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香 港 國 際 機 場

CIVIL AVIATION DEPARTMENT
HONG KONG INTERNATIONAL AIRPORT
HONG KONG

本署檔號 *Our Ref.:* KT/13/7 XIII
來函檔號 *Your Ref.:*
電 話 *Tel. No.:* 2769 8314
圖文傳真 *Fax. No.:* 2382 4534

8 December 1995

Mr. Ernest Schneider
President Director General
Breitling Montres SA
P.O. Box 1132
CH-2540 Grenchen

Dear Mr. Schneider,

SAREX 95

On behalf of the Civil Aviation Department, I would like to extend my deepest appreciation for the support and assistance that you had given to us during our annual Search and Rescue Exercise (SAREX 95).

This year's exercise is a tremendous success. The Breitling's innovative Emergency Watch has certainly generated a lot of interest and also the electronic search of beacon has added most favour to the event. The social event was another highlight of the SAREX as all guests from the participating units had thoroughly enjoyed the evening. The credit should naturally go to Mr. C.K. Law who was instrumental in making the evening event such a success.

May I take this opportunity to thank you personally and looking forward to having you with us again in SAREX 96.

Yours sincerely,

(G. CHAO)
for Director of Civil Aviation

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20 December 1995

Mr. Jean-Paul Girardin
Directeur Technique
Breitling S.A.
P.O. Box 1132
CH-2540 Grenchen
Switzerland

Dear Sir,

Search and Rescue Exercise (SAREX) 1995

I have the pleasure to enclose a copy of the report of the SAREX for your information and retention. Your excellent support during the exercise is much appreciated.

Yours faithfully,

(G. CHAO)
for Director of Civil Aviation

Search and Rescue Exercise
(SAREX 95)
4-7 December 1995

1. Introduction

1.1 The annual Search and Rescue Exercise (SAREX 95), organised by Hong Kong Civil Aviation Department (CAD) was held between 4 and 7 December 1995. The objective of the exercise was to provide continuation training and familiarization in search and rescue technique for SAR qualified air traffic controllers, Rescue Co-ordination Centre staff, aircrew and other SAR units likely to be involved in such operations. Through the exercise, the effectiveness of alerting, co-ordination and communication facilities with other departments and overseas territories were tested and evaluated.

1.2 During the exercise, representatives from other departments as well as overseas's observers were given an opportunity to view the SAR organization.

2. Participants

(a) Pacific RCC (USAF)

- to provide SAR qualified staff to assist in the SAR planning during the exercise.

(b) United States Coast Guard (USCG)

- to provide SAR qualified staff to participate in the SAR planning.

(c) United States Air Force (USAF) - 210 Air National Guard, Alaska

- to provide a C-130 aircraft and para-rescuers for the static display, the short range demonstration, the mountain rescue exercise and the long range exercise.

(d) United States Navy (USN) - CTF72 Pat Wing One Det

- to provide a P3 aircraft for the static display and the long range exercise.

(e) Japanese Maritime Safety Agency (JMSA)

- to provide a YS-11 aircraft for the static display and the long range exercise.

(f) Government Flying Service (GFS)

- to provide a BE20 aircraft, a SK70 helicopter and a SK76 helicopter for the static display, the short range demonstration, the mountain rescue exercise; the dropping of targets, the electronic search/homing and winching exercise and the long range exercise.

(g) Royal Air Force (RAF)

- to provide a WLX2 helicopter for the static display, the short range demonstration, mountain rescue exercise and the electronic search/homing and winching exercise.

(h) Royal Navy (RN)

- to provide a patrol ship for the long range search exercise and the rendezvous navigation exercise.

(i) PRC Guangdong Provincial Marine Emergency Search and Rescue Centre (MESRC)

- to provide a marine search and rescue vessel for the long range exercise.

(j) Marine Department (MARDEP)

- to co-ordinate the marine units during the long range exercise.

(k) Civil Aid Services (CAS)

- to provide staff to participate in the short range demonstration and in the mountain rescue exercise.

(l) Information Service Department (ISD)

- to provide staff to co-ordinate and to deal with press enquiries.

(m) Civil Aviation Department (CAD)

- to provide SAR qualified staff for the planning, co-ordination and control of the SAREX.

(n) Breitling Montres S.A.

