Sample Company

Aircraft New Home Base Airport Analysis

Conducted by

AeronomX LLC

Final Report
MMMMM DD, YYYY

Executive Summary

Sample Company no longer desires to be exposed to the almost certain risk of flooding associated with any hurricane or tropical storm that may come into the greater Blowhard area in the future. It has vacated the hangar at Coastal Airport and has set up temporary quarters at the Big City Airport located southwest of the Blowhard area.

This analysis researched the surrounding airports near Blowhard to determine those airports that are most beneficial as a home base airport that can best support the current Sample Company flight operations and any anticipated changes to the department, that will minimize its exposure to flooding and be conducive to safety.

Criteria were established for the airport and hangar facility to accomplish this. Twelve airports in the area were investigated, of which eight were dismissed early on from further consideration. The four final contending airports were First Airport, Second Airport, Third Airport, and Fourth Airport.

Each criteria item was examined in a side-by-side comparison. It is the recommendation of the consultants to use the Second Airport as the new home base for the Sample Company flight department. The primary reasons were its runway to handle all current and future flight operations without restrictions, the ILS precision instrument approach, the control tower to go into operation this summer, low taxes, low noise complaint probability, room to build and expand if necessary, and its proximity to company executives and flight department staff.

Introduction

With the flooding associated with Hurricane Kat5, the Sample Company Aircraft Home Base Hangar located on the Blowhard Coastal airport was flooded and there was substantial damage to personal aircraft stored in the hangar as well as aircraft parts and ground support equipment. The hangar was flooded for over 2 weeks. This same hangar was previously flooded in 1996.

Sample Company no longer desires to be exposed to the almost certain risk of flooding associated with any hurricane or tropical storm that may come into the greater Blowhard area in the future. It has vacated the hangar at Coastal Airport and has set up temporary quarters at the Big City Airport located southwest of the Blowhard area.

This analysis is intended to consider the surrounding airports near Blowhard and determine those airports that are most beneficial as a home base airport that can best support the current Sample Company flight operations and any anticipated changes to the department, that will minimize its exposure to flooding and be conducive to safety.

The Sample Company flight department currently consists of the following helicopters…. The department also has a XXX business jet. It is a possibility that the XXX will be replaced in the near future by a large-cabin aircraft, such as, a Challenger 300, Challenger 604, Falcon 2000, Falcon 900, or Gulfstream IV-SP.

For its helicopter support, the department will continue to maintain staging operations at the XXX Airport. The helicopters will predominantly be based off-shore and at the XXX location. From time to time, a helicopter will be brought to the home base location for maintenance.

The flight department personnel consist of Joe Friday as Chief Pilot who flies both helicopters and the XXX. There are 7 additional pilots, most fly the helicopters, one of which flies the XXX with Joe Friday. There are 4 maintenance technicians.

The helicopters fly in support of oil rig operations in the Gulf of Mexico carrying personnel and parts. Occasionally the helicopter will fly corporate personnel. It is planned that a helicopter will be used to shuttle corporate passengers to/from the XXXX Heliport to the Aircraft Home Base for some of the business jet flights.

The XXX, and possible replacement aircraft, will have the following destinations on average:

- Once a month to the XXX Ranch in Mississippi
- Two times per month to New York City (TEB)
- Four times per month to Houston (HOU)
- Four times per month to Dallas (DAL)
- Four times per year to Washington DC (IAD)
- Two times per year to Colorado
- Once a year to Alaska
- Seven times per year to the UK and Western Europe (replacement aircraft only)
- Three times per year to the US West Coast

Home Base Airport and Hangar Criteria

In discussions with Sample Company management and Joe Friday, Chief Pilot, the following criteria for a new home base were defined:

