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Subject: Response to Comments Sent to GACM by SENEAM

Dear Ing. Tapia:

On 28 July 2017, you sent to MITRE via e-mail a document that Servicios a la Navegación en el Espacio Aéreo Mexicano (SENEAM) sent to GACM (see SENEAM document 4.5.105.-453/17, dated 24 July 2017) that provides comments regarding MITRE's recent 1 July 2017 deliverables. This letter is intended to respond to those comments, where appropriate.

Most of these replies have already been discussed with SENEAM, to avoid any misunderstandings or surprises.

The main topic and/or sub-topic of each of SENEAM's comments are repeated below as they were written in SENEAM's above-mentioned letter. MITRE's comments are located directly underneath.

1. Sobre el documento "*Centro de Gestión de Residuos Sólidos en el Bordo Poniente. Regarding Aeroméxico's Takeoff Performance Analysis*", F500-L053.
 - **MITRE Responses 1:** Please note that the MITRE document number that SENEAM is referencing as "F500-L053" is incorrect. The correct number is F500-L17-053.
 - **MITRE Response 2:** Lic. Yuriria Mascott, Undersecretary of Transportation, and CTA. Miguel Peláez, Director General, Dirección General de Aeronáutica Civil (DGAC), requested that MITRE assist with the coordination of a takeoff performance analysis considering Aeroméxico's engine failure policy for critical aircraft for the locations and height of the proposed facility. The objective of MITRE's above-mentioned document is to provide authorities with MITRE's feedback and opinion regarding the results of Aeroméxico's takeoff performance analysis. MITRE is not comparing its analysis to any study that was performed by SENEAM. However, in the interest of collaboration, MITRE recommended that SENEAM review MITRE's document to be informed. This work is out of contractual scope. MITRE does not attempt at any time to substitute SENEAM. Finally, an update:

CONAGUA suggested a new site and MITRE recently provided what it is hoped will be a final opinion at a new site (called Option 6.2).

2. Con relación al documento: *Category III Instrument Landing System Acquisition Proposal: Final Feedback, F500-L17-057.*

* COBERTURA DE LOCALIZADOR

MITRE Response: Regarding the height of the localizer signal coverage, please note that MITRE is not an expert in the operation of an Instrument Landing System (ILS). Therefore, MITRE does not know if SENEAM's comment regarding height coverage (e.g., horizontal plane) means that MITRE's recommendations on height coverage are being met or not. SENEAM and others with expertise in this matter (e.g., the ILS equipment manufacturer/designer) should provide confirmation on localizer signal height coverage. Incidentally, MITRE has requested a localizer with a range of 40 NM.

* COBERTURA DEL GLIDE SLOPE

MITRE Response: MITRE has been provided with several different ILS acquisition documents to review by GACM, which only causes confusion regarding their content and purpose (e.g., mobile ILSs or permanent ILSs).

For example, on 22 July 2016, GACM sent MITRE a document named, *Technical Annex: Procurement of A New Mobile Instrument Landing System (ILS) CAT III Portable-Mobile-Semi-Deployable for the New International Mexico City Airport*. That document mentioned a glide slope coverage of 40 NM. MITRE provided feedback on that document on 12 August 2016 (see MITRE letter F500-L16-041).

The latest ILS acquisition document that GACM sent to MITRE to review named, *34 43 16.16 Especificación Particular, Sistema de Aterrizaje por Instrumentos (ILS)*, did not mention a glide slope coverage of 40 NM. Therefore, it appears that SENEAM's comment is referring to MITRE's comment on the glide slope coverage that was stated in the ILS acquisition document sent to MITRE on 22 July 2016.

Regarding the height of the glide slope signal coverage, MITRE does not know if SENEAM's comment regarding height coverage means that MITRE's recommendations on height coverage are being met or not. As mentioned above, SENEAM and others with expertise in this matter should provide confirmation on glide slope signal height coverage.

Once again, MITRE has suggested repeatedly that the glide slope should have a range of 28 NM. A longer distance would not a problem, except that it may make the glide slope more expensive.

* COBERTURA DME

MITRE Response: No response necessary.

* ACTIVIDADES DE INSPECCIÓN DE VUELO

MITRE Response: MITRE is not an expert in the area of flight inspection activities or how they should be conducted to meet certain objectives. However, it is critical that appropriate flight inspection activities are conducted in a manner to ensure that ILS signal reception to support long finals at NAICM can be achieved for all six of the opening-day runway ends. It would be unacceptable to find out after runways have been constructed that there are problems with ILS signal reception. The number of runways that need to be inspected in order to ensure that appropriate signal reception can be achieved on all six runway ends is a decision that SENEAM and others who are technical experts in this field with appropriate experience, especially when considering the high and diverse terrain and man-made objects surrounding the NAICM site, need to make.