- to provide technical support and equipment for the electronic search/homing exercise.

3. Aircraft Static Display

A static display of SAR aircraft was held at Hong Kong International Airport in the morning of 5 December. The aircraft on display were :-

(a)	Hercules C-130	(USAF)
(b)	Orion P3	(USN)
(c)	Mitsubishi Heavy YS-11	(JMSA)
(d)	Wessex WLX2	(RAF)
(e)	Super King Air BE20	(GFS)
(f)	Sikorsky Blackhawk SK70	(GFS)
(g)	Sikorsky SK76	(GFS)

Over 140 spectators including the press viewed the static display.

4. Short Range Search and Rescue Demonstration

A short range search and rescue demonstration was held in RAF Sek Kong Airfield in the afternoon of 5 December. It consisted of three parts :-

(1) Para-rescue demonstration by PJs of the USAF

(2) Emergency Beacon search and winching of simulated casualties demonstration by RAF WLX2 and GFS SK76 helicopter.

(3) Water bombing demonstration by RAF WLX2 helicopter

The event was observed by more than 100 spectators and the demonstration was widely covered by TV media and the newspaper.

5. Mountain Rescue Exercise

In the evening of 5 December, a Mountain Rescue Exercise involving the CAS Mountain Rescue Team, USAF PJs and helicopters from RAF and GFS was conducted in the New Territories.

6. The Long Range Exercise

6.1 Scenario

It was simulated that on 5 December 1995 at 2130 LT, a Cessna Skyhawk C172, callsign SRA95, whilst returning to Hong Kong after navigation exercise southeast of Hong Kong reported on 121.3 MHz that its engine was on fire and the aircraft was ditching. Communication could not be re-established and the aircraft was last seen on radar display at 83 NM SSE of Hong Kong with a mode C reading of 003. SAR actions were initiated. Electronic search was immediately launched but yielded no result. Subsequent SARSAT passes also did not pinpoint its location. A visual search commencing 061100 LT on scene is planned.

6.2 Target Positioning

Two sets of rubber tyres (four tyres in each set), painted in orange colour, simulating 2 rafts were dropped by GFS helicopter in the late afternoon of 5 December at about 80 NM Southeast of Hong Kong.

6.3 The Search

6.3.1 Surface Search and Rescue Unit (SRU)

Two marine vessels, the RN HMS Plover and the PRC Guangdong MESRC rescue ship "Tak Shun" took part in the surface search. Crew briefing for the ship was carried out by sending the search briefing form via fax to RN Ops Room and to Guangdong MESRC for onward transmission to the ship. HMS Plover was assigned as the On-Scene-Commander (OSC) and the OSC role was handed over to USN P3 upon their arrival on scene on 6 December. Both vessels were assigned a track line search along the direction of the draft. "Tak Shun" arrived on scene at 060745 LT and commenced its search from the splash point and HMS Plover commenced its search from the datum point by 061100 LT.

6.3.2 Air Search and Rescue Unit

6.3.2.1 Four aircraft participated in the search, viz USAF C130, USN P3, JMSA YS11, and GFS BE20. The USN P3 was designated as On-Scene-Commander (OSC).

6.3.2.2 A mission briefing with weather forecast was given to the crew at 0800 LT on 6 December in the Rescue Co-ordination Centre.

6.3.2.3 All Search and Rescue Units (SRUs) arrived on scene by 1110 LT and commenced search according to their allocated search sub-area as depicted in Attachment A.

6.3.3 Target Sighting

At 1221 LT one target was sighted by JMSA YS11 at position 2048.4N 11410.9E (approximately 12 NM NNW of datum calculated by Hong Kong RCC and 12.5 NM NNW of datum calculated by USCG). The target was video taped and photographed by JMSA crew and was shown at the critique meeting on 7 December. The target could not be retrieved by surface vessel due to very rough sea state.

6.3.4 Communication

Communications between air SRUs on 123.1 MHz were good. Communications between surface vessels, HMS Plover and Guangdong rescue vessel "Tak Shun" were established on HF 3023 kHz as both ships carried interpreters on board who were fluent in English and Cantonese.