Airport

- To have an elevation and ground contour/drainage sufficient to have a low probability of flooding due to storm surge from hurricane or tropical storm.
- To have a runway of adequate length, width, and weight bearing capacity to handle the anticipated flight needs of the XXX and possible replacement aircraft.
- To have taxiways and apron of adequate size and weight bearing capacity for the XXX and possible replacement aircraft.
- Average weather: IFR/VFR days, temperature, etc.
- To have IFR approaches that are adequate to the historical average weather conditions for fixed-wing and rotor-wing operations. It is presumed that an ILS precision approach that allows landing-configured stabilized approaches is optimum for safety for fixed-wing operations.
- Lighted for night and IFR operations.
- It is presumed that an airport with control tower and Class D airspace is most conducive to safe IFR fixed and rotor-wing takeoff and landing operations.
- To be secure by fencing and law enforcement patrols.
- Adequate crash/fire/rescue support.
- Is US Customs available to clear into USA?
- Not to have other operations that would adversely affect Sample Company's operations.
- To have minimal surrounding and over-flight of conflicting land uses, such as, residential areas, schools, shopping centers, etc.
- To have minimal impact to flight operations from restricted airspace associated with the visiting dignitaries that will continue to come to the region to observe hurricane disaster relief.
- To allow Sample Company to have its own fuel operations should it choose to do so. Otherwise, it must have an FBO that can supply jet fuel.
- To be located in either XXXX or XXX that minimizes exposure to tax liability by the state.

Hangar

- To be of sufficient size to house the entire fixed and rotor-wing fleet under one roof. This has been calculated to be approximately 24,000SF. It is anticipated that any excess space may be sublet to tenet aircraft.
- The hangar opening should be able to accommodate a Gulfstream IV-SP. This is at least 100 feet wide by 28 feet tall.
- To have adequate apron space for operations. This is estimated to be a minimum of 15,000SF.
- To have sufficient office space.
- To have sufficient space to support maintenance operations and parts storage.
- To have private suites with sleeping space and bathroom facilities for two pilots.
- To have adequate utilities.
- To have adequate parking.
- To be secure.
- It is presumed that the entire hangar facility will take approximately 1.5 to 2.5 acres of land at the airport (66,000SF to 110,000SF; for this study 100,000SF will be used).

Airports Considered for this Analysis

The following airports were considered for evaluation:

- First Airport
- Second Airport
- Third Airport
- Fourth Airport
- Fifth Airport
- Sixth Airport
- Seventh Airport
- Eighth Airport
- Ninth Airport
- Tenth Airport

Airports Immediately Dismissed from Further Consideration

The following airports were dismissed from further consideration due to a prominent feature as mentioned:

- Fifth Airport – Runway too short for fixed wing operations
- Sixth Airport – Did not offer any benefit better than Fifth airport
- Seventh Airport – Runway too short for fixed wing operations
- Eighth Airport – Runway too short for fixed wing operations
- Ninth Airport – Runway too short for fixed wing operations
- Tenth – Low elevation, proximity to shoreline, high probability of future flooding
- Eleventh Airport – Low elevation, proximity to shoreline, high probability of future flooding
- Twelveth Airport – Low elevation, runway too short for fixed wing operations

Airports for Analysis

This left four airports for the analysis: First Airport, Second Airport, Third Airport, and Fourth Airport.

First Airport (MSY)

Upon further consideration, the First Airport Airport was observed to have many of the desirable Airport Criteria listed above, except for its elevation and probability to flooding. The airport elevation is only 6 feet above mean sea level. There is a retaining wall located at the western edge of the airport which keeps the water from the lake and the Bonne Carre Spillway away from the airport. A breach similar to that experienced at other levees in Blowhard during Katrina would cause flooding on the airport.

We determined that only if a hangar facility that met the Hangar Criteria listed above currently existed and were available, would it be worthwhile to continue to consider this airport.

Such a facility exists. It is the Freeport – McMoRan hangar. Last week it was confirmed by Freeport – McMoRan management that it is fully leased out for the long-term and no hangar space is available. The contact in management was Debbie Schapetta (uncertain spelling).

