2003

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

HSAC Members: February 23, 2004
Please find attached the Helicopter Safety Advisory Conference (HSAC) "2003 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 2003 Gulf of Mexico oil industry helicopter accident rate per 100,000 flight hours was 3.93 with a total of 15 accidents (all single engine) compared to a 20-year annual average accident rate of 1.83 with a total of 9.1 accidents/year. The fatal accident rate per 100,000 flight hours during 2003 was 1.84 with a total of 7 fatal accidents compared to a 20-year average of 0.63 with a total of 2.7 fatal accidents/year.

This was the worst overall accident record in the 20 years since we began gathering data, with the highest number of fatal events (7) and total fatalities (12), and second highest number of total accidents (15). The 7 fatal accidents were caused by: 2 each engine and controlled flight into water; 1 each loss of control, helideck obstacle strike, loss of passenger control.

During 2003, improper pilot procedures accounted for 11 (73%) of the 15 accidents. 3 each of these were due to controlled flight into terrain or water, loss of control of the helicopter, and obstacle strikes. 1 each due to cargo falling out of the baggage bay and striking the tail rotor, and a strike to another helicopter.

In the last 5 years, there have been 47 accidents of which 14 were fatal (30%), resulting in 19 fatalities and 42 injuries. 25 (53%) of these accidents were due to pilot procedure related causes and 13 (28%) were due to technical fault. It should be noted that other than engines, the only technical causes of accidents were tail rotor failures. The specific leading causes of accidents in the last 5 years have been:

- **(19%) engine related - with 4 fatalities**
- **(19 %) loss of control or improper procedure with 1 fatality**
- **(11%) helideck obstacle strikes with 5 fatalities**
- **(11%) controlled flight into terrain or water - 3 occurred at night - with 5 fatalities**
- **(9%) tail rotor failures**
- **(6%) fuel quality control**
- **(6%) loose cargo striking tail rotor**
- **(6%) passenger control with 2 fatalities**

We are optimistic that by sharing this information with all operators and other oil industry group's, safety initiatives may be developed to reduce accidents and incidents.

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	NUMBEROF FLIGHTS
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

*** 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

GULF OF MEXICO HELICOPTER FLEET OPERATIONAL DATA

Averages Per Helicopter	2001	2002	2003	Averages Per Helicopter	2001	2002	2003
Passengers per Day per 5 Day Week	12,029	11,880	9,903	**Annual Hours Per Aircraft**	715	644	628
Flights Per Day	4,036	4,286	3,685	**Flights Per Aircraft**	2,333	2,503	2,216
Average Flight Duration in Min.	18	15	17	**Passengers Flown Per Year**	4,952	4,942	4,242

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.

2003 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 1M Occupants	# Acc 100k Flt Stages
Single Eng.	15	7	3	17	8	13	12	3	2	10	5.44	2.54	4.67	1.36
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	0	0.00	0.00	0.00	0.00
Heavy Twin	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
2003	15*	7	3	17	8	13	12	3	2	10	3.93	1.84	2.93	1.12
2002	6	1	1	1	2	2	1	0	4	2	1.49	0.25	0.21	0.38

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

2003 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	3	1	3	0	3	1	0	0	0	1	0	3

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
2003	3	1	0	3	1	3	0	3	1	0	0	0	1	0	3
99-03 Ttls	9	4	1	9	3	5	1	5	1	3	2	1	3	0	4

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

Number Of Accidents		**Injury Classification**				**Aircraft Damages**			**Aviation Accident Rates**				
Aircraft Year	**# Accidents**	**Categor # Fatal**	**Severity # Eng Related**	**Pax**	**Crew**	**Injured**	**Fatal**	**Minor**	**Substantial**	**Total Loss**	**# Acc 100k Hrs**	**# Fatal Acc 100k Hrs**	**# Fatal M Occupants**	**1 # Acc 100k Flt Stages**
1999	9	1	2	7	4	9	2	2	2	5	2.29	0.25	0.47	0.62
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
5 Yr. Avg.	9.4	2.6	1.8	6.8	5.2	8.4	3.8	0.8	4.2	4.4	2.30	0.65	0.89	0.66

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