existing ASR in its present location.



( V. Somasundaram )  
Chairman, Sub-Committee &  
Member (ANS), AAI



( L. Rajshankar Reddy )  
Director, MoCA



( J.S. Rawat )  
Jt. DGCA



( V.K. Dutta )  
ED (ATM)

S.K. Purwar

( S.K. Purwar )  
GM (ATM-NOC)



( Pan Singh )  
GM (CNS)



( K. Gohain )  
Ex. DGCA



( J.M.S. Negi )  
Ex. ED (ATM)