* INTEFERENCIAS DE SEÑAL POTENCIALES

MITRE Response: MITRE is not an expert in determining interference with ILS signals that could be caused by proposed airport facilities, buildings, taxiing aircraft, etc. Other experts in this area should examine proposed infrastructure and airfield plans to ensure that they do not cause signal interference problems.

* USO OPERACIONAL

MITRE Response: No response necessary.

3. Respecto al documento "*Technical Letter: Review of Polígono con Ampliación por Pistas 5 y 6*", F500-L17-057.

- **MITRE Response 1:** Please note that the MITRE document number that SENEAM is referencing as "F500-L17-057" is incorrect. The correct number is F500-L17-067.
- **MITRE Response 2:** MITRE was asked by GACM to provide feedback on the appropriateness of land acquisition matters to accommodate Runway 5 and Runway 6 and their associated Approach Lighting Systems (ALSs). MITRE noticed that several parcels within and adjacent to the NAICM site boundary had yet to be acquired. These parcels are in important areas in relation to Runway 5 and Runway 6. In addition, there are areas in the drawing provided for MITRE to review that lack any symbology or classification regarding their acquisition status or have been labeled as "parcelas sin trámite de pago." Note that MITRE recently received information from GACM regarding the NAICM site boundary, which is currently being reviewed.

Also, SENEAM mentions that some land acquisition matters to the east of NAICM are affecting taxiway planning matters. MITRE would like to know more about this matter from GACM.

4. Sobre al documento "*Technical letter: Analysis of Obstacle Clearance and Limitation Surfaces over the Southeast Campus*", F500-L17-068.

MITRE Response: Please refer to MITRE's document for information on its analysis of obstacle clearance and limitation surfaces over the southeast campus, as necessary.

5. Referente al documento *Nuevo Aeropuerto Internacional de la Ciudad de México - Runway Visual Range Data Analysis: Preliminary Findings, Enclosure No.1, F500-L17-070*.

MITRE Response: MITRE has not received data from the Automated Weather Observing System (AWOS) since December 2016. MITRE would like to know if it is possible to resolve the problem with the AWOS at its current location while preparations are being made to relocate the AWOS (and Runway Visual Range [RVR]) equipment inside the NAICM perimeter fence. This, of course, depends on how much longer it will take to complete preparations to relocate the AWOS and RVR equipment. If the AWOS and RVR are still not operational or keep malfunctioning past 15 October 2017, MITRE will not be able to produce a robust weather analysis in 2018.

- 6/7 Con respecto a los documentos: "*Mexico Area Control Center Preliminary Airspace Redesign - Informal Working Notes: Routes and Sectorization, Enclosure No. 3 (F500-L17-070)*" y "*New Terminal Maneuvering Area Preliminary Airspace Redesign - Informal Working Notes: Routes and Sectorization*", Enclosure No. 2 (F500-L17-070).

MITRE Response: After returning from the June 2017 airspace design workshop in Mexico City, the MITRE team worked hard to include changes and modifications in both of the above-mentioned MITRE documents so that SENEAM would have the most up-to-date information.

The statement that indicates that information from the June 2017 airspace design workshop is not being reflected in MITRE's above-mentioned documents was discussed with SENEAM. The information that SENEAM is referring to relates to the possible acquisition of airspace from the Mazatlán Area Control Center (ACC). However, SENEAM had previously informed MITRE not to consider the possible acquisition of Mazatlán ACC airspace because of SENEAM-related internal coordination matters that still need to be conducted. In conclusion, SENEAM has concurred that MITRE's documents do reflect the airspace and route information discussions as of the June 2017 airspace design workshop.

8. En cuanto al documento: "*Guadalajara International Airport - Expansion Feasibility Examination and Technology Transfer: Initial Data Request, Enclosure No.4, (F500-L17-070)*).

MITRE Response: The objective of the above-mentioned document is to request initial data on Guadalajara Airport that is needed for MITRE to perform many of its early project tasks. Some data can be obtained by GACM. However, other data may need to be ultimately obtained through the assistance of SENEAM (e.g., operational statistics) and DGAC. Therefore, MITRE hopes that SENEAM can assist GACM in obtaining data that is within its domain of expertise and knowledge. Let me add that the Guadalajara data MITRE is waiting for is now extremely late.

Please do not hesitate to contact me if you need any additional assistance.

Sincerely,



Ing. Robert W. Kleinhans
Project Technical Coordinator

cc:

Ing. Enrique Lavin, GACM
Dr. Bernardo Lisker, MITRE