However, I was recently contacted by another Freeport-McMoRan aviation supervisor who stated that space MAY be available. I am waiting for additional information. However, until there is new information to the contrary, we consider MSY airport does not meet the criteria.

Airport Side-by-Side Comparison

The table below lists the basic features of the remaining 3 airports. Each will be discussed in further detail below.

We met with the airport managers of each of these airports. All three expressed a strong interest in having the Sample Company flight department located at their respective airports. They each would like to have the opportunity to hold further discussions as to special economic sanctions or benefits that they might be able to extend to Sample Company.

Feature	Third Airport (HAS)	Second Airport (ASD)	Fourth Airport (HDC)
Airport Elevation	23 ft, though southern half of airport flooded from Katrina storm surge.	28 ft.	46 ft.
Flood Control/Drainage	Adequate	Adequate	Adequate
Runway Length x Width	8,500 x 150	5,000 x 100	6,500 x 100 5,000 x 150
Runway Weight Bearing Capacity	120,000 lbs single wheel. 170,000 lbs dual wheel. 270,000 lbs dual tandem wheel.	48,000 lbs single wheel. Planned in 2 years to reinforce to 120,000 lbs single wheel.	42,000 lbs single wheel.
Taxiway/Apron Weight Capacity	Same as rwy.	48,000 lbs single axle.	60,000 lbs single wheel.
Runway Adequate for XXX?	Yes, unrestricted	90F limited to ~19,000 lbs. for takeoff, or 1 pax/2 hr flight. 24,000 lbs. for landing.	Yes, unrestricted
Runway Adequate for Future Aircraft?	Yes, unrestricted	Likely limited by runway length and weight.	May be limited by weight.
Number IFR days	2 fog days/yr. 106 prcp days/yr. Avg max temp 91F.	230 days with some IFR conditions. Max temp 97F.	Waiting for data….
IFR Approaches	ILS/VOR	RNAV/VOR. Talk of ILS in future.	ILS to shorter runway. VOR
Lights for Night Ops	REIL rwy 18-36. HIRL rwy 18-36.	REIL rwy 18-36. MIRL rwy 18-36.	REIL rwy 13-31. MIRL both rwy.
Control Tower. Weather reporting.	Opening Aug 2006. AWOS-3.	No. Talk of one in the future. ASOS.	No. Talk of one with ANG unit coming to field.
Airport Security	Fenced. Patrolled.	Fenced. Patrolled.	Fenced. Not patrolled, though US Customs Flt. Dept. on field.
Crash/fire/rescue	2 trucks manned by volunteers on field.	Local fire department 2 miles away.	Station on field. 2 trucks. Full-time force.
US Customs Avail?	Yes	No	No; talk of it for future.
Other Airport Uses	None interfering.	Skydiving.	Air Natl. Guard coming.

Surrounding Land Use	Well buffered.	Housing along SW boundary.	Surrounded by housing.
Possible Restricted Airspace	Outside 30 NM from MSY airspace.	Outside 30 NM from MSY airspace.	Outside 30 NM from MSY airspace.
Fuel Operations	Yes; 7¢ flowage fee plus $100/mo. Or FBO provide at 22¢ over cost.	Yes; unknown flowage fee. Or FBO to offer competitive price.	Yes; 10¢ flowage fee. Or FBO to offer at competitive price.
Tax – Personal Property	None.	Yes; 16.5% of fair market value of aircraft.	Yes; 15% of book value of aircraft.
Hangar Available?	No	No	No
Sufficient Land Available to Build?	Yes	Yes	Yes
Land Lease Rate	25¢/SF/mo. Approx $25,000/mo.	21¢/SF/mo. Approx $21,000/mo.	12¢/SF/mo. Approx $12,000/mo.
Land Lease Terms	Up to 60 years	Up to 60 years	Up to 60 years

Additional Discussion of Airports

Third Airport (HAS)

This airport is located 20 miles east of Second Airport and is very close to I-10. During Katrina the southern end of the airport experienced some flooding but the northern end had no flooding. The northern end of the airport is where property is available for lease and building. As with most airports either a third party builder of the occupant would be responsible for the building with pay back options used to reimburse the occupant.

