2004

HELICOPTER SAFETY ADVISORY CONFERENCE (HSAC) GULF OF MEXICO OFFSHORE HELICOPTER OPERATIONS AND SAFETY REVIEW

HSAC Members: March 3, 2005
Please find attached the Helicopter Safety Advisory Conference (HSAC) "2004 Gulf of Mexico Offshore Helicopter Operations and Safety Review". The membership support and response from 22 helicopter operators for this review is not only appreciated, but vital in establishing a meaningful report. Continued support is encouraged for the future.

The 2004 Gulf of Mexico oil industry helicopter accident rate per 100,000 flight hours was 2.77 with a total of 10 accidents (9 single engine, 1 medium twin) compared to a 21-year annual average accident rate of 1.88 with a total of 9.1 accidents/year. The fatal accident rate per 100,000 flight hours during 2004 was 1.11 with a total of 4 fatal accidents (15 fatalities) compared to a 21-year average of 0.71 with a total of 2.8 fatal accidents/year.

This was the worst year for fatalities in the 21 years since we began gathering data. The 4 fatal accidents were caused by: 2 unknown (1 at night), 1 each helideck obstacle strike and controlled flight into water.

During 2004, improper pilot procedures and technical fault each accounted for 4 (40%) or 8 of the 10 accidents. 2 accidents have an unknown final cause and 2 occurred at night.

In the last 5 years, there have been 48 accidents of which 16 were fatal (33%), resulting in 32 fatalities and 40 injuries. 25 (52%) of these accidents were due to pilot procedure related causes and 14 (29%) were due to technical fault. For technical accidents, there were the 9 engine related events, 4 tail rotor events, a 1 main drive shaft failure. 13 of the 48 accidents (27%) were related to events around the helideck (5 each loss of control and obstacle strikes, 2 passenger control, and 1 tie-down removal). The specific leading causes of accidents in the last 5 years have been:

- **9 (19%) engine related - with 4 fatalities**
- **8 (17 %) loss of control or improper procedure with 1 fatality**
- **5 (10%) controlled flight into terrain or water - 2 occurred at night - with 8 fatalities**
- **4 (8%) helideck obstacle strikes with 4 fatalities**
- **3 (6%) tail rotor failures**
- **3 (6%) fuel management**
- **3 (6%) loose cargo striking tail rotor**
- **3 (6%) unknown causes with 12 fatalities (1 night with 10 fatalities)**
- **3 (6%) fuel quality control**

Note - Although night flight accounts for less than 3% of the GoM flight hours, in the last five years, the 4 night accidents accounted for 8% of the total accidents and 38% of total fatalities (12 of 32 total). 3 of the 4 events were fatal.

HSAC has published a number of Recommended Practices to address these issues and they can be reviewed at www.HSAC.org. We are optimistic that by sharing this information with all operators and other oil industry group's, safety initiatives may be developed and implemented to reduce accidents and incidents.

Bob Williams

Industry Liaison Committee Member

GULF OF MEXICO OFFSHORE HELICOPTER OPERATIONAL DATA SUMMARY

YEAR	NUMBERS by TYPE HELICOPTER						HOURS		
	SINGLE ENGINE	LIGHT TWIN	MEDIUM TWIN	HEAVY TWIN	TOTAL FLEET	PASSENGERS CARRIED	FLOWN	NUMBEROFTS	FLIGH
2000	385	76	106	15	582	3,451,511	441,908	1,394,679	
2001	407	87	121	17	632	3,127,449	451,712	1,473,057	
2002	411	77	121	16	625	3,088,865	402,632	,564,362	
2003	410	66	118	13	607	2,574,810	381,273	1,345,075	
2004*	387	60	100	14	561	2,329,064	361,514	1,270,863	

*** Data extracted from voluntary input of 12 helicopter operators in the Gulf of Mexico**

GULF OF MEXICO OFFSHORE HELICOPTER OPERATIONAL DATA DETAILS

HOURS by TYPE HELICOPTER						OPERATIONS by TYPE HELICOPTER				
YEAR	SINGLE ENGINE	LIGHT TWIN	MEDIUM TWIN	HEAVY TWIN	TOTAL FLEET	SINGLE ENGINE	LIGHT TWIN	MEDIUM TWIN	HEAVY TWIN)	TOTAL FLEET
1999	316,029	38,126	79,736	8,016	441,908	1,051,160	134,035	192,289	17,197	1,394,679
2000	309,429	35,318	96,548	10,417	451,712	1,123,393	125,832	204,285	19,547	1,473,057
2002	284,226	26,610	83,556	8,240	402,632	1,251,945	99,117	195,883	17,417	1,564,362
2003	275,580	22,161	76,948	6,584	381,273	1,102,644	67,399	163,869	11,163	1,345,075
2004	263,258	20,436	69,479	8,341	361,514	1,048,858	65,704	144,545	11,756	1,270,863