6.3.5 Electronic Search and Rendezvous Navigation and Winching Exercise

An electronic homing to Emergency Beacon followed by winching exercise were carried out between HMS Plover and RAF WLX2 and GFS SK76 helicopters at around 35 NM SSE of Hong Kong in the afternoon of 6 December.

6.3.6 Briefing and demonstration of SAR computer program by USCG (Honolulu JRCC)

A briefing with demonstration of the USCG SAR computer programme was presented by USCG staff to CAD RCC staff and overseas observers in the RCC on the morning of 6 December.

7. Social Event

A cocktail and dinner reception were held in the evening of 6 December. The function was well attended by participating personnel and observers.

8. Critique

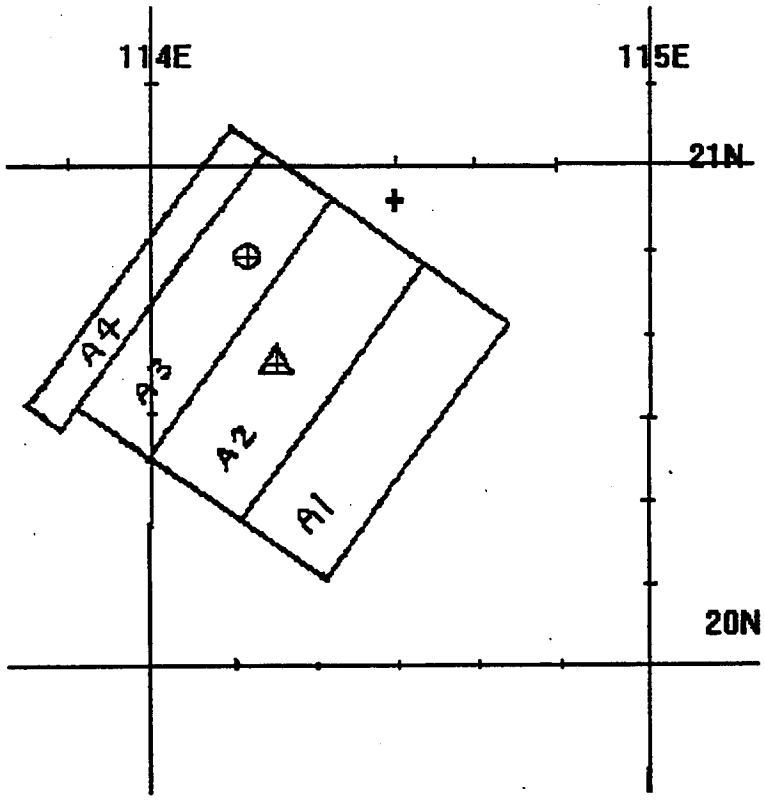
A critique was held on 7 December. The minute of the meeting is at Attachment B.

* * * * * * * *

Attachment A

A1 - Search Area of USAF C130
A2 - Search Area of USN P3
A3 - Search Area of JMSA YS11
A4 - Search Area of GFS BE20

Last Know Position (LKP)	+	2056.1N 11429.3E
Datum	⧋	2036.8N 11414.2E
Target sighted position	⊕	2048.4N 11410.9E



Search and Rescue Exercise (SAREX) 1995

Notes on Critique held on 7 December 1995 in Room 532, Passenger Terminal Building, Hong Kong International Airport at 10:00 a.m.

1. Present

Mr G Chao	CAD (Chairman)
Cdr H Nasu	JMSA
Lt Cdr M Ichijo	JMSA
Lt Cdr M Kakita	JMSA
Mr S Nomura	JMSA
Mr T Kubo	JMSA
Mr J Imamura	JMSA
Mr Y Gushiken	JMSA
Mr T Kawamoto	JMSA
Mr M Karimata	JMSA
Col J W Chan	USDLO
Capt D Florenzie	USDLO
MSgt W Jackson	USDLO
Lt Col R E Parkhouse	USAF
Capt E M Ohlfs	USAF
Capt T J Cathcart	USAF
SMSgt W E Miller	USAF
TSgt S R Lupenski	USAF
Mr R Ross	PACAF HQ
Lt Col R Peterson	PAC RCC
Capt S Shuttleworth	PAC RCC
SSgt G Kehl	PAC RCC
SSgt K Littlejohn	PAC RCC
LCdr N Nickerson	USN
Lt S Harrington	USN
Lt P Johnson	USN
Cdr R Huwel	USCG
Capt R D Sirois	USCG
Lt J Cameron	USCG
Rdi T Allen	USCG
Lt S Pink	RN
WO Owen	RN
Mr R Howell	GFS
Mr C Harris	GFS
Mr M Chan	GFS
Mr E Schneider	UTime