There are some tax incentives available at this airport through the Katrina Taxes & Incentives. Senate Amendment to H.R. 4440. A brief on this bill is attached. There are personal property taxes, but the local tax authorities have the willingness and ability to establish taxes based on economic improvements to the area.

Fuel can be purchased for $.22 above wholesale if a hangar of 2500 sq. ft. or larger is built.

There is a fire truck available on the airport, but volunteer firemen man it. The volunteers and the local fire departments would have a 5 to 10 minute response time.

All the runways and taxiways will support aircraft up to Boeing 747 weights and the approaches and runways are state of the art. The facilities are already improved and ready for use. There is no waiting time for airport improvements.

Air Traffic Control is through Biloxi Approach Control, which is relative close and has radar coverage to a low altitude. Third Airport is also an International Airport with U.S. Customs available. This would assist in return trips from the Islands, Central or South America and Europe if refueling is done in Gander or somewhere outside the U.S. There would be no need for a stop at a busy airport just to clear customs, it could be done at the home base. They anticipate having a contract control tower on the field by mid summer of 2006.

Complaints from the public should be minimal. The entire area west of the airport for at least 11 miles is a zone leased by NASA and there are no residences or any inhabited structures allowed in the entire area due to noise from the rocket motor testing.

Second Airport Municipal

Second Airport is a work in progress. The runway has just been extended to 5000 feet and will be painted in the very near future. The airport has a subdivision adjacent to it with an apartment/condo complex on the south side just off the airport. These are potential problems for noise complaints for both the jets and the helicopters.

There is ample space for building and expansion, but there seem to be many plans that may or may not develop as the airport manager wishes they would. For example, the reserve center is to the Southeast of the airport with an access road on the Southeast corner of the airport. The airport manager perceives this as a positive for airport development with the National Guard, however we learned that the National Guard has already committed to Fourth Airport Airport for a new facility to move what was at Lake Front to that airport. Knowing this it is not conceivable to me that the state or FAA would spend money on a tower or other airport development to support a state military function at Second Airport when they are making a major investment only 40 miles west of the airport.

Another detriment to development of the airport is a string of very high voltage power lines which pass to the northeast of the airport. These power lines are holding up the installation of the ILS approach, and without the pressure or need from a state or federal agency it is hard to believe that multi-millions of dollars will be spent to move these lines.

The 5000 foot runway will support smaller business jets, but that is a bare minimum for larger business jets. There would be minimal to no safety margin for taking off with a load of fuel to allow a west coast or European flight. It is questionable if the runway and taxiways are certified for the weights of the higher weight business jets. This is something we will be checking out and submitting with this report.

The Second Airport National Weather Service station is located on the field, so gathering weather information would be a simple task. However even if they are next door, it is a phone call and that can be done from anywhere and the physical access is not necessary.

It is stated that there is no flooding problem at the airport, but the west side of the airport is in a flood zone because of a drainage ditch that runs between the airport and the subdivision. Construction would have to involve about a three foot layer of fill dirt to get above the flood level.

Additional concerns are that there is only one access to the airport, if the road is blocked for any reason, access is denied until the problem is resolved.

There are also economic development options available at this airport as with many. The personal property tax issue is being checked out. Fuel can be self provided or through the FBO. With the small FBO and what appears to be limited hours of operation I would suggest self-fueling at this location if it is selected.

Bottom line, this airport has an aggressive airport manager with many ideas and dreams for improvement, but as stated by him, he has many obstacles in the way for first class improvements to the airport, and all will take time to overcome, if indeed they are overcome.

Fourth Airport Municipal

This airport has two runways, with the ILS to the shortest runway. They have subdivisions in all quadrants of the airport and already have problems with neighbors who will not allow trees to be cut off the end of the runway. The subdivision to the east already has a noise fence installed, so there must have been or is a problem with noise.

