

Lic. y P.A. Gilberto López Meyer
Director General
Aeropuertos y Servicios Auxiliares (ASA)
Avenida 602, Número 161
15620 México, D.F.
México

Subject: Automated Weather Observing System (Revised Proposal Review)

Dear Capt. López Meyer:

The MITRE team reviewed the revised technical proposal (dated 6 August 2014) submitted to ASA by Rossbach de México S.A. de C.V. (hereafter referred to as Rossbach) describing Vaisala's Automated Weather Observing System (AWOS) being considered for installation at three potential airport sites in the State of Hidalgo. Additionally, the MITRE team reviewed ASA's letter (00902/2014 dated 9 September 2014) that accompanied the above-mentioned technical proposal. That letter provides feedback from ASA regarding important ASA-related considerations and responsibilities highlighted by MITRE in its previous AWOS response letter (see MITRE Letter F500-L14-037, dated 21 July 2014).

While MITRE is glad to assist with this review, it is important to consider that commercial reviews are normally outside the scope of MITRE's work. Being this the case, MITRE's liability does not apply to this opinion. The paragraphs below describe MITRE's comments on the Rossbach technical proposal. MITRE recommends that those comments be addressed by ASA with Rossbach before ASA makes a final decision.

Rossbach Technical Proposal

In general, most of MITRE's comments and recommendations were addressed by Rossbach in the revised version of the proposal. However, in the "AWOS Archive" table of the "OUTPUT DATA FORMAT" section of the proposal, the wind direction data description still indicates that wind will be reported in magnetic values (see the definitions of items "g" and "l" in the table). ASA should ensure that all wind direction data (including variable winds) are provided to MITRE **based on true north, not magnetic north**. Therefore, items "g" and "l" in the proposal should clearly state that wind direction data will be provided based on true north.

Additionally, the proposal is still missing a provision for a maintenance contract to repair the system within seven calendar days of the initial reporting of failure. This

provision is very important to ensure the timely recovery of the system in case of maintenance-related outages and to prevent significant loss of weather data, which may result in project delays. Therefore, MITRE recommends that a maintenance contract be included in Rossbach's proposal. **If not, please inform MITRE how ASA intends to repair the AWOSs in a timely manner.**

AWOSs Acquisition and Installation

ASA informed MITRE recently that the Fuerza Aérea Mexicana (FAM) is only considering one of the four potential airport sites currently being considered in the State of Hidalgo (i.e., the site near the town of Tulancingo). However, Dr. Bernardo Lisker contacted Lic. Manuel Ángel Núñez last week. Lic. Núñez explained that the site has not been decided and requested that MITRE continues working on all sites non-stop. This matches with what you have told Dr. Lisker. Therefore, MITRE recommends that three AWOSs are acquired as soon as possible to be installed in the State of Hidalgo. The siting of the AWOSs is the responsibility of ASA and the vendor providing the AWOS equipment. MITRE can, however, provide its opinion regarding the specific place selected for the installation of the AWOSs.

In order for the Nuevo Aeropuerto Internacional de la Ciudad de México (NAICM) to open, Santa Lucía Military Base's existing runway must be closed. As a result, all FAM fixed-wing training and maintenance operations need to be relocated to a new airport (fixed-wing transport aircraft would move to NAICM). One option currently being considered is for all fixed-wing training and maintenance operations to relocate to a new airport in the State of Hidalgo. Therefore, it is critical that a feasible airport site in the State of Hidalgo be identified in a timely manner, so that it can be planned, constructed and opened before NAICM operations commence.

In order to accomplish the above, it is necessary to simultaneously examine three potential airport sites using at least one-year of appropriate weather data so that if one of the sites is deemed infeasible, other alternative sites can be considered without having to wait for one-year of weather data for that site to be collected. If only one site is considered at this time, and it is deemed infeasible after one-year of AWOS data is collected and analyzed, the overall project would be delayed for at least one additional year for the new AWOS to be installed at an alternate site and data to be collected.

On the issue of providing security for the AWOSs, ASA has stated that in case an AWOS is installed on private property, probably the owners of that property can make daily patrols to oversee security of the system. If private property owners are to provide security, ASA should ensure that they are properly trained and instructed not only to provide actual security, but also to check basic AWOS operations and conduct minor maintenance of the systems to help prevent possible loss of data. Not doing so could lead to an AWOS not functioning for weeks. Periodic oversight by ASA, regardless of the manner in which security is provided, is essential.

Please confirm receipt of this letter via e-mail and, when finalized, provide to MITRE the updated technical proposal from Rossbach and ASA's responses to the issues identified above.

Do not hesitate to contact me if you need any clarification or any other assistance.

Sincerely,



Ing. Robert W. Kleinhans
Project Technical Coordinator

cc:

Jorge Nevárez Jacobo (ASA)
Gilberto Manuel Vázquez Alanís (ASA)
Bernardo Lisker (MITRE)