Mr J P Girardin	UTime
Mr Y Renaudet	UTime
Mr Y F Lam	Marine Dept
Mr Y T Fong	Civil Aid Services
劉春喜先生	PRC Dept of Defence
郝毓昆先生	PRC Dept of Defence
周振遠先生	PRC Dept of Defence
馬吉順先生	PRC Dept of Defence
吳炳鈿先生	PRC Dept of Defence
許景才先生	PRC Dept of Defence
李華嵩先生	CAAC
段戈生先生	Guangdong RCC
張永大先生	Guangdong RCC
程躍先生	Guangdong RCC
鄭作雄先生	Guangdong RCC
李新興先生	Guangdong RCC
趙家麒先生	Guangdong RCC
黎星先生	Guangdong RCC
任士利先生	Shenzhen Airport Corp
Lt Cdr RMN J Osman	Royal Malaysian Navy
Mr P Thirugnanaselvan	DCA Malaysia
Mr V Gomez	CAAS Singapore
Mr B Singh	CAAS Singapore
Mr U Sucharitkul	Aerothai Thailand
Mr Chu Chi Thai	HCM ACC Vietnam
Mr Truong Huu Hung	HCM RCC Vietnam
Mr Bui Van Khanh	HCM RCC Vietnam
Mr J Hui	CAD
Mr A Au	CAD
Mr E Wong	CAD
Ms Y L Chow	CAD
Mr P Parker	CAD
Mr K Tse	CAD
Ms M So	CAD
Mr C T Wong	CAD (Secretary)

2. Opening Address

The Chairman opened the critique by welcoming all present. He thanked all the participants who, through their joint efforts, made the SAREX such a smooth and successful event. He then invited Mr James Hui, Air Traffic General Manager of the Hong Kong Civil Aviation Department to address the meeting.

Mr James Hui thanked all the participating units for their contribution and high degree of professionalism. He stressed the importance of co-ordination, control and communication in a SAR operation. He felt also that the human element was equally important. It was events like SAREX 95 that helped to breakdown barriers in human communication and contributed to the smooth running and success of SAR operations. (Mr Hui left the meeting after his address for other commitments.)

The Chairman then gave a summary of the events for the 3-day SAREX.

4 December 1995 -
The exercise planning meeting was well attended.

5 December 1995 -
Approximately 140 persons attended the Static Display in the morning, including members from the press and media.

Approximately 100 persons attended the Short Range SAREX held at Sek Kong Airfield in the afternoon.

A mountain rescue exercise was carried out with the CAS mountain rescue team.

The Long Range SAREX started on the second day with the target dropped late afternoon and alerting and search planning carried out in the evening.

6 December 1995 -
The actual search began on the third day. Two vessels, a RN Ship and a Guangdong MESRC Ship, and four aircraft participated in the search. The target was located after about an hour of search. In view of the traffic situation at Hong Kong Airport, the search aircraft was recalled shortly after the target was located.

Apart from the visual search, an electronic search by two helicopters was conducted followed by a winching exercise.

The Chairman then invited comments from participating units and observers.

3. Comments from Participating Units and Observers

3.1 USN

The USN representative commented that as far as the designation of OSC was concerned, the P3 might not be the ideal aircraft as this particularly P3 aircraft was only equipped with 1 VHF. As it happened, the aircraft had to use VHF for communication with search aircraft and HF for communication with RCC.

In the recovery of search aircraft, it would be easier for the OSC to be given a higher altitude block and the OSC would climb all search aircraft to higher levels to be pick up by radar and be given radar clearance rather than relaying clearance through RCC on HF.

The representative further commented that because of the weather situation, the OSC decided to change the search altitudes to 300 and 800 feet.

3.2 USAF

The USAF representative thanked all present for their support, for the good search co-ordination and briefing, and for the assistance from GFS in the mountain rescue exercise.