There is little formal security. But with the occupants that are there, there is plenty of passive and visible security in the way of cameras and signs.

The Louisiana National Guard is moving their facility and aircraft from Lake Front airport and Customs is located on the field as well. All the improvements will be as a result of money spent by the state and FAA to facilitate these two organizations. Operational control of the airport, in my opinion, will be lost to the government agencies.

There is property available for rent/build, but no existing hangars available. The mayor is very anxious to develop the airport and is willing to talk deals, but the location of the airport so far west and the population around the airport makes it a very low choice in priority.

The runways are not stressed for very large aircraft, and the taxi ways are not stressed for anything over a G-III. The airport layout will require a lot of taxi time, which is time and fuel and is generally just inconvenient. It is hard to figure why they did not extend the ILS runway and make it the long runway, there appears to be sufficient property off the north end of that runway as there is with the current long runway.

Fuel is available or you can have your own. If you use your own fuel they collect a $.10 per gallon flowage fee. The property rental is between 12 and 18 cents per sq. ft. The leases on the airport will run 10 years for every $60,000.00 spent up to 60 years. The maximum lease is 60 years.

Distances:

Using Second Airport as a central location, Third Airport is 20 miles east, Second Airport is about 3 miles from downtown, Fourth Airport is 45 miles west and Armstrong is about 50 miles southwest. These are highway miles, direct flight miles may be a bit less.

Recommendations

A new hangar facility would have to be built at any of the airport choices, so this issue is the same for each. However, the lease rental rate, the tax liability, self fuel issue, and timeline for approvals are significant factors.

The airport with the most advantages for flight operations is the Third Airport Airport. It has a more than adequate runway, an ILS approach, and soon to have an operating control tower. There are minimal chances of receiving noise complaints. The XXX and any future aircraft can operate unrestricted from this airport. This is the only airport that has US Customs service available for re-entry into the United States. Mississippi does not tax aircraft.

The XXX can marginally operate safely into and out of the Second Airport Airport. It is equipped to fly the RNAV instrument approaches into Second Airport that would allow it to fly a landing-configured stabilized instrument approach. The runway, even with the 1,000 foot extension, does not allow too much room for error. On most days, the XXX will only be able to takeoff with 2 to 2.5 hours worth of fuel. This means that it would have to make an extra stop to the West Coast or to New York if the destination weather is marginal. A larger replacement jet could not be safely operated from there by normal industry standards. The possibility of an additional runway extension, ILS approach, and control tower, are unfortunately just only a possibility. There is current no formal plan under consideration for these improvements. The parish tax office has confirmed that the aircraft are subject to a 16.5% tax on the fair market value of the aircraft. This could potentially add up approximately to a $1,650,000 tax liability annually.

The Fourth Airport Airport has many advantages over the Second Airport airport, however, it does not have the most advantageous features for the Sample Company fleet. The ILS approach is into the shorter runway. A replacement jet aircraft may be affected by the weight limits of the runway. When the Air National Guard starts up operations there, unless they install a control tower, there may be issues regarding air traffic around the airport. The airport is surrounded by neighborhoods, so noise complaints will always be a possibility. And finally, the parish definitely levies a tax on aircraft, which would amount to nearly $1,500,000 per year to the company.

It has been mentioned that if the Second Airport Airport is chosen, most of the passenger flights departing from there would have only one passenger. And that most of pricipal's flights would involve the flight crew repositioning the airplane from Second Airport to XXX or CC airports. Regarding flight safety, it does not matter whether the aircraft has the crew only or one passenger only. Safety should not be compromised for convenience. A larger replacement jet will either need to be ruled out entirely or will be very restricted. All of these restrictive issues are eliminated by operating out of the Third Airport airport which is only a 20 minute drive from Second Airport.

It is the recommendation of the consultants to use the Third Airport International Airport as the new home base for the Sample Company flight department.