GULF OF MEXICO HELICOPTER FLEET OPERATIONAL DATA

Averages Per Helicopter	2002	2003	2004	Averages Per Helicopter	2002	2003	2004
Passengers per Day per 5 Day Week	11,880	9,903	8,958	**Annual Hours Per Aircraft**	644	628	644
Flights Per Day	4,286	3,685	3,482	**Flights Per Aircraft**	2,503	2,216	2,265
Average Flight Duration in Min.	15	17	17	**Passengers Flown Per Year**	4,942	4,242	4,152

As a service to the Helicopter Safety Advisory Conference (HSAC) membership, this Gulf of Mexico Offshore Helicopter Statistical Report is compiled annually from information submitted voluntarily by the membership and helicopter operators. The information is neither verified nor reviewed for accuracy and should be treated as unofficial. The data is believed to be representative; however, the HSAC assumes no liability for accuracy or completeness.

2004 GULF OF MEXICO OFFSHORE HELCOPTER ACCIDENT DATA

NUMBER OF ACCIDENTS				**INJURY CLASSIFICATION**					**AIRCRAFT DAMAGES**		**AVIATION ACCIDENT**			
Aircraft Category				**Injuries**		**Severity**			**Classification**		**Rates**			
Type Aircraft	# Accidents	# Fatal	# Eng Related	Pax	Crew	Injured	Fatal	Minor	Substantial	Total Loss	# Acc 100k Hours	# Fatal Acc 100k Hours	# Fatal 1 M Occupants	# Acc 100k Flt Stages
Single Eng.	9	3	2	8	4	7	5	0	3	6	3.42	1.14	2.11	0.86
Light Twin	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
Med. Twin	0	0	0	0	0	0	0	0	0	1	4.89	4.89	9.14	0.69
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
2004*	10	4	2	16	6	7	15	0	3	7	2.77	1.11	3.99	0.79
2003	15	7	3	17	8	13	12	3	2	10	3.93	1.84	2.93	1.12

*** Note - There was one additional ditching in 2009 due to loss of power that was not recorded as an accident.**

2004 GULF OF MEXICO OFFSHORE HELICOPTER ACCIDENT CAUSES/INFO

Type	Power Loss, multi-cause	Other	Tie-down Proc.	Loss Control or Improper Proced.	Loose Cargo	Flight Into Terrain, Water (CFIT W)	Fuel Mgmt	Obstacle Strike		Fuel Qual.	Weather non-CFIT	Unk	Pax Control or HLO Proced.	Helideck Design or Size Issues	Fatalities Due To Engine Malf.
								Helideck	Other						
	Technical		Pilot Procedure Related												
Single Eng	3	1	0	0	0	1	2	1	0	0	0	1	0	1	0
Light Twin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Med. Twin	0	0	0	0	0	0	0	0	0	0	0	0		0	0
Hvy Twin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2004	3	1	0	0	0	1	2	1	0	0	0	2	0	1	0
99-04 Ttls	12	5	1	9	3	6	3	6	1	3	2	3	3	6	4

FIVE YEAR GULF OF MEXICO OFFSHORE HELICOPTER ACCIDENT DATA **Injuries**

Number Of Accidents		Injury Classification				Aircraft Damages			Aviation Accident Rates				
Aircraft Year	# Accidents	# Fatal	# Eng Related	Pax	Crew	Injured	Fatal	Minor	Substantial	Total Loss	# Acc 100k Hrs	# Fatal Accts 100	# Fatal M Occupants	# Acc 100k Flt Stages

												k Hrs		
2000	9	3	2	3	8	8	2	0	1	8	2.04	0.68	0.40	0.65
2001	8	1	1	8	3	10	1	3	2	3	1.77	0.22	0.32	0.54
2002	6	1	1	1	2	2	1	0	4	2	1.49	0.25	0.21	0.38
2003	15	7	3	17	8	13	12	3	2	10	3.93	1.84	2.93	1.12
2004	10	4	2	16	6	7	15	0	3	7	2.77	1.11	3.99	0.79
5 Yr. Avg.	9.6	3.2	2.2	9.2	5.4	8.2	6.4	0.4	3.2	6.0	2.40	0.82	1.59	0.70

Revision 3-22-2005