3.3 JMSA

The JMSA representative found that weather conditions, low visibility, strong wind and rough seas, made the search difficult. They were assigned 300 feet search altitude but would have preferred 500 feet. (JMSA then showed the meeting a small section of the video taken from the aircraft when the target was located.)

3.4 GFS

The GFS representative suggested reporting procedure between search units and OSC be standardized at the pre-flight briefing.

He preferred co-ordinates for CSP's be calculated and presented at the search briefing sheets.

He also commented on the change of holding procedure during recovery but experienced no problems with holding at Tango. The Chairman commented that change of ATC clearance was not an unusual practice especially in a busy airport like Hong Kong.

3.5 RN

The RN representative stated that the sea was very rough. Under the conditions and for the short duration of the exercise, the vessel had no time to search on arrival CSP. He suggested the target be dropped closer to Hong Kong. The Chairman replied that assigning of search area closer to Hong Kong in SAREX had become very difficult in recent years due to introduction of new holding areas and helicopter tracks. RN further suggested formalised agreement for their vessels to transit Chinese waters be pursued for genuine SAR operation. In this connection, the Chairman proposed that this could be raised at the next SAR co-ordination meeting with PRC. RN also commented that communication between RCC and search units, and between search units in particular between themselves and the Chinese vessel worked very well during the exercise.

With regard to the winching, in view of the work involved in preparing for the winching, a short winching exercise appeared to be wasteful. A longer winching exercise would make the effort spent on preparation more worthwhile.

When the search vessel changed to SAR frequency, communication between HMS Tamar and vessel was lost. The base would rely on RCC to keep them informed of the progress of the search. For real SAR operations, a liaison officer might have to be sent to RCC to assist in communication and co-ordination.

3.6 Guangdong RCC

The Guangdong RCC representative thanked the Chairman for the opportunity to participate in the exercise. He stated that Guangdong MESRC was responsible for a very large ocean area adjacent to Hong Kong. Hence, close co-operation between the two RCC's was important. He was glad that communication and language difficulties between the vessels and between the MESRC vessel and Hong Kong RCC did not present a problem and looked forward to future exercises.

3.7 Pacific RCC

The Pacific RCC representative thanked the Chairman for the invitation. He said that such a large gathering of SAR experts in the region was a rare opportunity and as such it should be made use of to conduct symposiums to discuss SAR topics of mutual interest. The Chairman advised that the proposal would certainly be considered next year.

3.8 PACAF HQ

The PACAF HQ representative expressed his thanks to the meeting. He stated that this type of exercise was very important for SAR training. The human interaction enhanced cooperation between SAR organizations.

3.9 USCG

The USCG representative said that the SAR program was still under development. If the need arose, their RCC was willing to work out a SAR plan for other RCC's.

He supported the suggestion of symposiums being held in conjunction with SAREX.

He further stated that communication and cooperation were key elements in SAR and suggested exchange of information such as names, telephone numbers and SAR resources. Data sheets on capabilities of SAR units for the region should be prepared. The Chairman also felt that the idea was worth pursuing.

Another problem facing SAR organizations was the ever increasing number of EPIRB alerts.

In closing, the USCG representative suggested a night search for future SAREX's.

3.10 U Time (BREITLING)

The U Time representative thanked all the SAR organizations for the well run exercise. It was a real test for their new equipment and proved that the reception of signal was acceptable within a reasonable range.

3.11 CAS

The CAS was grateful to RAF and GFS for their assistance in the mountain rescue exercise. He also thanked the USAF PJ's for their advice on equipment and technique. He was informed that the PJ's could participate in the mountain rescue exercise more actively if they were informed of the requirements beforehand.

3.12 Shenzhen Airport Corp

The Shenzhen representative thanked the Chairman for the opportunity to observe the exercise with so many overseas SAR experts participating. He said that Shenzhen, located in the Pearl Estuary, needed the support of Guangdong, Hong Kong and other SAR organizations.

3.12 CAAS Singapore

The Singapore representative expressed his thanks to CAD for inviting them to observe the exercise.

3.13 Malaysia

The Malaysian representative was pleased that he was able to meet all overseas units in such a big event. He opined that the observers would benefit more if they could also observe the planning part of the long range exercise.

3.14 Vietnam

The representative from Vietnam thanked the meeting for the opportunity to learn from professional SAR organizations.

3.15 Aerothai Thailand

On behalf of the National SAR Committee of Thailand, the representative from Thailand expressed his appreciation of the proven efficient of the Hong Kong SAR units. He stated that in addition to annual full scale SAREX's, paper exercises were also held in Thailand.

3.16 USDLO

The USDLO representative stated that the Hong Kong RCC, in keeping up with the reputation of the Hong Kong CAD, demonstrated a high degree of efficiency in the SAREX. He advised that US SAR units had been taking part in SAREX's in Hong Kong for the past years and looked forward to future participation.

4. The meeting closed at 11:30 a.m.

A. D. R. A. S. E. C. 69

Préfecture du Rhône
106, rue Pierre Corneille
69419 - Lyon

Lyon, 22 December 1997

Dear Sir,

Enclosed please find report on the "sater" trial of Saturday **29 November 1997**.

Secretary [Seal]
Bernard GALLET
RASEC RHONE, SECURITE CIVILE

Recipients:

O. DDPC, Rhône Prefecture	M. RIBET
O. CIRCOSC	Col. BOUTTE
O. RCC Mont Verdun	Lt. Col. GADZINSKI
O. FNRASEC	M. Francis MISSLIN
O. HELICO. BASE, Sécurité Civile	Com. LEPLUS
O. BREITLING	M. Olivier DESJEUX
O. ADRASEC 69	Files.

Report on "Breitling" trial of Saturday 29 November 1997.

At the initiative of Lt. Col. CHINAL (CIRCOSC), a team of technicians from BREITLING went to Lyon to take part in a demonstration trial of an Emergency Chronograph in actual conditions.
Taking part in the search was : a DRAGON 69 from the Base of the Sécurité Civile at Bron, a helicopter from the Breitling Company, the search teams of ADRASEC 69.

13:30 hours. Rendezvous at Rhône Prefecture for briefing on the technical aspects and operation of the Emergency Chronograph.

Launch 14:30 hours. Call from Mr. SANLAVILLE indicating that the demonstration Chronograph was transmitting on the trial frequency 121.375 MHz.

Search Area. The search area was delimited by a VENISSIEUX - GIVORS - MORNANT - BRINDAS quadrilateral.

Beacon. BREITLING "EMERGENCY" Chronograph. Watch transmitting a 121.375 MHz AM signal at 30 mW power.

Facilities Used.

CIRCOSC Fixed Control Centre at Rhône Prefecture

Control Centre	Bernard GEORGES, Sébastien LE GOAEC
Mobile 1	Jean-Jacques VALOT - Lt.Col. CHINAL, Olivier DESJEUX (Breitling)
Mobile 2	Jean-Pierre MUNGER, Christian PELLEGRIN
Mobile 3	Patrice DILIAKOU, Bernard MARGAN
Mobile 4	Bernard GALLET, Jean-Pierre GENILLON
Mobile 5	Michel SUBTIL, Philippe BOUCHARD
Mobile 6	Gilles DEMURE, Xavier SANLAVILLE
Sécurité Civile DRAGON 69 Crew	Robert PRE, Jean BASTRIOS
BREITLING Helicopter	Breitling Crew

Search Equipment. The mobiles were fitted with Homing Receivers. DRAGON 69 was equipped with 2 homing receivers, 1 forward (administrative equipment), 1 lateral (Rasec equipment) see description in appendix. The Breitling helicopter was fitted with a Shelton homing receiver.

Trial sequence.

14:55 hours. Departure of all mobiles from Prefecture. The DRAGON 69 and the BREITLING helicopter based at BRON take off. Mobile 2 at Feyzin fort, mobile 3 at Chassagny, mobile 4 at Mornant, mobile 5 at Brindas, mobile 6 at Montagny.
Mobile 1 as "observer" along with BREITLING officials and Lt. Col. CHINAL.

15:05 hours. DRAGON 69 at Chronograph vertical followed a few seconds later by the BREITLING helicopter, beacon found after 9 minutes 30 seconds, both helicopters leave the area to allow the mobiles to search without interference. The beacon was found in the vicinity of fort Champvillars in the district of Irigny.

Search Phases. See chart of plots attached.

15:35 hours. Beacon found by mobile 6. The other mobiles continue searching.

15:50 hours. Beacon found by mobile 1.